

A Study of J.S. Bach's Toccata in F Major, BWV 540

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The music of Johann Sebastian Bach (1675-1750) represents the epitome of the mature Baroque musical style, synthesizing the various styles found in the music of that period into a single, unified sound. This study of Johann Sebastian Bach's Toccata in F Major, BWV 540, reveals that this work for organ is no exception; it explores the work's mysterious origins as well as some of the reasons why it stands as one of Bach's more praised works and is still such a popular piece both for academic study as well as for performance. It also includes an in-depth harmonic analysis that outlines and explains the various techniques Bach employed in the writing of this work.

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Even today Johann Sebastian Bach stands out as one of the most well-known composers in the world. This is due to the fact that his music is appealing to both the listener and the scholar. His *Toccata in F Major*, BWV 540 is no exception. Unique in form and in harmonic structure, grandiose in size and style, and mysterious in its origins, the *Toccata in F Major* is of value to both the average listener and the scholar wishing to learn both where Bach found his roots and where he took his music as he matured.

J.S. Bach, born in 1685, is considered one of Western music's greatest composers. However, this was not the case in his lifetime. Even by his death in 1750, his music wasn't highly regarded. Rather, it was his skills as an organist that brought him what fame and success he had. It was not until early in the 19th century that his compositions garnered significant interest, partially through the work of Felix Mendelssohn in what came to be known as the first early music revival.

This work in particular, the *Toccata in F Major*, has gained interest from scholars for several reasons. First, the date of the work is very uncertain. While some scholars place it at Weimar, others put it in the Cöthen period; both have legitimate arguments for their case. Dr. Robert Marshall of Brandeis University states in *The Music of Johann Sebastian Bach* that “as for the Toccata in F, its unique pedal range – to f’ – makes it virtually certain that the work was written for the organ at Weissenfels” (Marshall 287). He goes on to say that “since the copy of the work entered into the Walther manuscript, P 803 (by Johann Tobias Krebs), seems to be dateable to ca. 1714, one can conclude that Bach composed at least the toccata section of BWV 540 during the Weimar years, almost certainly in connection with his visit to Weissenfels in February 1713” (Marshall 287). Marshall not only places the date of composition in the Weimar period (1708-17), but even fairly early in the period.

Andre Pirro, however, argues that “it seems evident, on the contrary, that he composed this work only in order to take advantage of a resource for which he had not encountered before; thus the date of this Toccata appears to be between the years of 1717 and 1723, the period of Bach’s residence in Cöthen” (Pirro 51). This resource he makes reference to is an organ in *St. Agnuskirche*, a church in Cöthen with a very expansive pedal that “responded to the touch with remarkable precision and promptness” (Pirro 51). As curious as the issue of date is in regard to this toccata, the question is also raised as to whether it was written in conjunction with the fugue with which it is paired in BWV 540. The answer, that it certainly was not composed in conjunction with the fugue, is more generally agreed upon, particularly due to the fact that the toccata is considered to be a much more mature composition than the fugue (Williams 103).

This fact and the fact that the toccata is extraordinarily long—indeed, it is the longest of any of Bach’s extant preludes—are what often lead to its being performed by itself rather than in conjunction with the fugue (Williams 104). Indeed, its length and overall form are unique in Bach’s oeuvre. In this composition, Bach combines a pedal toccata with what various scholars have dubbed either a concerto or ritornello form. The fact that both of these options fit rather imperfectly is perhaps due to the fact that it is indeed a toccata, a more improvisatory form than many others of the day. A general outline appears as follows:

Section	Measures	Comments
A	1-83	<ul style="list-style-type: none"> • First statement of the ritornello • FM → BbM → FM → CM
A ^{tr}	83-176	<ul style="list-style-type: none"> • First return of the ritornello (only classified as a “return” rather than simply a repetition of the first statement because ritornello form at this time had the second statement of the ritornello always as dominant or relative major – thus, this must be considered another statement, rather than simply a repetition) • CM → FM → CM • Departs from the tonal plan of A in that it doesn’t end a fifth higher than where it started. Technically, B begins with the first cadence back in the key of FM, so the relationship between the first and second statements of A is more like that found typically in binary form – a I – V – I relationship. • A^{tr} is not an exact repetition of A. It stops correlating after measure 151/69 so that it can modulate back to FM, rather than following the plan and moving to GM
B	176-219	<ul style="list-style-type: none"> • First episode • FM → BbM → Dm
C	219-238	<ul style="list-style-type: none"> • Second return of the ritornello (considered C because it is now in three-part invertible counterpoint rather than in a canon, as it was first used) • Dm
B ¹	238-270	<ul style="list-style-type: none"> • Second episode • Dm → GM → CM → FM → Am → Dm → Am
C ¹	270-290	<ul style="list-style-type: none"> • Third return of the ritornello • Am
B ²	290-333	<ul style="list-style-type: none"> • Third episode • Am → Dm → Gm → Cm → Gm
C ²	333-352	<ul style="list-style-type: none"> • Fourth return of the ritornello • Gm
B ³	352-438	<ul style="list-style-type: none"> • Final episode – combines abbreviated statement of ritornello – perhaps better said “it contains the motif found throughout the ritornello,” as the presence of the rit. in B³ is sparse • Gm → Cm → FM → BbM → FM → CM → FM

Christoph Wolff of Harvard University states that this piece, Bach’s *Tocatta in F Major*, and its form in particular, is “directly indebted to the Vivaldi-style ritornello concerto” (Wolff 126). Indeed, it seems Bach is indebted to many for this piece. Wolff goes on to say that “its canonic beginning [is] modeled after Vivaldi’s Double Violin Concerto in D minor, transcribed

in BWV 596” (Wolff 126). Williams also points out that the piece seems to “combine ideas current in other kinds of organ toccata: the tonic/dominant pedal points found in so many ‘southern’ toccatas (Pachelbel, Fischer, Kerll etc) and the pedal solo found in the ‘northern’ type (Buxtehude, Bruhns etc)” (Williams 106). Finally, Keller states that “in the last movement of the *Concerto in F Major* by Marcello,” there are measures that contain the same staccato eighth-note idea seen in Bach’s *Tocatta in F Major* (see mm. 169-176), except that Bach displaced the notes one beat to land on two and three instead of one and two (Keller 118). However, the difference in note placement does alter the feel of the music drastically; after all, certain dances, such as the sarabande, are defined partly by their emphasis on beat two rather than on one. So the significance of that correlation is perhaps not as great as Keller asserts

Truly, even if Bach’s ideas are not all original, this does not negate the value or quality of the work. As Keller says, “As with many works by Bach and Handel, it is perhaps not the original idea but what these masters made of it that is decisive and great” (Keller 118). Whether original or not, the motifs present in this toccata, while quite unique, all tie together extraordinarily well.

He has two primary motives – one to begin the ritornello (motif a) and one to begin the episodes (motif b) – and a third motif for the cadences. At first glance, the two primary motives (a and b) appear quite different in nature. This is due to the unique direction of each. While motif a turns about on itself, motif b is more of a rocket motif.



That is, rather than turning around on itself and ending on the same note on which it began, as motif a does, motif b ascends in arpeggiated fashion a complete octave within its one-measure statement.

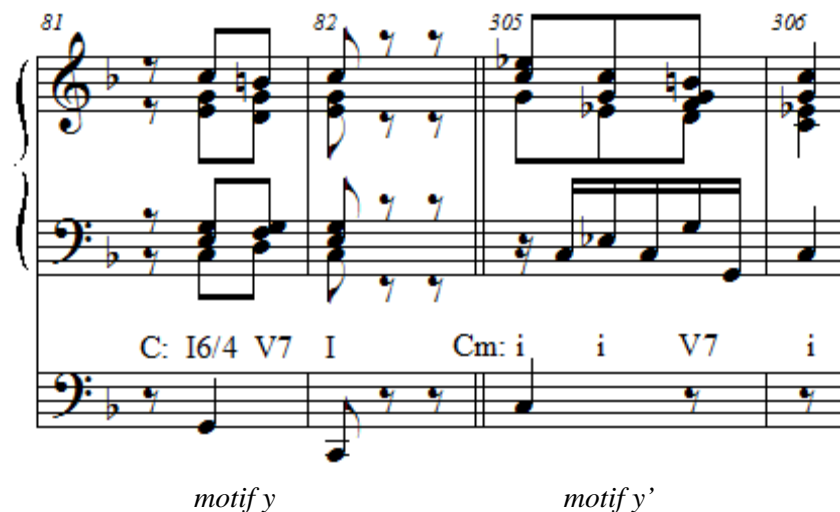
These two motifs give clear and powerful contrast to the ritornello sections and the episodes, but they are not disparate to the point of giving the piece a disjointed feel. This is because, while the two motifs are contrasting in direction, they contain the same core. Indeed, five of the notes are the same. If one were to drop



notes four and six an octave in motif b, it would become quite apparent that this is the case. Note that, when pitches are adjusted to match octaves, five of the six notes are the same. This more clearly shows how significant direction is in the formulation of the motif.

There is one other motif present in this toccata, and it appears primarily at cadential points in the piece. Motif y appears in the ritornello sections as motif y as well as in a slightly altered form, called motif y' in the episodes.

However, in this case the form is modified so slightly that it is being considered one motif, slightly modified. This is



the eighth-note motif spoken

of above in Keller's commentary on how Bach's toccata relates to Marcello's *Concerto in F Major*, and Bach has indeed used it, original material or not, quite masterfully in this piece. An entire harmonic structure was included with both examples of motif y shown above; this is because, unlike motives a and b, motif y is a harmonic motif rather than simply a melodic one. While motives a and b are dominated by a distinct melodic pattern, motif y is marked by

cadential action, specifically a second inversion tonic chord followed by a dominant seventh chord and then a root position tonic chord in whatever key is applicable. This fact sets it apart from the other two motives and is what makes this motif a cadential rather than a primary motif.

Upon comparing these two versions of motif y with motives a and b, it becomes clear that even this motive is related. The first three notes of motif a are used throughout the piece as an example of a lower neighboring tone. This lower neighboring tone is one of the main ideas of the piece, and as such it appears in the top voice of the cadential motif as well – it has simply been rhythmically augmented. In the case of motif y', the jump is added at the beginning so as to tie in better with motif b.

While these motives sound very precise on paper, they have a good deal of flexibility within the piece itself. Many variations exist (see mm. 2, 5, 6, and 9 for just a few examples) which give the piece the ability to transition more easily between keys and maintain a natural, musical sound.

In addition to the masterful motivic control that Bach exercises in this piece, he also uses tonality in unique and clever ways. Keller praises his “daring modulatory shifts,” and his “ingenious” use of secondary dominants of the supertonic, mediant, subdominant, and Neapolitan sixth chord (Keller 119). However, most of Bach’s *Tocatta in F Major* is harmonically simple. It is typically only when motif y appears that Bach goes far afield. Several examples are worthy of mentioning in this paper.

Found in mm 169-176 is the first extensive use of motif y and also the beginning of the B section, which is the first episode. The harmonic analysis reads as follows:

The image shows a musical score for measures 169 through 176 in C minor. The score is written for a grand staff (treble and bass clefs). The key signature has three flats (B-flat, E-flat, A-flat). The time signature is 4/4. The music consists of chords, many of which are beamed together across measures. Below the staff, a line of figured bass notation provides harmonic analysis for each measure. The figures are: Cm: i6/4 V4/3 i6/4 V4/2 i6/4 V4/3 i6/4 v6 iv6 III6 ii°6 vii°7/v i6/4 V7 I. The final measure (176) ends with a whole rest.

Of particular interest in this example is how the ear perceives this entire section. The ear seems to hear the progression of { V7 – v – III – vii°7/v – V7 – I } rather than the entire progression because, in the context of the phrase, beat two of each measure functions as non-harmonic; each of those chords is simply embellishing the harmony found on beat three. Most likely, Bach intended for the listener to hear the progression this way. Taken separately, the two progressions work quite nicely, with i proceeding to iv to ii° before arriving at the i6/4 – V7 – I, and the v going to a III (in this context perhaps better analyzed as a VI/v, going to the fully diminished leading tone of V before arriving at the i6/4 and then finally cadencing back into F with V7 – I. Here is the same thing in an easier-to-read format:

$$i - iv - ii^{\circ} - i6/4 - V - I \quad \text{and} \quad v - VI/v - vii^{\circ}7/v - i6/4 - V7 - I$$

This is clearly an interesting specimen of harmonic progression. Even more interestingly, after this comes the first episode, where the chord on m. 176 turns immediately into a V7/IV (and indeed, begins a series of modulations to the IV via sequence up a fourth). So the chord that the music finally lands on turns out to be another V7, giving the listener almost no sense of rest and release at all, and instead driving the music forward into the episode.

Another harmonically interesting example is mm. 422-424.

This is probably what J.S. Bach's *Tocatta in F Major* is most well known for – the direct modulation directly across the circle of fifths.

This can be analyzed in one of two

ways: in the key of F major that chord is most naturally seen as an enharmonically spelled German augmented sixth chord. However, German chords are typically used before a five rather than after it, so this option doesn't seem to fit.

422 423 424

F: V7 vii°4/2/V V4 7/3 V4/2/N

A Neapolitan *plus* chord could also be considered, but one runs into the same problem. If this chord is considered to be a Neapolitan of V – that is, C major – then that still leaves the Baroque composer with the fact that he has written a non-sensical chord progression. A I chord doesn't go to a Neapolitan and then stop. Interestingly, the chord could alternately be analyzed as a V4/2 of the Gb chord in the following measure – this Gb chord would be the Neapolitan of F major. This is the solution that seems to make the most sense. Bach is using this chord to move to a secondary tonal center, from the key of F major to the key of Gb major, and using what would be a German augmented sixth chord in the key of F major as the V of the secondary tonic, Gb, the Neapolitan of F major.

Finally, while Bach's use of harmony is extravagant, his counterpoint is more ordinary. There is not much worthy of note except for the ritornello sections. These are the C sections on the formal plan, and they are written in three-part invertible counterpoint. And indeed, each time the C material enters, the parts have been inverted – this is called textural inversion. Clearly,

though in these repetitions, not all is the same. This is typically because of the limitation of the compass of the instrument. If the range of the instrument is not large enough to allow for a line to continue, Bach changes it to fit the keyboard.

All in all, Johann Sebastian Bach's *Tocatta in F Major*, BWV 540 is an excellent piece, both for study and performance – not as much for its new ideas, but for the masterful execution of techniques practiced at the time. From Bach's use of harmony, to his use of multiple similar yet distinct motives, to his unique and grandiose ritornello form, he has created a beautiful piece of music that will be studied, performed, and enjoyed for years to come.

Works Cited

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Handwritten musical score for "Canon in D" by Pachelbel, featuring piano accompaniment and guitar notation. The score is divided into four systems, each with a grand staff (piano) and a single staff (guitar). The guitar part includes fret numbers and chord diagrams. The piano part includes notes, rests, and dynamic markings. The score is annotated with handwritten notes and a page number "17".

System 1 (Measures 35-45): The piano part features a continuous eighth-note accompaniment. The guitar part includes a melodic line with notes like G4, A4, B4, C5, and D5. Handwritten notes include "Canon continues, delayed by 5 beats" and "seq. & by step".

System 2 (Measures 46-57): The piano part continues with the eighth-note accompaniment. The guitar part includes a melodic line with notes like E5, F5, G5, and A5. Handwritten notes include "Bolo." and "seq. & by step".

System 3 (Measures 58-69): The piano part continues with the eighth-note accompaniment. The guitar part includes a melodic line with notes like B5, C6, and D6. Handwritten notes include "seq. & by step".

System 4 (Measures 70-82): The piano part continues with the eighth-note accompaniment. The guitar part includes a melodic line with notes like E6, F6, G6, and A6. Handwritten notes include "seq. & by step".

A⁺

1:39

18

93/1tr

94/2tr

95/3tr

96/4tr

97/5tr

98/6tr

99/7tr

100/8tr

101/9tr

102/10tr

103/11tr

104/12tr

105/13tr

106/14tr

96/4tr

97/5tr

98/6tr

99/7tr

100/8tr

101/9tr

102/10tr

103/11tr

104/12tr

105/13tr

106/14tr

107/15tr

108/16tr

109/17tr

110/18tr

111/19tr

112/20tr

113/21tr

114/22tr

115/23tr

2:07

108/18tr

109/19tr

110/20tr

111/21tr

112/22tr

113/23tr

114/24tr

115/25tr

116/26tr

117/27tr

118/28tr

119/29tr

120/30tr

121/31tr

122/32tr

123/33tr

124/34tr

125/35tr

126/36tr

121/39tr (mod)

122/40tr

123/41tr

124/42tr

125/43tr

126/44tr

127/45tr

128/46tr

129/47tr

130/48tr

131/49tr

132/50tr

2:29

127/45tr

128/46tr

129/47tr

130/48tr

131/49tr

132/50tr

2:42

133/5tr 134/5tr 135/5tr 136/5tr 137/5tr 138/5tr 139/5tr 140/5tr 141/5tr 142/6tr 143/6tr 144/6tr 145/6tr

(C)

Solo.

146/6tr 147/6tr 148/6tr 149/6tr 150/6tr 151/6tr 152 153/5tr 154/5tr 155/5tr 156/5tr 157 158

IV (seq. mult. fid) II I

seq. + by step

159 160 161 162 163 164 165 166 167 168 169 170 171

IV vi^o iii vi ii I vi^o II/V vi^o/I i^o II i^o II^o

seq. + by step seq. + by step

172 173 174 175 176 177 178 179 180 181 182 183 184 185

3:27

4m. seq. + 4th or 5th

Handwritten musical score, measures 186-200. The score is written on a grand staff (treble and bass clefs). The melody is in the treble clef, and the bass line is in the bass clef. The key signature has one sharp (F#). The time signature is 4/4. The music features various chords and melodic lines, with some notes highlighted in green and others in pink. Chord symbols are written below the bass line: iv, ii°, V, i, iv, iv°, ii, V, ii°. Measure numbers 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200 are indicated above the staff.

Handwritten musical score, measures 201-214. The score continues on a grand staff. The melody is in the treble clef, and the bass line is in the bass clef. The key signature has one sharp (F#). The time signature is 4/4. The music features various chords and melodic lines, with some notes highlighted in green and others in pink. Chord symbols are written below the bass line: V, ii°, N, N, V, III, V, iv, N, V, V. Measure numbers 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214 are indicated above the staff.

Handwritten musical score, measures 215-226. The score continues on a grand staff. The melody is in the treble clef, and the bass line is in the bass clef. The key signature has one sharp (F#). The time signature is 4/4. The music features various chords and melodic lines, with some notes highlighted in green and others in pink. Chord symbols are written below the bass line: V, V, V, V, V, V, V, V. Measure numbers 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226 are indicated above the staff.

Handwritten musical score, measures 227-238. The score continues on a grand staff. The melody is in the treble clef, and the bass line is in the bass clef. The key signature has one sharp (F#). The time signature is 4/4. The music features various chords and melodic lines, with some notes highlighted in green and others in pink. Chord symbols are written below the bass line: V, III, iv, ii, III, VII, vii°, IX, V, VI, iv, V. Measure numbers 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238 are indicated above the staff.

Handwritten musical score for piano, featuring four systems of music. The notation includes treble and bass staves with various chords and melodic lines. The score is heavily annotated with handwritten notes, including measure numbers, chord symbols, and performance markings.

System 1 (Measures 239-251): Treble staff shows chords with green and pink highlights. Bass staff includes chord symbols: i , IV , I , IV , I , IV , I . Measure 251 is marked with a yellow highlight.

System 2 (Measures 252-265): Treble staff continues with green and pink highlights. Bass staff includes chord symbols: $Am: iv$, ii^0 , II , i , vi^{+7} , N , iv , IV , iv , IV , iv , IV . Measure 265 is marked with a yellow highlight.

System 3 (Measures 266-278): Treble staff shows chords with pink and orange highlights. Bass staff includes chord symbols: iv , v , iv , III , ii^{+7} , iv , II^7 , IV , i , IV^7 , II^7 , iv , IV^7 , iv , IV^7 . Measure 278 is marked with a yellow highlight.

System 4 (Measures 279-291): Treble staff shows chords with orange and green highlights. Bass staff includes chord symbols: IV^7 , i , iv , ii^0 , II^7 , i , ii^0 , VI^7 , i , vi^{+7} , ii^{+7} , vi^{+7} , IV^7 , i , IV , II , iv , IV . Measure 291 is marked with a yellow highlight.

Handwritten annotations include measure numbers (e.g., 239/177r, 240/176r, 241/179r, 242/180r, 243/181r, 244/182r, 245/183r, 246/181r, 247/185r, 248/186r, 249/187r, 250/188r, 251/189r, 21, 252/190r, 253/191r, 254/192r, 255/193r, 256/194r, 257, 258/192r, 259/193r, 260/194r, 261/195r, 262/196r, 263/197r, 264/198r, 265/199r, 266/200r, 267/201r, 268/202r, 269/203r, 270, 271, 272, 273, 274, 275, 276/224r, 277/225r, 278/226r, 279/227r, 280/228r, 281/229r, 282/230r, 283/231r, 284/232r, 285/233r, 286, 287, 288/236r, 289, 290/176r, 291/177r). Chord symbols include i , IV , I , IV , I , IV , I , $Am: iv$, ii^0 , II , i , vi^{+7} , N , iv , IV , iv , IV , iv , IV , iv , v , iv , III , ii^{+7} , iv , II^7 , IV , i , IV^7 , II^7 , iv , IV^7 , iv , IV^7 , IV^7 , i , iv , ii^0 , II^7 , i , ii^0 , VI^7 , i , vi^{+7} , ii^{+7} , vi^{+7} , IV^7 , i , IV , II , iv , IV .

Handwritten musical score for piano, consisting of four systems of staves. The notation includes treble and bass clefs, notes, rests, and various musical symbols. The score is heavily annotated with handwritten notes, including measure numbers and bar lines, and is color-coded with pink, green, and orange highlights.

System 1: Measures 22 to 30. Treble clef. Annotations include measure numbers (22, 24, 26, 28, 30) and bar lines. Chords are highlighted in pink. Green wavy lines are drawn over the notes. Bass clef has Roman numerals (i, V, i, V, i, V, i, V, i, V).

System 2: Measures 30 to 36. Treble clef. Annotations include measure numbers (30, 32, 34, 36) and bar lines. Chords are highlighted in pink. Green wavy lines are drawn over the notes. Bass clef has Roman numerals (i, V, i, V, i, V, i, V, i, V).

System 3: Measures 31 to 38. Treble clef. Annotations include measure numbers (31, 33, 35, 37) and bar lines. Chords are highlighted in pink. Green wavy lines are drawn over the notes. Bass clef has Roman numerals (i, V, i, V, i, V, i, V, i, V).

System 4: Measures 32 to 39. Treble clef. Annotations include measure numbers (32, 34, 36, 38) and bar lines. Chords are highlighted in pink. Green wavy lines are drawn over the notes. Bass clef has Roman numerals (i, V, i, V, i, V, i, V, i, V).

Handwritten musical score system 1. Measures 341-352. Treble and bass staves. Includes tempo markings (e.g., 342/228tr, 343/224tr) and a time signature of 6:53. A yellow highlight is present at the end of the system.

Handwritten musical score system 2. Measures 353-364. Treble and bass staves. Includes tempo markings (e.g., 353/177tr, 354/172tr). A yellow highlight is present at the end of the system.

Handwritten musical score system 3. Measures 365-376. Treble and bass staves. Includes tempo markings (e.g., 365/177tr, 366/172tr). A yellow highlight is present at the end of the system.

Handwritten musical score system 4. Measures 377-389. Treble and bass staves. Includes tempo markings (e.g., 377/177tr, 378/172tr). A yellow highlight is present at the end of the system.

