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Schenkerian pedagogy has received increased attention in recent years, with studies ranging from introductory level topics to those geared toward advanced graduate students. The fugal genre is noticeably absent from these studies, but I suggest that fugal analysis proves beneficial for both introductory and advanced courses in Schenkerian analysis. After introducing a step-by-step method for graphing fugues, I demonstrate the method through detailed discussions of J. S. Bach's Fugues in D major and F major from the *Well-Tempered Clavier* Book I.

Schenkerian pedagogy has received increased attention in recent years, with studies ranging from introductory level topics to those geared toward advanced graduate students.[1] Of all the material covered, however, the fugal genre is noticeably absent. Excerpts from fugues are cited, of course, along with tangential discussions of polyphonic melody and baroque textures, but no direct demonstration for how to approach the task of analyzing a complete fugue, or any imitative work, is provided.[2] Indeed, the decision

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1 A growing number of textbooks and articles are dedicated to Schenkerian pedagogy. See Beach (2012, [1989] 2014); Cadwallader, Gagné, and Samarotto (2020); Damschroder (2017); Forte and Gilbert (1982); Pearsall (2017); Schachter (2016); Slottow (2005); Wadsworth (2016); and Wen (2020).

2 To date, the most detailed and widely-known Schenkerian analyses of fugue are provided by Schenker (1984, 2005, 2014); Schachter (1999), and Renwick (1987, 1991, 1995a, 1995b, 2006), but there are introductory stages of the analytical process that remain unmentioned in these sources. David Beach's *Advanced Schenkerian Analysis* offers a chapter on baroque textures, and polyphonic melodies appear frequently throughout the text; but as close as his text comes, it still does not explicitly address the fugal genre. In the Epilogue of his recent textbook, Eric Wen includes a substantive discussion of polyphonic melody and implied harmony in the fugue subject from J. S. Bach's Fugue in B minor from the *Well-tempered Clavier* Book I (2020, 355–58). While other recent studies on fugue, including Franck (2007, 2010, 2011), Marlowe (2014), Reef (2019), Renwick (1991, 1995a, 1995b, 2006), and Väisälä (2011), focus on broader theoretical concepts aimed at an audience of experts, one cannot (and indeed should not) expect to find a complete demonstration of, or explanation for, every decision made to produce the final analysis. What remains is a considerable gap between these excellent studies on fugue and the instructional resources that are currently available to support students interested in pursuing research in this area.

to omit fugue in the pedagogical literature is a sensible one. Many music programs in North America do not offer a dedicated elective in Schenkerian analysis; instead, it is often presented as one of several approaches in tonal analysis survey courses. Where full-semester courses in Schenkerian analysis are included in the curriculum, these courses are typically introductory in nature. In my personal experience teaching the latter type of course, the majority of the semester is spent examining short excerpts and phrases for the purpose of learning the mechanics of Schenkerian graphic notation; analyses of short, full-length works can be completed by the end of the semester, but course structure leaves room for nothing so advanced as an imitative texture. Since this is typically the intended audience for most of the available Schenkerian analysis textbooks, and there is already so much information to include at the introductory level, it makes little sense to include more advanced topics there.

There are many reasons why studying fugues is beneficial, however. For one thing, advanced students should consider studying complete fugues as a way of honing their analytical skills, since fugal textures expose theoretical problems that are not always present or fully realized in more straightforward works. For instance: How does one identify the *fundamental line* and *bass arpeggiation* when every voice has the "melody" (subject) and when the stylistic aim is total independence of line? What is the process for analyzing a polyphonic melody (a frequent feature of Bach's fugue subjects) and how does one determine the number of voices it implies? How does one extract an imaginary continuo from a texture defined by linear motion?

For the seasoned Schenkerian, these questions may seem naïve or unsophisticated. After all, none of these issues are unique to the fugal genre, and all should be considered when analyzing any tonal work. But fugal textures do exacerbate these issues. Carl Schachter writes:

> In principle the analysis of a fugue should present no problems essentially different from those encountered in other types of music. Fugal procedures, after all, grow out of the contrapuntal and harmonic elements fundamental to tonality. ... Unfortunately, what we might expect in principle does not always coincide with what we find. As it happens, the analysis of fugues involves difficulties which, if not fundamentally new, are often unusually intractable.[3]

I similarly take the position that these problems, while not new, are not immediately obvious either. Failure to discuss strategies for approaching these works explicitly makes fugal analysis seem much more intimidating than it really needs to be. An added benefit to working through these textures is that it encourages greater

3 Schachter (1999, 239).

precision in our application of the theory itself. Through detailed exploration of fugal textures over the past several years, I have discovered ways to simplify not only the task of fugue analysis, but have found more concrete ways to explain certain topics that always seem challenging for students to master.

Imitative textures also emerge in many works that are not necessarily assigned the designation of "fugue." While this essay focuses on works that are strict "fugues" by J. S. Bach, fugal passages and imitative textures can be found in numerous works from the common-practice period.[4] To that end, we can think of fugues as test cases for how to solve complex textural problems, and students can later apply what they learn in new and varied contexts. According to Stephen Slottow, "It is crucial to have model pieces or passages … that illustrate common procedures or patterns (such as the I–II$^4_2$–V$^6_5$–I opening or elided cadences). … It is equally important to highlight certain common techniques (such as voice exchanges or sequences) and their properties."[5] The same is true for imitative textures. Although we cannot predict which specific issues will arise in every composition, fugues frequently exhibit a finite number of recurring analytic problems. Engaging with fugal textures ultimately encourages students to use the theory as a problem-solving tool when they encounter tricky passages in analysis.

In the sections to follow, I introduce a step-by-step method for graphing fugues and then demonstrate the method through detailed discussions of J. S. Bach's Fugues in D major and F major from the *Well-Tempered Clavier* Book I. Since each composition is unique, it is impossible to offer precise methods that will work universally, but in working through problematic passages that arise in these two fugues specifically, I provide helpful strategies for approaching similar issues when they arise in other contexts. This approach is not new, and in fact follows the models of many Schenkerian textbooks, in addition to two highly informative articles by Stephen Slottow and David Beach.[6] David Beach writes about his reasons for offering a descriptive analysis such as this:

> It happens all too frequently, I think, that individuals perceive there is something mystical, perhaps even magical, about Schenkerian analysis, or, even worse, that it is arbitrary. I'm afraid we have ourselves to blame, at least in part, for this perspective, in that we are not careful under appropriate circumstances to explain the reasons for

4 Many classical works feature fugal passages. For an example of Schenkerian analysis of fugal textures within larger tonal forms, see Tepping (1986, 1987, 1988).

5 Slottow (2005, 65).

6 Cadwallader, Gagné, and Samarotto (2020, xii); Slottow (2005); Beach (2014).

> the choices we make, though, quite honestly, it would be a burden on us all if we were always to do so. Clearly there are times when a lengthy justification of choices is not appropriate. ... I hope to dispel any notion that all this is in any way arbitrary or the result of some magical incantation known only to the select few.[7]

It is true that it should not be the task for every analytical essay to explain the minutiae considered during the analytic process itself; this would leave no room for more important observations or broader theoretical discussions. Nevertheless, I agree with the sentiment that it should be the task for *some* theorists to take on from time to time. Stephen Slottow suggests other reasons for why these discussions are largely absent from the literature: "as theorists become more experienced and skilled, they perhaps also become less aware of their analytical procedures and processes, which become to some extent automatic and unconscious. ... Another [reason] is that analytic process may well be idiosyncratic to the analyst (or, for that matter, to the piece or composer) and thus difficult to generalize."[8] Both authors present valid points. My article is not the first to present a detailed analysis of a fugue; Schenker provided one himself, Carl Schachter's article on Bach's Fugue in B-flat major from the *Well-Tempered Clavier* Book I has a clear pedagogical undertone, and William Renwick has written several articles and a book dedicated to the topic.[9] There are certain details of their analyses that are left unmentioned, however, since they are writing for an audience more concerned with their conclusions rather than the steps taken to derive them. This study gives attention to the earliest stages of analysis in an effort to clarify the decisions one needs to make during the analytical process.

My descriptive analyses can be utilized by instructors in different ways. For introductory courses where time does not allow for discussion of complete fugues, it may prove most useful to examine isolated concepts—such as polyphonic melody and sequences—and to repurpose my analyses as brief excerpts for study. With this in mind, Appendix A lists additional excerpts appropriate for classroom use. For more advanced courses or independent study, I recommend working through one of the analyses with the students first, and then ask them to analyze the other fugue on their own before reading the rest of the article. For this purpose, Appendix B provides blank worksheets for both of the fugues discussed here.[10]

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7 Beach (2014, 11).

8 Slottow (2005, 44). Several excellent pedagogical resources have appeared since Slottow authored this article, but the general sentiment is still quite relevant to the current essay.

9 See footnote 2.

10 I often provide worksheets like these in my introductory Schenker course as I find it helps the

While my approach is admittedly idiosyncratic, and undoubtedly others would graph these pieces differently in some ways, my goal is to provide a concrete list of actions to take at the earliest stages of analysis, especially when one might feel "stuck." As Slottow writes, "It is important to have an order of possible activities. Students need concrete steps, especially when temporarily stymied … 'don't just stare at the piece, *do* something.'"[11]

Process for Graphing a Fugue: Some Preliminaries

Example 1 outlines my process for graphing a fugue.[12] Understanding the work's formal design is an essential first step in the process, for as Beach notes, "you must always know where you are in the piece."[13]

1. **Analyze the formal design and tonal structure**
   a. Identify tonal segments
   b. Identify subject entries and episodes
2. **Sketch and compare all parallel combinations**
   a. Compare/contrast subject entries
   b. Compare/contrast episodes
3. **Examine the fugue's contrapuntal structure**
   a. Consider and test potential middleground structures
   b. Reconnect individual segments to generate a complete sketch of the entire fugue

Example 1
Process for Graphing Fugue.

By the time they take a course in Schenkerian analysis, most students will be familiar with the tasks typically associated with analyzing a fugue: identifying and labeling

students to have the score arranged horizontally below their multi-level analysis.

11 Slottow (2005, 64-65).

12 This process is similarly implied, yet not explicitly articulated, by Schenker (2014) and Schachter (1999). Helpful summaries of the order of tasks suggested in Schenkerian approaches to tonal analysis can be found in Slottow (2005) and Wadsworth (2016). Neither author presents a complete chart for comparison, but their summaries and bibliographies will prove useful for those interested in the pedagogy of developing a Schenkerian analytic reading.

13 Beach (2014, 8).

subject entries, episodes, and other notable contrapuntal devices.[14] Before completing this task, however, I recommend identifying the fugue's tonal segments (step 1a). By tonal segments, I mean the sections of the fugue articulated by cadences, which are typically few and far between. Emphasis on tonal rather than motivic segmentation is perhaps the biggest distinction between Schenker's theory and traditional formal approaches.[15] Since cadential markers can be less obvious in fugal textures, I suggest that tonal segments will be identified most successfully through listening several times without looking at the score. If we encourage students to identify tonal segments in a fugue first, they will less likely be swayed by surface motivic features in their analysis.[16] Once tonal segments have been identified, surface contrapuntal features can also be added to the form chart. As I will demonstrate below, I combine my analysis of tonal segments (shown with bolder lines) with more usual contrapuntal observations (subjects, episodes, etc.) on the same form chart to make these two approaches easy to reference while keeping them visually distinct.

Step 2 of the process requires detailed sketching and comparison of all passages containing the same contrapuntal materials; in fugues these are typically subject entries and episodes. Many textbooks recommend extracting a voice-leading reduction (imaginary continuo) early in the analytic process in order to simplify the voice leading of a passage.[17] The detailed foreground analyses that students complete during stage 2 will ultimately clarify these underlying voice-leading structures, but as William Renwick describes, progressing from a predominantly linear surface texture toward a chordal framework is not an easy task:

> Discovering or recognizing the path of the fundamental line in a fugue often constitutes a major difficulty for the analyst. The very nature of fugal style includes copious voice-exchanges, voice crossings, register shifts, subsidiary motions to and from inner voices, superposition of inner voices above the main voice, rests in both outer voices, and the unique demands which the various imitative techniques place on the voice leading.

14 Gauldin (2013) is a useful resource for students learning how to analyze a fugue's formal design. Steps 1a and 1b would also be appropriate to introduce to advanced undergraduates or graduates in an 18th-century counterpoint course.

15 This distinction is one of the central points of Schenker's article on "organicism in fugue" (2014); it is also demonstrated in Schachter (1999) and Marlowe (2014), although my 2014 study does not discuss complete compositions.

16 See Schachter (1999); this is also implicit in Schenker (2014).

17 See Rothstein (1990) where the term *imaginary continuo* was first used. In pedagogical resources, see Cadwallader, Gagné, and Samarotto (2020, 68); Schachter (2001); Slottow (2005); and Beach (2012).

> Further, the through-composed form of many fugues gives little in the way of definite structural indicators for the analyst.[18]

Overcoming these analytical challenges is not impossible, but there are two specific concepts that need to be clarified in order to successfully extract an imaginary continuo from fugal textures: students must understand how to analyze polyphonic melodies (a frequent feature of Bach's fugue subjects), and they must be able to identify the contrapuntal framework of a harmonic sequence (a common attribute found in many fugal episodes).[19]

William Rothstein's rules for rhythmic displacement and rhythmic normalization prove most useful when analyzing polyphonic melodies: his rules provide concrete ways to approach and interpret ambiguous passages, and this clarity of thought will lead to greater consistency in analysis.[20] In fact, Rothstein references polyphonic melodies specifically when he introduces the process of extracting an imaginary continuo:

> A polyphonic melody will reduce to a chordal texture when its non-chord tones are reduced out, its constituent voices are verticalized, and the rule of arpeggiation is applied. I like to think of this latent chordal texture as a sort of imaginary continuo accompaniment that underlies every piece of tonal music—regardless of scoring, texture, or date of composition.[21]

Although Rothstein introduces these terms separately, his *Rule of Simultaneity and Rule of Arpeggiation* are essentially one concept.[22] The rule of simultaneity refers to a harmonic interval (two notes) and the rule of arpeggiation refers to an entire harmony (three or more notes that belong to a triad or seventh chord), but in essence all melodic tones belonging to the same harmony should be grouped together. (At deeper levels of structure, these tones will be represented as a single, verticalized chord.) He adds to this later, explaining that linear progressions fill in these arpeggiations with passing tones.[23] In order to determine chord membership, however, we must also

18 Renwick (1995, 205).

19 This is an oversimplification, of course. Polyphonic melodies and sequences can and do occur elsewhere in some fugues.

20 Rothstein (1990).

21 Ibid., 94.

22 Ibid., 92–93.

23 Ibid., 98.

consider the implied harmonic rhythm of a passage.[24] From a pedagogical perspective we can apply these ideas in the following order:

- Determine the harmonic rhythm and implied harmonies of a musical excerpt.
- Distinguish between chord tones and non-chord tones.
- Group pitches that belong to the same harmonies together.

As will be shown below, applying this concept in analysis is more nuanced than my simplistic summary suggests since the implied harmonies and number of voices are often ambiguous in fugal textures.

The second problematic feature commonly encountered in fugal textures involves sequential passages. Sequences often, though not always, occur within fugal episodes and will also appear as a central concept in my analyses below. The concept of harmonic sequences and their voice leading is relatively straightforward, but the frequent registral shifts associated with fugal texture complicates what is often a very simple contrapuntal framework. In my experience teaching an introductory course in Schenkerian analysis, I find that students often struggle with graphing sequences. Like many Schenkerian topics, students tend to understand the broader concepts quite easily, but then are unsure how to apply these concepts independently in their own graphs.

Of the various Schenkerian textbook approaches to analyzing sequences, all observe that they can serve one of two functions: either they are prolongational—that is, they start and end on the same harmony—or they can connect two different harmonies. Either way, sequences play a secondary role within the broader tonal context in which they appear.[25] However, their approaches otherwise differ significantly in the use of terminology and in analytical detail. Cadwallader, Gagné, and Samarotto adopt Forte and Gilbert's concept of the Linear Intervallic Pattern (LIP), a recurring intervallic pattern that occurs between two voices in a sequence.[26] David Damschroder categorizes

24 Ibid., 93.

25 See for comparison, Cadwallader, Gagné, and Samarotto (2020); Damschroder (2017); Forte and Gilbert (1982); and Wen (2020).

26 Cadwallader, Gagné, and Samarotto (2020, 88–101; 103–106); Forte and Gilbert (1982, 83–102). Forte and Gilbert are adamant that LIPs do not necessarily need to occur within a sequence, but it seems that this view stems from differing definition of what a "sequence" is. They define sequences as recurring melodic patterns (85), whereas contemporary theorists define sequences as recurring harmonic patterns. Cadwallader, Gagné, and Samarotto likewise soften the definition in terms of which pair of voices will participate in the recurring intervallic pattern; Forte and Gilbert limit this event exclusively to the outer voices (83), but later studies have shown that this is not always the case.

sequences as parallel (e.g. parallel six-three sonorities), circular, (e.g., a progression that follows a consistent pattern of root motion, such as the descending fifths sequence which travels through the circle of fifths), or sequential (e.g. progressions with models containing two or more harmonies that are subsequently transposed to create either an ascending or descending pattern).[27] He does not reference LIPs specifically, but they are clearly labeled in his sketches. Eric Wen's discussion of sequences focuses exclusively on harmonic reduction (imaginary continuo), and in his characteristic fashion each analysis consists of a series of examples that gradually increase in voice-leading detail as they approach the foreground.[28] All of the above approaches require students to infer a substantial amount of detail from the start, particularly in terms of extracting an imaginary continuo. For many textures, this is simple to achieve. In fugal textures, it is not always immediately obvious what the underlying voice leading of a passage is.

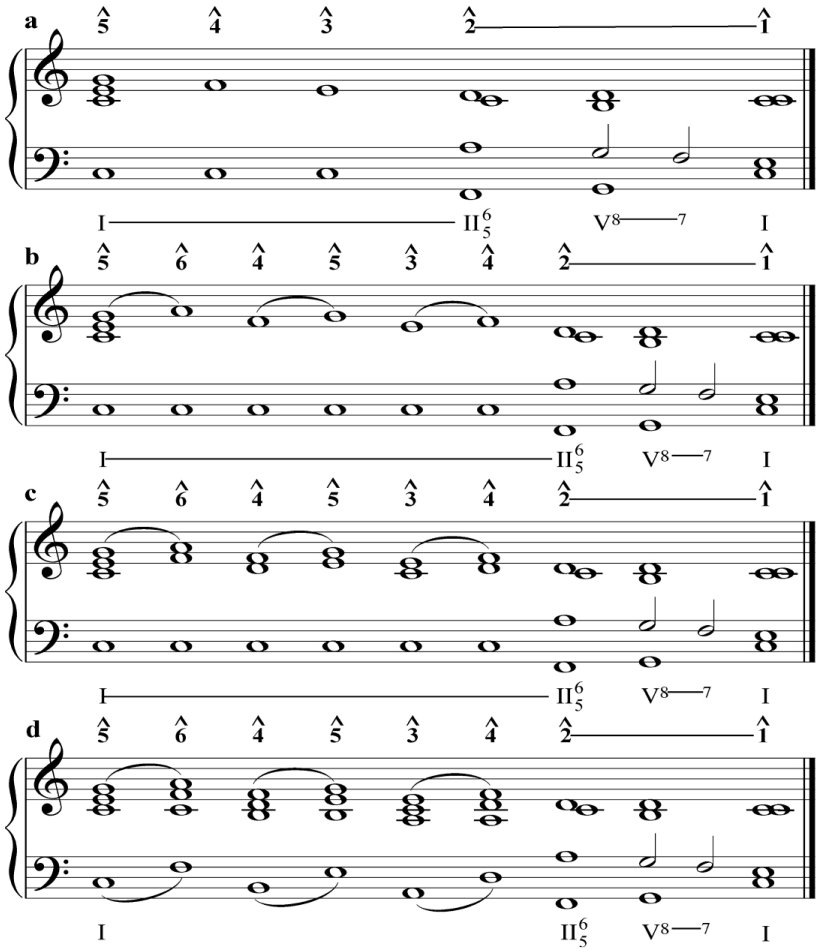
Consideration of species counterpoint frameworks, as suggested by Matthew Brown, provides a more systematic method for approaching sequential passages in analysis, particularly when the voice leading is heavily masked by countless registral exchanges between the voices.[29] To demonstrate this process, Brown's example for how to derive a descending-fifths sequence from species counterpoint is reproduced in Example 2. This example is most relevant to the present study, since both of the fugues I analyze later will feature descending-fifths sequences in their episodes. As Brown demonstrates, given a simple tonal progression (Example 2a), the descending fifth-progression in the melody ($\hat{5}$–$\hat{4}$–$\hat{3}$–$\hat{2}$–$\hat{1}$) can be embellished with upper neighbor tones (Example 2b); a supporting line follows the melody either in parallel thirds or sixths (Example 2c); finally, only one viable option exists for harmonizing the upper lines while adhering to the rules of strict species counterpoint, where no parallel perfect intervals are permitted (Example 2d). Through a series of examples like this, Brown shows how in each sequence type, the voice leading is controlled entirely by parallel motion between the upper voices. At a deeper structural level the bass may even be represented by a pedal tone similar to the one shown in Example 2c.[30] When

27 Damschroder (2018, 163–190).

28 Wen (2020, 157–64).

29 Brown (2005, 99–139).

30 Ibid., 107-10. It is important to note that these contrapuntal frameworks represent deeper levels of structure than concepts like the LIP. Parallel motion can, and often does, appear between any two voices at the musical foreground; later these voices can be repositioned above a stationary bass in the voice-leading framework. An example of this process in Schenker's work is discussed in Marlowe (2020; forthcoming).



Example 2
Deriving a descending fifths sequence, after Brown (2005, 109).

viewed through this lens it is also easier to see how passages like these, while often containing a substantial amount of surface activity, should be viewed as transitory material within larger parts of the structure. In theory, we should be able to identify these parallel sixths or thirds (and thus the underlying contrapuntal framework) within the musical texture, regardless of how complex it may appear to be at the surface.

Brown's contrapuntal frameworks represent deeper levels of structure, and are quite complementary to the textbook approaches summarized above. For instance, students might first identify an LIP, and then consider Brown's frameworks when representing the excerpt at a higher level. Conversely, and especially in more complicated fugal textures, Brown's contrapuntal frameworks can be considered as a preliminary step to conceptualize and untangle the voice-leading. Generally we can summarize the process as follows:

- Identify the tonal trajectory of the sequence (its beginning and ending points).
- Determine the harmonic pattern; this is typically observed most easily through analyzing the bass line.
- Next, depending on the complexity of the excerpt, follow one of these two processes:
  Option 1: Foreground → Background
  - Identify the LIP.
  - Reposition the parallel voices as upper voices above a stationary bass (deep middleground).

  Option 2: Background → Foreground
  - If the texture complicates the task of identifying the LIP at first, start by searching for parallel voices (thirds or sixths).
  - Use these parallel voices to determine what the voice leading must be in the surrounding passage.
  - Observe contrapuntal embellishments of this framework at the foreground.

Application of these ideas will ultimately aid in the process of extracting an imaginary continuo. From there, students can then proceed to compare and contrast parallel passages as they occur throughout the fugue. Students will of course need to consider and observe how similar (often identical) material functions differently when it appears in different contexts throughout the fugue, but I suggest that solving the problems of analyzing polyphonic melody and sequential passages is the key to understanding a fugue's inner form. Once these obstacles are overcome, the remaining stages of analysis will prove to be as straightforward as any tonal work. In fact, since fugues are primarily composed of subject entries and episodes, students will find that after completing step 2 they have sketched the majority of the composition.

In step 3a, students should examine the fugue's harmonic trajectory (this was first identified in step 1a) and consider plausible middleground structures that align with this progression. Consideration of deeper structural levels should only come after careful examination of the surface details since the information observed in step

2 will inform decisions about which of these structures are possible representations of the fugue.[31] Finally, step 3b rejoins the tonal segments from earlier and observes how they align with the fugue's fundamental structure.

Of course, this process does not always need to be followed to the letter for every fugue. In any analysis, a certain amount of flexibility is always required, as is an openness toward alternate interpretations along the way. Most importantly, however, is what Slottow calls "active attention" in analysis.[32] Simply staring at a score and/or passive listening will never lead to a profound understanding of the inner workings of a musical composition; analysts arrive at their final conclusions only through hours of active listening, careful contemplation, and a lot of trial and error. Many of the tasks I outline in Example 1 are meant simply to serve as a springboard for deeper stages of inquiry.

Analytic Demonstration: Two Fugues by J. S. Bach

Getting started: *J.S. Bach, Fugue in D Major from the* Well-Tempered Clavier *Book I*

Bach's Fugue in D Major from the *Well-Tempered Clavier* Book I serves as an ideal introduction to fugal analysis: it is short, allowing for in-depth study of many important details without losing sight of the complete work; the formal design of the fugue is quite tidy, reusing the same elements in only slightly altered ways; and it is strikingly homophonic, which allows for a gradual move away from textures that are primarily chordal and toward those that are predominantly linear in construct.[33] The simple texture enables students to extract an imaginary continuo more confidently in spite of the imitation and linear motion in the fugue's subject.

1. Analyze the formal design and tonal structure.

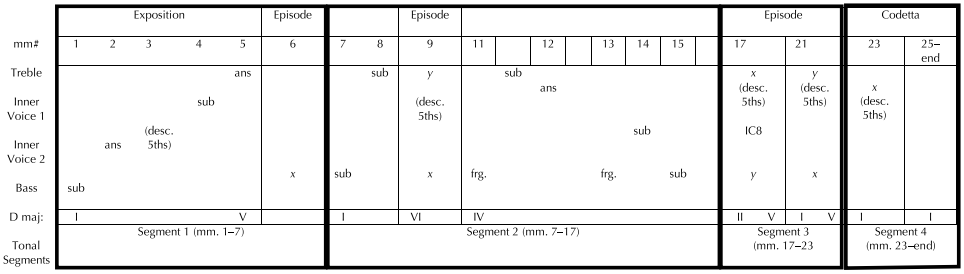
Step 1 is completed relatively quickly within the process, but it is very important. In the form chart, shown in Example 3, bold lines emphasize four tonal segments,

31 In her account of a lesson with Felix-Eberhard von Cube, a student of Heinrich Schenker, Susan Tepping (1988, 66) mentioned his refusal to assign deeper structural function to any notes in their graph until the entire foreground-level analysis was completed.

32 lottow (2005, 64).

33 In his discussion of formal design and tonal structure, Felix Salzer presents a full sketch of this fugue as an example of a one-part structure (1982, 240–243).

in contrast to seven sections articulated by motivic segmentation.[34] Students should consider the implications of these differences carefully, and they should also focus on how a Schenkerian approach informs their understanding of the concepts of formal design and tonal structure. Consider the fugue's exposition, for example. Traditionally, we mark the end of the fugue exposition at the point where all of the voices have stated the subject.[35] Form analysis would therefore dictate that the exposition ends on the arrival of V in m. 6. But the first tonal segment marked in Example 3 continues until a return to I in m. 7. It will also be possible, and sometimes necessary, to extract smaller units when examining the voice leading in step 2—Schachter does this as well—but only where clear tonal boundaries are apparent. For instance, while the first tonal segment extends from mm. 1–7 as described above, a smaller tonic expansion occurs in mm. 1–4. Depending on the context, and details under consideration, one might find smaller segments more manageable at times.



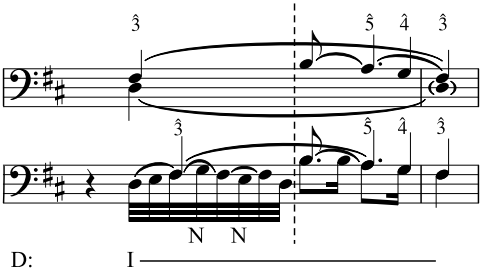
Example 3
Form Chart, J. S. Bach Fugue in D major from the *Well-Tempered Clavier* Book I

34 This approach is modeled closely after Carl Schachter's analysis of Bach's Fugue in B-flat major; he provides a more traditional form chart of the fugue, but he organizes his analytic discussion by tonal segments (1990). My step 1 aims to combine these two views more explicitly. The D-major fugue contains only two large passages of subject entries (mm. 1–6 and mm. 11–17; a briefer passage of entries in mm. 7–9 will be shown in the full graph of the piece). The fugue's subject never returns in its entirety after m. 17. Bach's extensive use of the first half of the subject in the later episodes ensures that the subject continues to dominate the fugue as a whole.

35 Schenker ([1926] 2014, 33) was vehemently opposed to the practice of associating the "voices" in fugal texture with voice parts (Soprano, Alto, Tenor, Bass). He argued that the voices in fugues should be understood only as instrumental parts. Carl Schachter (2016, 30) similarly objects to the current practice of referring to pitches via the system created by the Acoustical Society of America (ASA), suggesting that the traditional system used by J. S. Bach and others is more "rooted in the human body and the human voice." In keeping with these views, I will refer to voice parts as Treble, Inner Voice, and Bass in my form charts and elsewhere.

2a. Identify and compare all parallel passages: subject and subject entries.

Step 2 requires sketching and comparing all parallel passages. Step 2a involves graphing the subject and all subsequent passages containing subject entries. Because subject entries recur frequently throughout a fugue, and because similar passages need be graphed consistently, it is important to justify all analytical choices made at this stage. Example 4 presents the score and voice-leading sketch for the D-major fugue subject.



Example 4
J. S. Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, subject.

The dotted vertical line in Example 4 divides the subject into two parts for study. According to Rothstein, linear progressions are the composing-out of a chord or chordal interval: "Despite its stepwise appearance, therefore, a linear progression is in essence an arpeggiation filled in by passing tones."[36] The rising stepwise motion in the first half of the subject outlines a third D/F♯, and F♯ is further embellished by upper and lower neighbor tones. The second half of the subject features a leap to B ($\hat{6}$) followed by descending third-progression ($\hat{5}$–$\hat{4}$–$\hat{3}$). The final consideration is how the first and second halves of the subject are connected. Rothstein's *rule of arpeggiation* states that tones of an arpeggiated harmony will belong to a vertical chord.[37] When D and F♯ from the first half of the subject are grouped with the B that starts the second half of the subject, they do form a triad. But it makes little sense to outline a B-minor triad at the start of a composition in D major. Furthermore, grouping these pitches together ignores the harmonic rhythm, which changes regularly on every quarter-note beat. The harmonic rhythm also precludes grouping D, F♯, and A (beats 2 and 4) together as a single tonic arpeggiation, because it would also bypass a harmonic

36 Rothstein (1990, 98).

37 Ibid., 92.

change on beat 3.[38] Thus, according to Rothstein's rule, neither group of pitches can be viewed as an arpeggiation—at least not at the foreground—because they do not form a triad. With these details in mind, it makes the most sense to interpret B as an upper-neighbor to A ($\hat{5}$), which initiates a descending third-progression ($\hat{5}$–$\hat{4}$–$\hat{3}$). Because this fugue subject places so much emphasis on F♯, my sketch in Example 4 (and in the middleground sketch in Example 11) treats the $\hat{5}$–$\hat{4}$–$\hat{3}$ progression as a melodic embellishment to F♯.

Several of these observations might seem immediately obvious, but it is important to be as precise as possible since how the subject is graphed impacts a substantial portion of the analysis. Many students have strong musical intuitions and will want to jump more quickly to the graphing stage, but I caution them against relying too heavily on musical intuition alone, as this can sometimes lead to inconsistent readings.[39] It is best to ground our decisions in the rules of counterpoint. In the remaining part of step 2a, students should compare all of the subject entries in the fugue and observe how they function within various contexts.[40] The first tonal segment, mm. 1–7, is analyzed in Example 5.[41] (In all of my examples, the score is provided at the lowest level for ease of comparison with my analyses; a foreground sketch containing most of the pitches from the score is immediately above, followed by a middleground sketch at the highest level.)

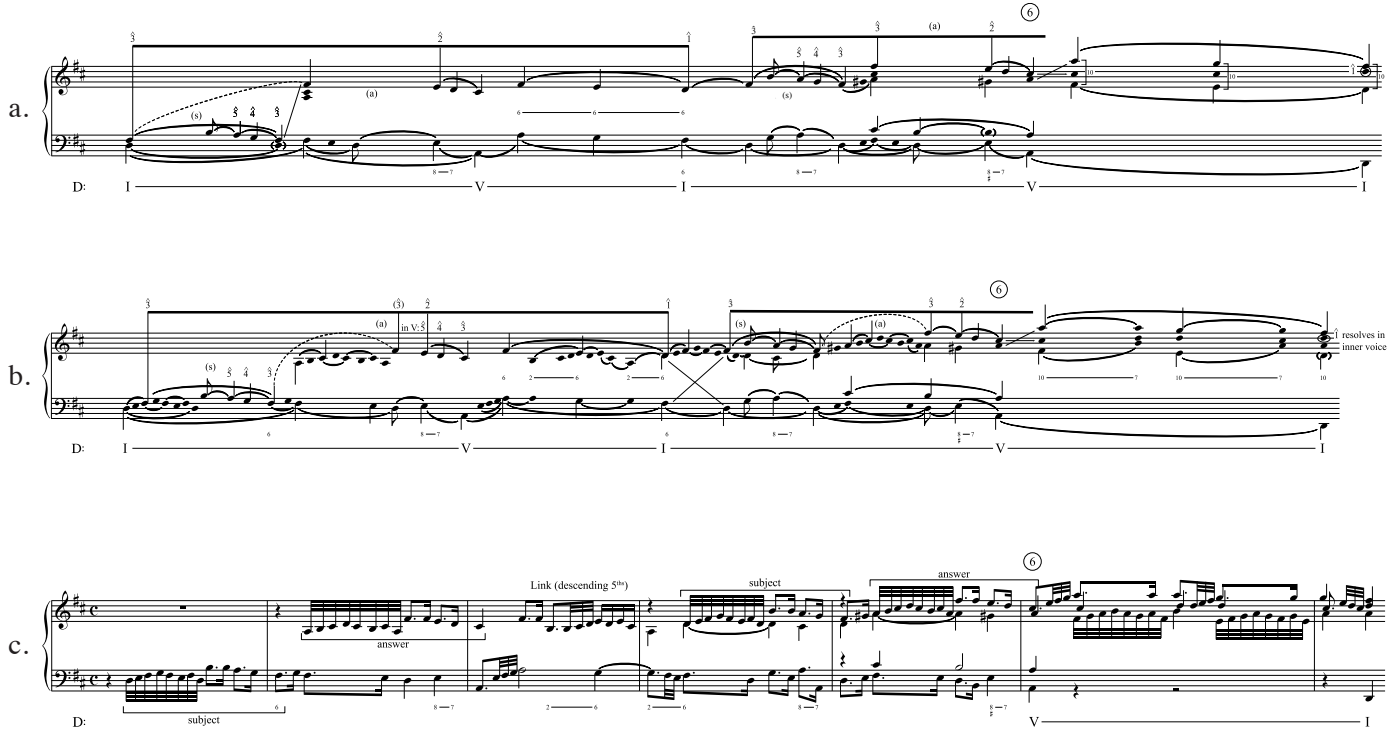
In examining Examples 5a and 5b, it is clear that the subject and answer are not graphed identically. Where the upper-neighbor B ($\hat{6}$) in the subject is graphed consistently with the analysis shown in Example 4, this same upper neighbor in the answer (F♯ in m. 2) holds more structural weight; it keeps $\hat{3}$ active within a large-scale descending third-progression that spans across mm. 1–4 (and again in mm. 4–7 with the second pair of entries). Because the answer ends on the dominant, the linear progression is incomplete until the arrival of the third voice entry in m. 4 (beat 2).

38 Rothstein (1990, 91) also notes the importance of observing harmonic rhythm.

39 I discuss this issue in greater detail in Marlowe (2020; forthcoming).

40 Blank worksheets of these tonal segments are provided in Appendix B for individual study.

41 I demonstrated earlier how a shorter tonal segment from mm. 1–4 could also be extracted, but because the third and fourth voice entries follow an identical voice-leading model as the one shown in the first and second voice entries, it seems more appropriate to include the entire exposition here instead (i.e., further insights would not be gained through examining the later pair of voice entries in isolation). Students should also notice that these initial sketches do not contain any open noteheads. It is crucial to examine the voice-leading motions within each tonal segment, without committing to a specific middleground reading too early in the analytic process.



Example 5
Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, subject entries in mm. 1–7 (exposition).

For this reason, it is essential to include the *link* in m. 3 to represent a complete tonal segment.[42] The complete sketch in Example 11 reveals two descending linear progressions ($\hat{3}$–$\hat{2}$–$\hat{1}$) that, when combined together, expand the tonic *Stufe* over the entire span of mm. 1–7.

The next large group of subject entries (mm. 11–17) is presented in Example 6. A similar large-scale descending third-progression (B–A–G) is projected here, except this passage features a modulation from G major (m. 11) to E minor (m. 17). By the time the linear progression descends to G in m. 14, we have firmly arrived in E minor via 5–6 contrapuntal motion. The excerpt concludes with a key-confirming cadence in E minor (m. 17) that continues to support G in the upper line.

2b. Identify and compare all episodes.

Step 2b examines fugal episodes. As the form chart illustrates (Example 3), most of the episodes in this fugue feature descending-fifths sequences, and three (those beginning in measures 9, 17, and 21) contain nearly identical material. Schenker generally did not acknowledge sequences in his writing, referring to them as "fallacious concepts."[43] Contemporary Schenkerians are of course far more willing to recognize the existence of sequences. Nevertheless Slottow suggests that, while we might be inclined to tone down Schenker's harsh rhetoric, we should still heed his point about how sequences function within the larger tonal context: "That is, they do not exist apart from their larger context and function but they do not 'not exist' either."[44] Slottow recommends viewing sequences as verbs (progressions that perform a specific action, leading from one point to another within the large-scale tonal trajectory) rather than nouns (inert objects, like "stones plopped here and there into the musical stream … [if viewed this way] their role in the larger structure [is] eclipsed").[45] I find this to be a particularly useful analogy in the classroom.

As we all know, not all fugal episodes contain sequences, but Renwick discusses how the two topics are interrelated:

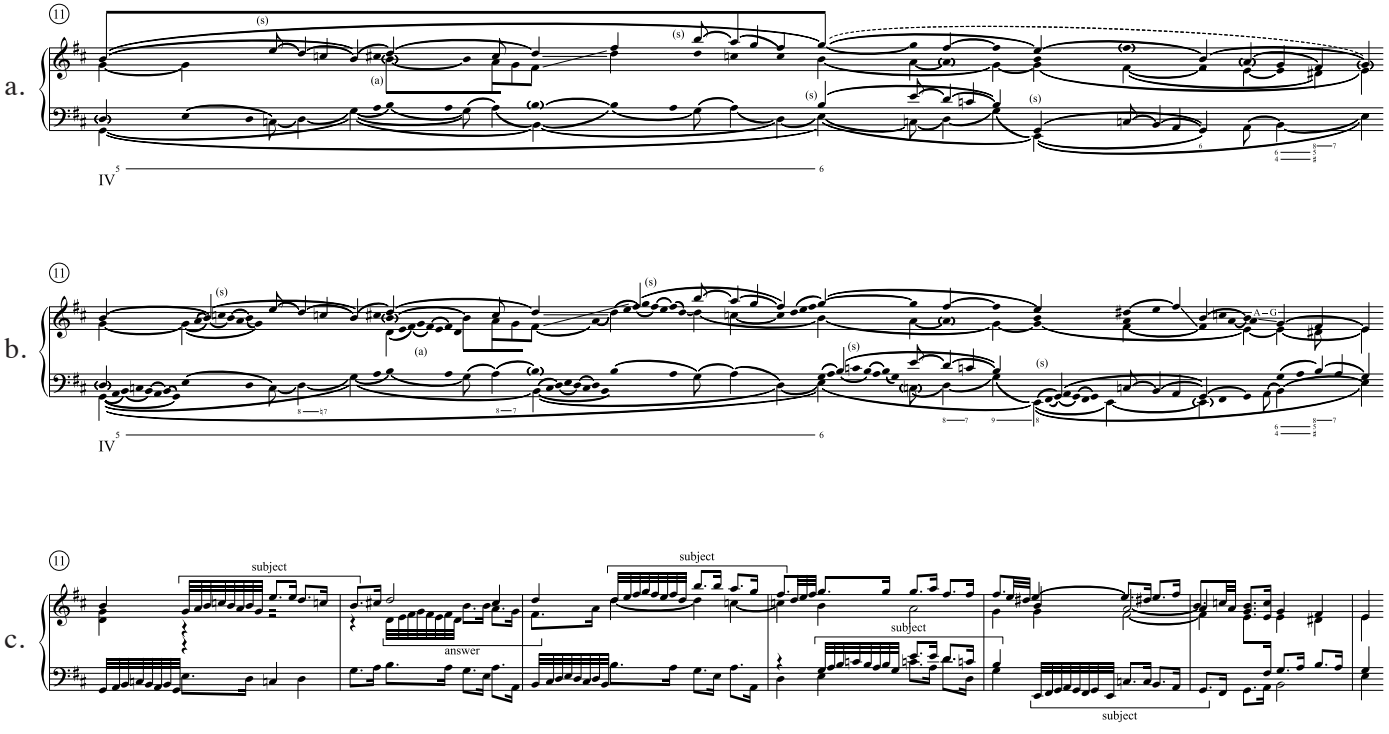
---

42 The descending-fifths sequences in mm. 3 and 6 serve to return to tonic in this context; I will discuss sequences when I analyze fugal episodes in the next section.

43 Two helpful summaries of Schenker's opinion on sequences, along with proposed solutions for addressing them in analysis can be found in Brown (2005, 99–103) and Slottow (2018).

44 Slottow (2018, 73).

45 Ibid., 76 and 74.



Example 6
J. S. Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, subject entries, mm. 11–17.

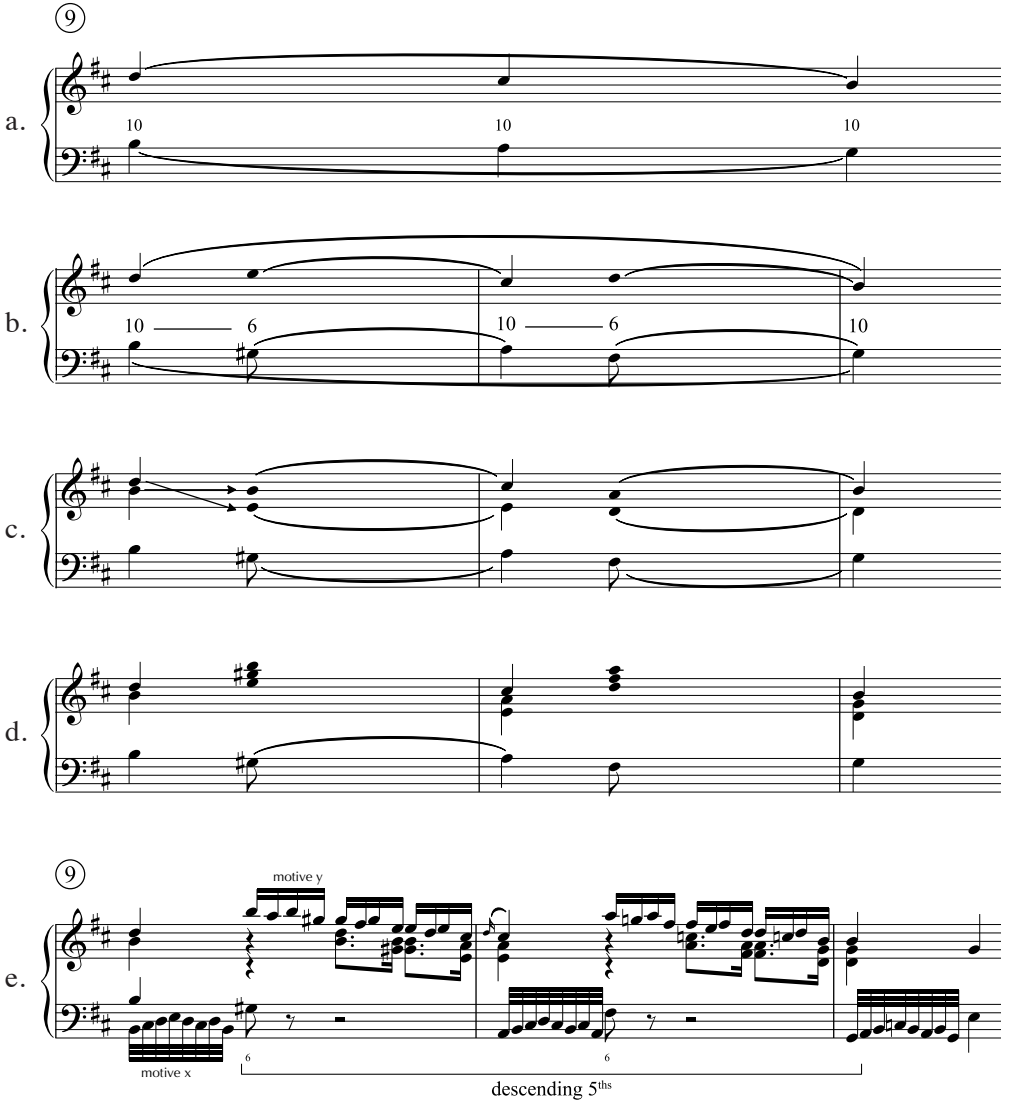
> Despite their different significations, sequence and episode are intimately linked in that episodes are commonly but not always based on a sequential structure, and sequences are most conspicuous in fugues when they are used as the structural basis of episodes. Indeed sequence is the typical means by which episodes project a sense of unity and directed motion.[46]

When completing step 2b, it is completely appropriate to examine the voice-leading of each episode and to consider the sequence's contrapuntal framework; but it is equally important for students to consider each episode's tonal trajectory as well. As stated earlier, we know that a sequence can either be prolongational, composing out its local tonic, or it can be transitional, moving from one key to another at the musical surface. But the tonal segments we extract for study may not necessarily start and end precisely where the sequences do. Rather, we must examine these passages within the confines of their local tonal boundaries. In Example 7 for instance, there is a clear arrival on B minor at the conclusion of the subject entry on the downbeat of m. 9; this arrival coincides with the start of the sequential passage, and so I am able to isolate the sequence for study. Other instances may require inclusion of non-sequential material if tonal bondaries are articulated separately from the beginning and ending of the sequence itself. Of course, in all of these instances, we will later take a further step back to consider how these segments function within the larger tonal context.

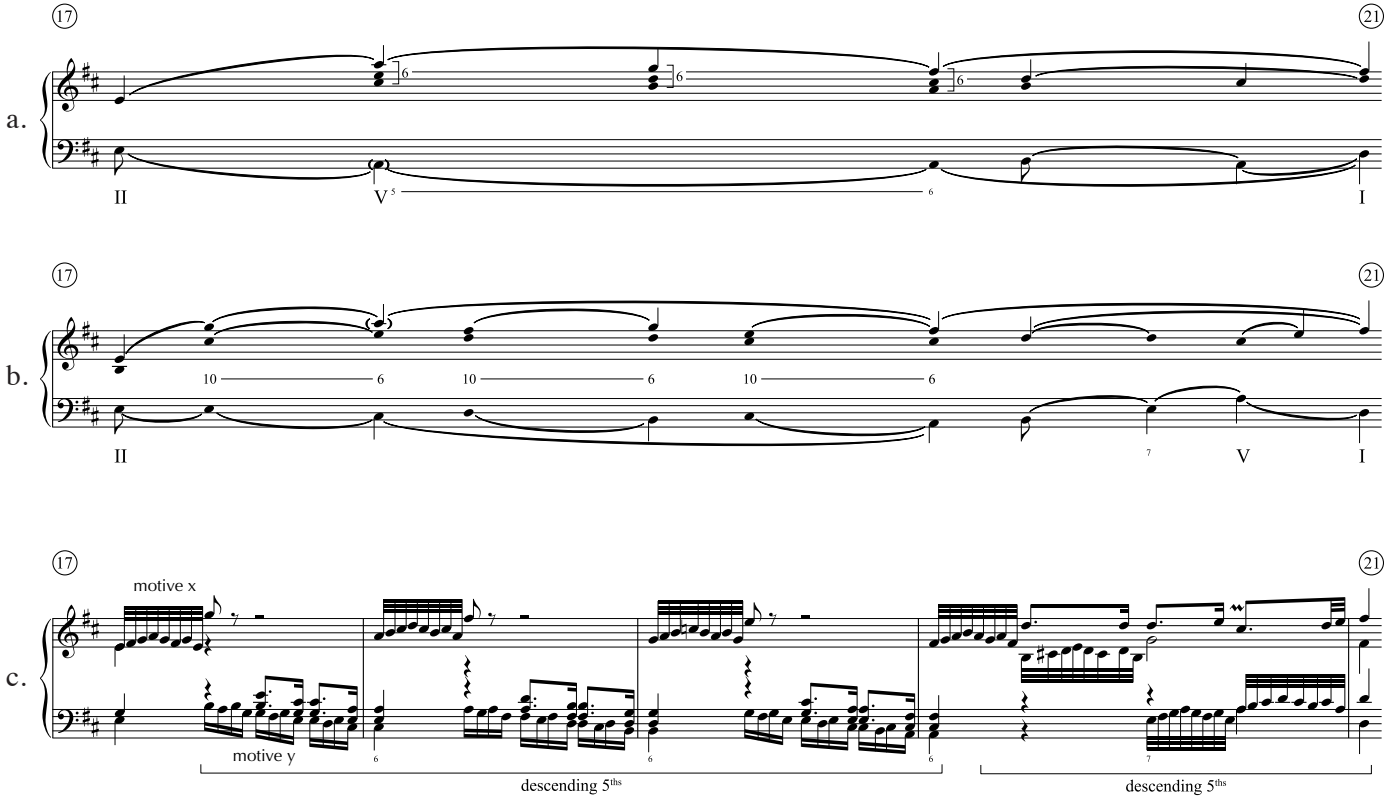
A general process for analyzing sequences in fugal texture was described above; of course, this process can be applied to any complex texture. In Example 7, the underlying harmonic pattern is clear (it is a descending-fifths progression embellished with secondary dominants in the ancillary chords).[47] Students will likely be able to identify the LIP here as well: at the onset of each new harmony, we can identify a 10–6 intervallic pattern in the outer voices. But, in my experience, students will need more instructional guidance to determine how to graph this passage. Using Rothstein's rule of arpeggiation, Example 7d first groups the tones in beats 2–4 as a vertical harmony: in the right-hand part, each sixteenth-note group features a lower neighbor followed by an anticipation of the following pitch; and the left-hand part has been simplified to highlight only the bass tones of the implied harmonies (the thirty-second-note pattern was already analyzed when it first occurred in the fugue's subject). I then normalize the register of the right-hand part and omit octave doublings with the bass pitches (Example 7c). The arrows indicate voice-leading motions in the upper voice.

46 Renwick (1995a, 139).

47 For more in-depth discussion of ancillary chords, see Slottow (2018) and Willner (2005, 2016).



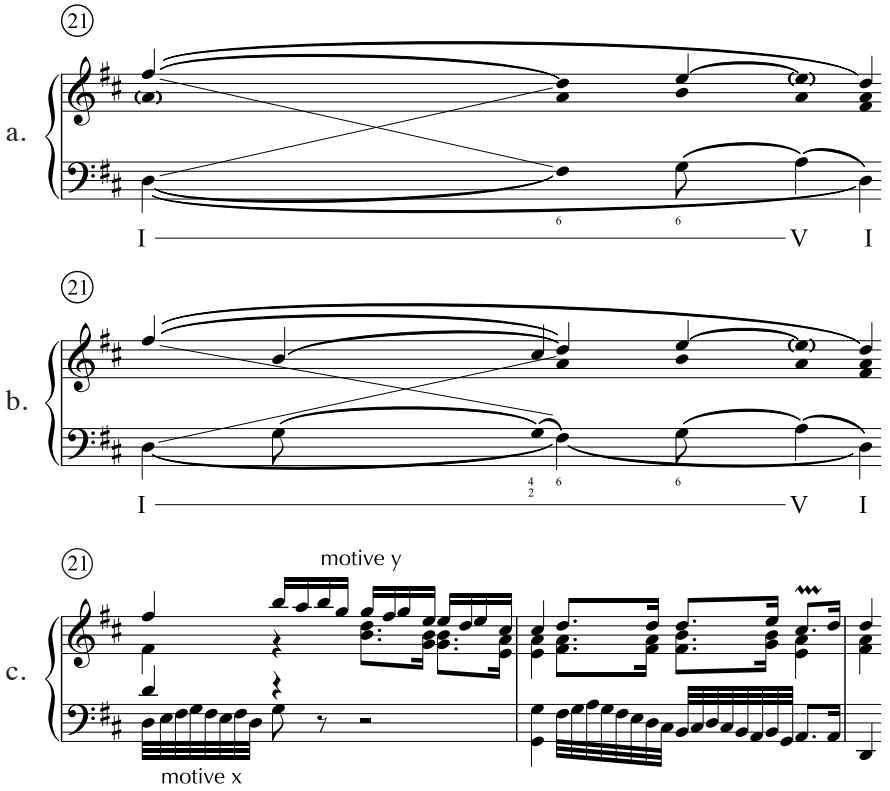
Example 7
J. S. Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, mm. 9–11.



Example 8
J. S. Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, mm. 17–21.

From here, I rely on Brown's contrapuntal frameworks to help clarify the deeper-level function of the passage. In Example 7b, I omit additional doublings and normalize the upper voice to isolate a two-voice framework. The neighbor-note embellishments that were featured in Example 2b start to emerge here as well. As Brown points out, and as is now clear here, the surface "chords" are contrapuntal elaborations of the underlying parallel motion between two voices (Example 7a).

The same procedure is applied to the later fugal episodes as shown in Example 8 and Example 9. In Example 8, motives *x* and *y* have been inverted (this is also noted on the form chart in Example 3) resulting in invertible counterpoint at the octave. The sequential pattern changes in m. 20 and a faster harmonic rhythm drives toward the cadence in tonic (m. 21). An abbreviated form of the same sequential pattern returns in m. 21 (Example 9). The arrival of a V^4_2 sonority signals a break in the sequence in

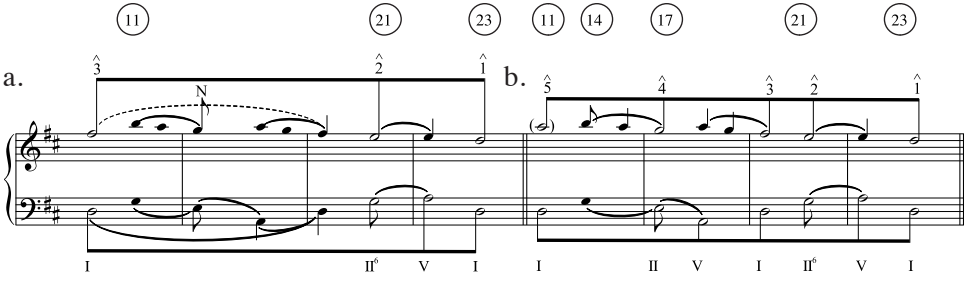


Example 9
J. S. Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, mm. 21–23.

m. 22, and the passage concludes with a second emphatic arrival on the tonic in m. 23. Simplified voice leading in Example 9a reveals a descending third-progression (F♯–E–D) that spans this entire segment.

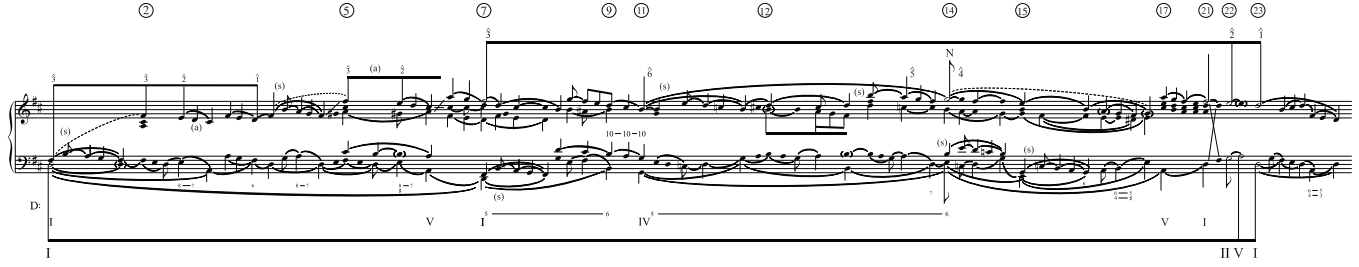
3. Examine the fugue's contrapuntal structure.

Completing step 2 results in detailed foreground sketches of nearly the entire fugue; the remaining tasks (steps 3a and 3b) reconnect these segments to fit within the large-scale structure. At the earliest stages of analysis, it is important to proceed from foreground to background. It is often tempting to jump ahead to the deeper structural levels—and sometimes they are immediately recognizable—but clarifying the precise voice-leading paths at the musical surface is essential before making any final determinations about the fugue's tonal structure. Taking the harmonic trajectory outlined in Example 3 as a starting point, I present two plausible middleground structures for the fugue in Example 10. Both readings seem equally sound, but the final decision rests on whether the *Kopfton* is $\hat{3}$ or $\hat{5}$.



Example 10
J. S. Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, plausible middleground structures.

The middleground sketch in Example 11 (step 3b) considers the fugue's large-scale structure while keeping the voice leading from step 2 intact. After reconnecting the individual tonal segments, I decided that $\hat{3}$ was the primary tone for two main reasons. In my discussion of the fugue's subject (Example 4), I noted the strong emphasis on F♯ ($\hat{3}$). I also noticed that an inner voice reaches over the answer (m. 6) and leads to F♯ ($\hat{3}$) in the upper register. This F♯ (m. 7) remains active until the supporting harmony modulates to B minor (m. 9), giving it added emphasis. This reading (consistent with the structure represented in Example 10a) also reveals some interesting motivic parallelisms: the upper-third patterns that decorate pitches in the fundamental line



Example 11
Bach, Fugue in D major from the *Well-Tempered Clavier* Book I, middleground sketch.

($\hat{6}$–$\hat{5}$–$\hat{4}$ leading to G in m. 14; and $\hat{5}$–$\hat{4}$–$\hat{3}$ leading to F♯ in m. 21) are similar to the melodic embellishment ($\hat{5}$–$\hat{4}$–$\hat{3}$) leading to F♯ ($\hat{3}$) in the fugue's subject (see Example 4). The misalignment with the upper line and its harmonic support also highlights an anticipatory quality, similar to the anticipation figures featured in the episodes.

Advanced Practice:
J. S. Bach, Fugue in F major from the Well-Tempered Clavier *Book I*

Having demonstrated my process through discussion of the D-major fugue, I will now discuss Bach's Fugue in F major from the *Well-Tempered Clavier* Book I to explore how the process can be adapted to a new composition. This fugue poses greater challenges than the D-major fugue: the voice leading in the subject is more ambiguous, and there are many register transfers (particularly in the episodes) that complicate the voice-leading analysis. Nevertheless, I will show that application of the same procedures described earlier will result in a successful analysis of the fugue.

1. Analyze the formal design and tonal structure.

A form chart for the F-major fugue is presented in Example 12. Step 1a identifies four tonal segments, and step 1b reveals a double exposition and middle entries in stretto at the octave.[48] The order of voice entries reverses in both of these passages: in the counter-exposition (starting in m. 18), the upper voices appear in reverse order, and the voice order in the second set of stretto entries (mm. 46–56) is a mirror image of the first stretto passage (mm. 36–46).

	Exposition mm. 1–13			Episode mm. 13–17	Counter-Exposition mm. 18–29			Episode mm. 29–36	Stretto Entries mm. 36–46			Stretto Entries mm. 46–56			Episode mm. 56–64	Final subject entry mm. 65–68	Closing mm. 68–end		
mm.	1	5	10		18	22	26		36	38	40	46	48	50		65	68	71	72
S		ans			sub			desc. 5ths	sub					sub	desc. 5ths	sub			
A	sub					ans				sub			sub						
B			sub				sub				sub	sub							
FM:									V	→	I	V	→	I				V	I
	I	V	I		I	V	I			(in VI)			(in II)						
	Segment (mm. 1–29)							Segment 2 (mm. 29–46)				Segment 3 (mm. 46–56)			Segment 4 (mm. 56–end)				

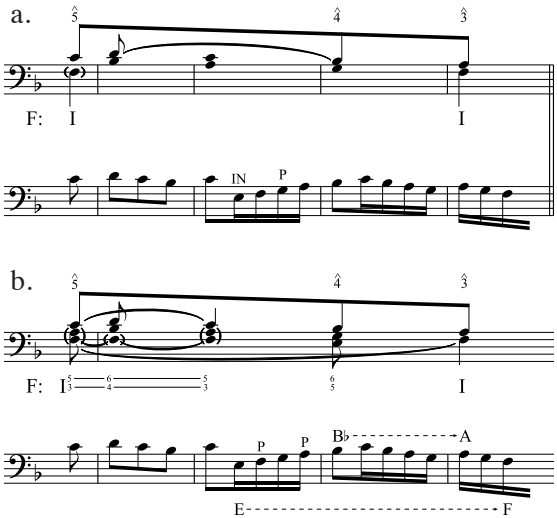
Example 12
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, form chart.

48 Only four fugues from the *Well-Tempered Clavier* contain double expositions: Book I: Nos. 1 and 11; and Book II: Nos. 2 and 9 (Prout 1891, 90). For the stretto entries, imitation at the octave (rather than the fourth or fifth) is more akin to canonic writing than to fugue.

2a. Identify and compare all subject entries.

The subject is presented in Example 13 with two possible voice-leading interpretations. I should note here that the subject itself ends on the downbeat of m. 4 (A); I include two additional sixteenth notes in m. 4 to show the resolution of the bass tone F (compare with the implied bass tones in both voice-leading sketches in Examples 13a and 13b). The subject's descending third-progression ($\hat{5}$–$\hat{4}$–$\hat{3}$) is readily apparent, but the sketches reveal slight differences in how the pitches in m. 2 are interpreted: is D ($\hat{6}$) an incomplete neighbor leading to $\hat{4}$ (Example 13a) or does it participate in a complete neighbor progression to $\hat{5}$ (m. 2) before descending to $\hat{4}$ (Example 13b)? It seems like a small detail, but since graphing the subject has such significant implications for the remainder of the analysis, students should be encouraged to provide clear and precise explanations for the analytic interpretation they choose.

To start, it seems reasonable to imply a tonic bass pitch to support $\hat{5}$ at the beginning of the fugue.[49] Example 13a relies primarily on pitches that occur in the score: the descending thirds in mm. 1 and 4 are grouped to show dyads D/B♭ and A/F, and m. 3 reveals yet another outlined third B♭/G when the melodic embellishments are omitted. When taken at face value, the surrounding context suggests that m. 2



Example 13
J. S. Bach, Fugue in F major from the Well-Tempered Clavier Book I, subject.

49 To read more about the implied inner voices of Schenker's *Stufen* see Brown (unpublished), Lubben (1993), Neumeyer (1981, 1987); and Willner (2007).

should also highlight a third (C/A). This interpretation treats E and G as accented embellishments to an implied F-major sonority. But this reading does not provide an explanation for the F in m. 2. If an F-major sonority is implied, and we omit the embellishing tones, then we would be left with F–A–C, not merely a dyad (C/A) like in the surrounding measures. Perhaps the F is a continuation of the implied bass tone at the start of the fugue and through to m. 4, but where does this line go in mm. 1 and 3?

As an alternative, the linear progression $\hat{5}$–$\hat{4}$–$\hat{3}$ and its lower-third embellishments are still represented in Example 13b, but this reading considers the possibility of an implied third voice. In contrast to Example 13a, where E and G were interpreted as accented embellishments in m. 2, Example 13b treats F and A as the embellishing tones and the linear motion from E to B♭ is then grouped together as a single sonority in m. 3. Students may find this interpretation less convincing at first: the harmonic rhythm is one chord per measure, and so it may seem strange to treat the pitches in m. 2 as an anticipation of the harmony in m. 3. This interpretation is valid, however, as it follows the principles outlined in Rothstein's "Rules of Arpeggiation and of the Primary Tone." According to Rothstein, if the harmonic rhythm remains steady throughout a musical composition, we can use the surrounding context to resolve any ambiguities.[50] Additionally, he explains:

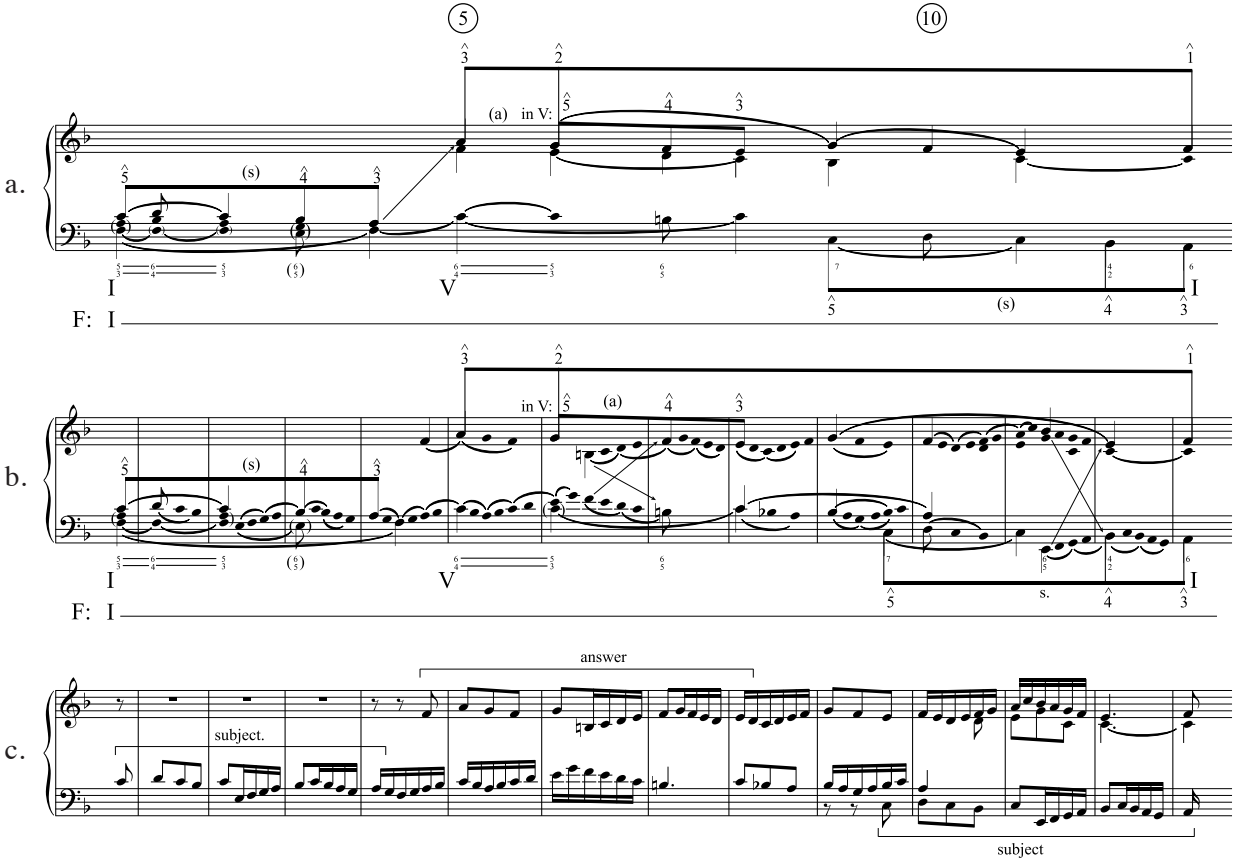
> Harmonies tend to begin on relatively strong beats rather than on relatively weak ones. When a harmony begins on a weak beat and is continued into the next stronger beat, a harmonic syncopation occurs. ... When a harmonic syncopation is normalized, the underlying initiation point of the harmony will not be the same as the surface initiation point. ... If the goal harmony arrives only at the end of the linear progression, the melodic line must be considered an anticipation of that harmony. ... The underlying initiation point of each tone in an arpeggiation is the same as that of the harmony being arpeggiated. Hence any chord tones appearing *before* that point are to be understood as anticipations of the harmony (unless they are held in common with the preceding harmony). Any chord tones appearing *after* that point are to be understood as having been delayed from the underlying initiation point."[51]

In the F-major fugue, the harmony changes approximately once per measure. The linear ascent from E to B♭ outlines the tritone within a V^7 sonority, but V^7 chord does not actually emerge until the downbeat of m. 3. As a result, we can view this melodic outline from E to B♭ as an anticipation of the V^7 sonority in m. 3.[52] In the

50 Rothstein (1990, 93).

51 Ibid., 93 and 99.

52 The analysis in Example 13b is consistent with how Cadwallader, Gagné, and Samarotto analyze this fugue subject in their textbook (2020, 21).



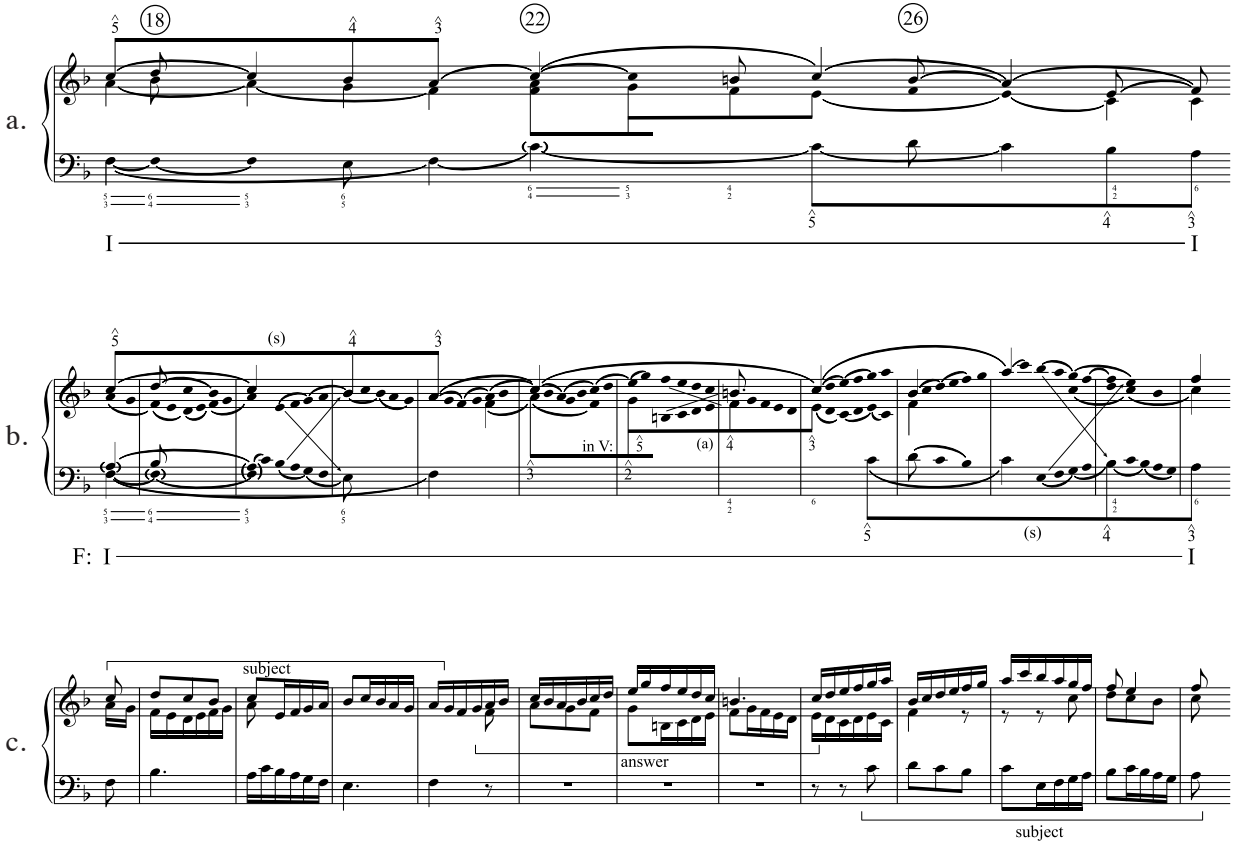
Example 14
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 1–13.

end, Example 13b suggests that there are three active lines of voice leading implicit in the fugal subject. The added bass line clarifies the voice leading of the passage and demonstrates how $\hat{6}$ in m. 1 functions as a complete neighbor to $\hat{5}$ in m. 2. When additional contrapuntal lines accompany the subject later in the fugue, any octave doublings that occur with this three-voice framework can be omitted from the voice-leading sketch.

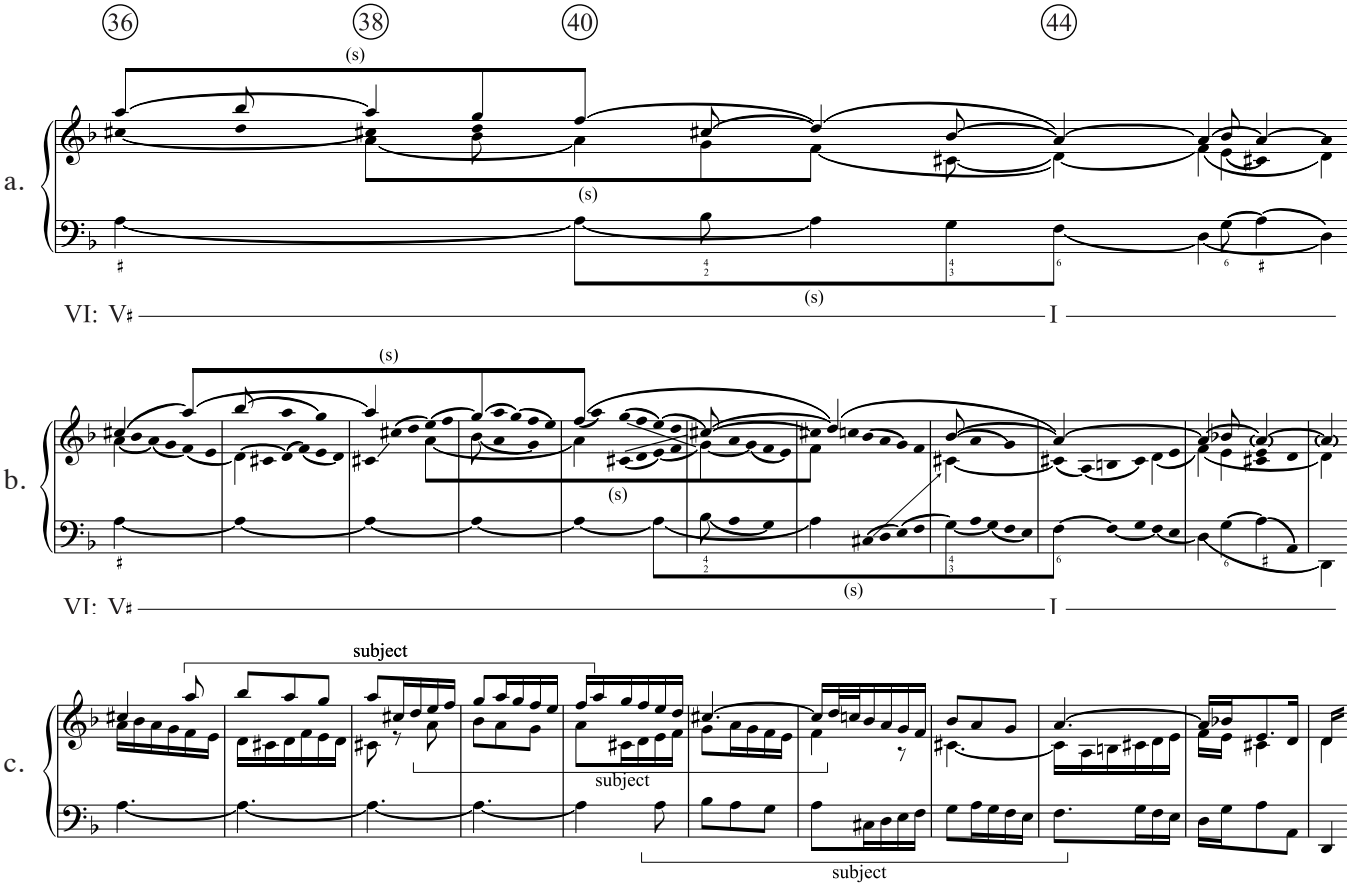
The next part of step 2a explores how the subject functions within larger tonal contexts. There are two pairs of subject entries to compare in this fugue: the exposition (mm. 1–13) with the counter-exposition (mm. 18–29), and the two passages containing stretto entries (mm. 36–46 and mm. 46–56). In Example 14, students should observe how the subject's voice-leading framework is modified as additional contrapuntal lines are added to the texture. In other words, since the number of contrapuntal lines increases with each subject entry, and because some of the same linear motions are present in the added voices (such as the $\hat{1}$–$\hat{7}$–$\hat{1}$ motion in m. 3), they no longer need to be included specifically with the subject.

As in the D-major fugue, the analysis of mm. 1–13 shows how the answer (beginning in m. 5) plays a supportive role across the entire exposition. When combined with the opening subject entry, these two voices combine to project a large-scale descending fifth-progression ($\hat{5}$–$\hat{4}$–$\hat{3}$–$\hat{2}$–$\hat{1}$) that is not completed until the return of tonic in m. 13. (Although the third entry appears sooner, it begins on $\hat{5}$ in the bass voice so it cannot support a tonic *Stufe* until it descends to $\hat{3}$.) The counter-exposition in Example 15 projects the same descending fifth-progression but with reversed voice entries.

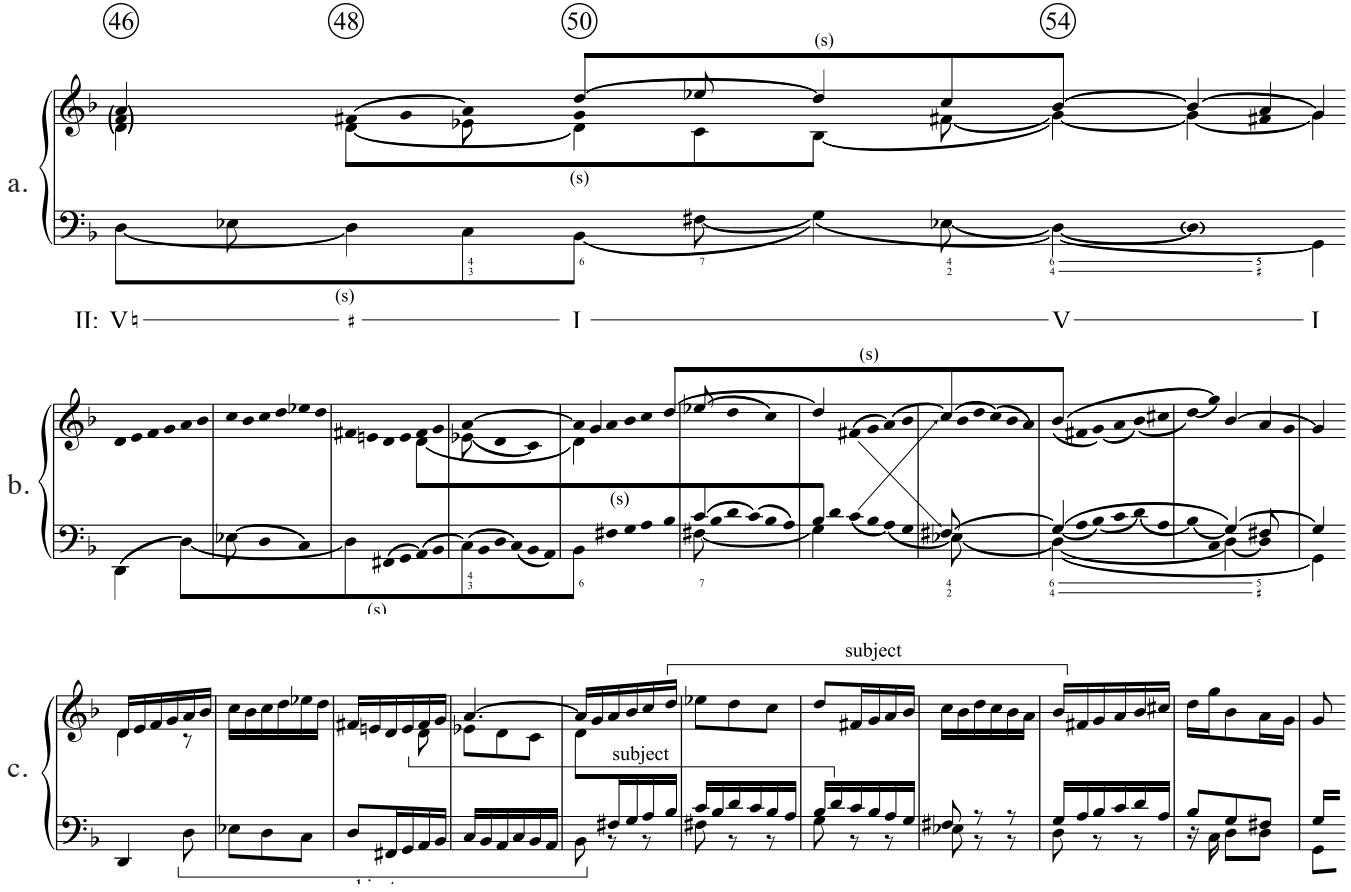
The stretto entries (Examples 16 and 17) work a bit differently. By nature of stretto technique, the spacing between entries is more compressed than in the previous two excerpts. Bach repositions the entries to combine the subject's upper neighbor figure ($\hat{5}$–$\hat{6}$–$\hat{5}$) with its implied lower neighbor motion in the bass ($\hat{1}$–$\hat{7}$–$\hat{1}$). As a result, these entries no longer support a descending fifth-progression, but continue to project descending third-progressions ($\hat{5}$–$\hat{4}$–$\hat{3}$) in their respective key areas. The construction of the subject lends itself well to tonal manipulation, and Bach clearly exploits these features throughout the fugue: beginning on $\hat{5}$ creates a sense of harmonic instability when the subject appears in the lowest voice (it projects an implied six-four sonority); the descending linear progression $\hat{5}$–$\hat{4}$–$\hat{3}$ predictably appears as 8–7 motion over the dominant, creating a strong drive toward its resolution to tonic ($V^{8-7} \rightarrow I$); and in the stretto passages, the upper and lower neighbor patterns are aligned to imply $vii^{\circ 7}$ sonorities which, in addition to the compressed timing of entries, increases harmonic tension and drive toward resolution.



Example 15
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 18–29.



Example 16
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 36–46.



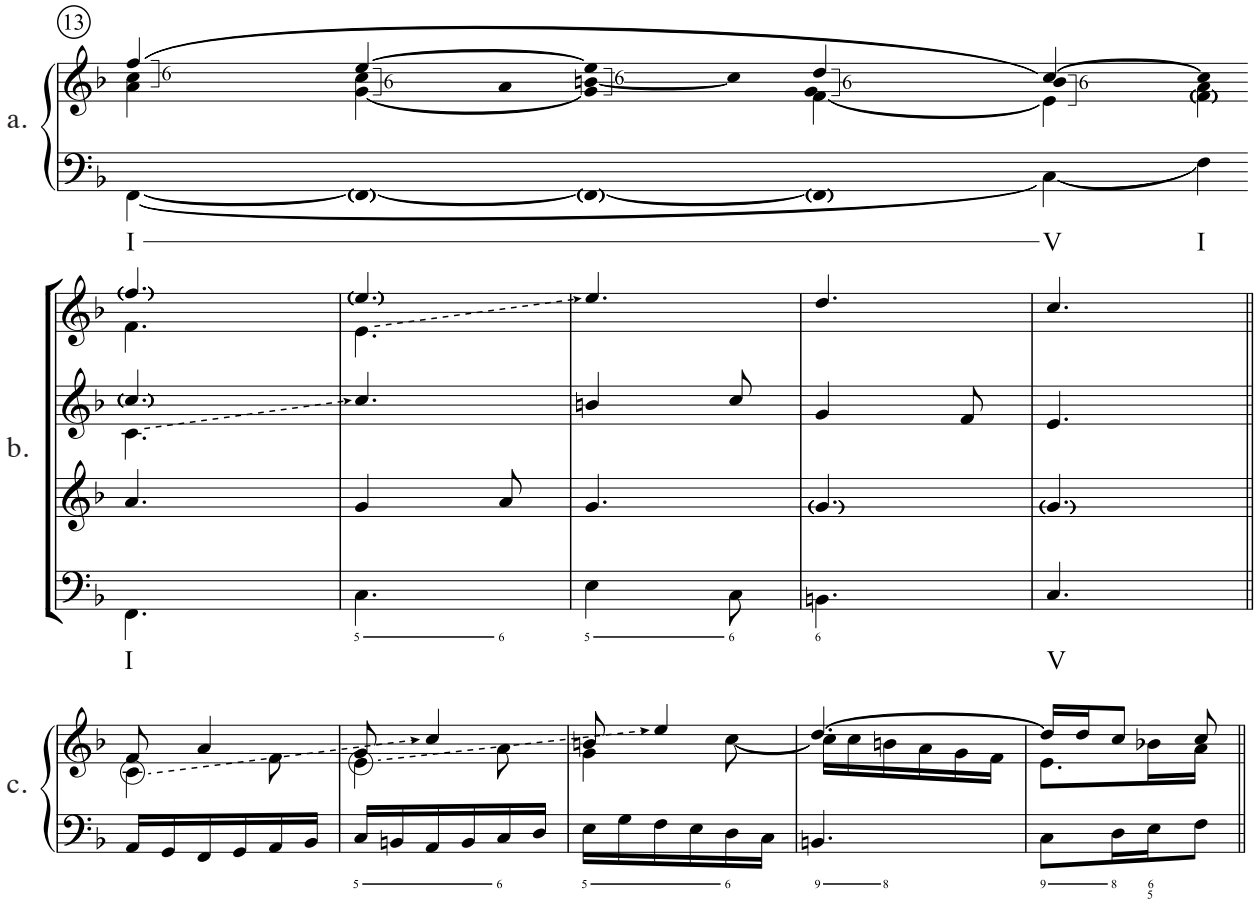
Example 17
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 46–56.

2b. Identify and compare all episodes.

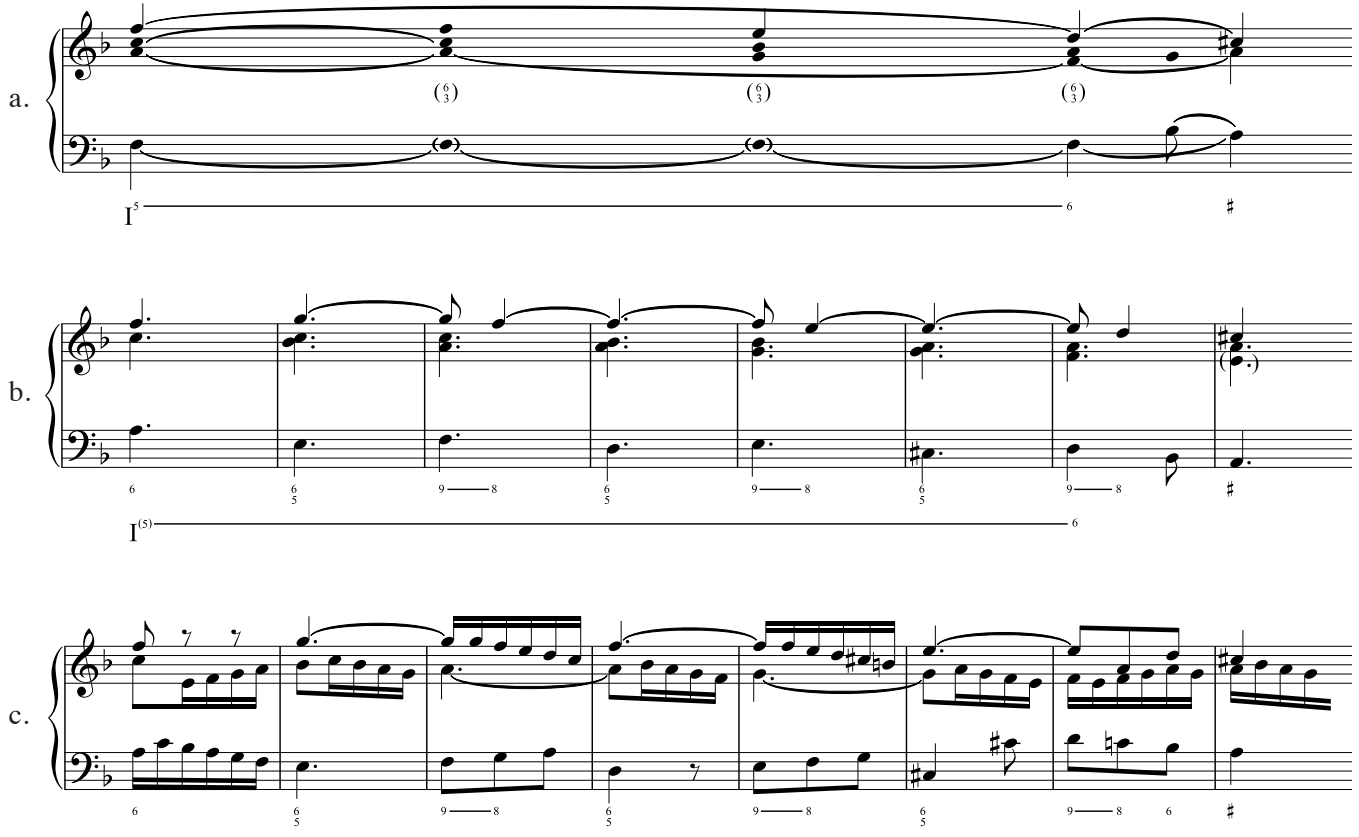
The next step (2b) identifies and compares voice-leading frameworks in the episodes. The excerpt in Example 18 does not exhibit parallel material with the later episodes in this fugue, but I include it here to demonstrate an effective strategy students can use to simplify more complex textures. The implied harmonies of this passage are not difficult to decipher, but the voice leading is masked by a series of reaching-over patterns in the upper voices (highlighted with dotted arrows in Example 18c). It is unclear what the LIP is, and it is similarly challenging to identify any parallel thirds or sixths that might help us construct a deep-level contrapuntal framework. In mm. 13–14, two separate voice-leading motions occur: A descends to G, and F descends to E. To carefully trace the voice leading motions, Example 18b normalizes the registers and provides separate staves for each line.[53] The top line descends F–E–D–C, and voice-leading motions in the inner parts highlight 5–6 motion over the bass. Example 18b clarifies how the series of reaching-over patterns reactivates the upper register and prepares us for the beginning of the counter-exposition. Further simplification in Example 18a reveals a series of descending parallel sixths over a sustained F in the bass.

The remaining two episodes feature descending-fifths sequences and use similar motivic material, but their voice leading becomes increasingly more complex. The episode in mm. 29–36 is analyzed in Example 19. Example 19b simplifies the texture into a chordal framework, which features a series of 9–8 suspensions. The voice exchange between the lower two parts in m. 29 highlights the same E/B♭ dyad that much of the expositional content has highlighted. E is clearly the bass pitch in m. 30, so B♭ becomes the active tone in the inner voice. From here, the remainder of the passage is quite straightforward. Following the pattern until the sequence breaks in m. 35, Example 19b highlights a modulation from tonic to D minor via 5–6 contrapuntal motion. Example 19a follows Brown's contrapuntal frameworks as a model, revealing a series of descending six-three sonorities (and ultimately a series of descending sixths) above a pedal tone in the bass.

53 Susan Tepping uses this approach in her dissertation (1987). When students encounter more complex textures, they should consider the multi-stave approach as an intermediary step.



Example 18
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 13–17.

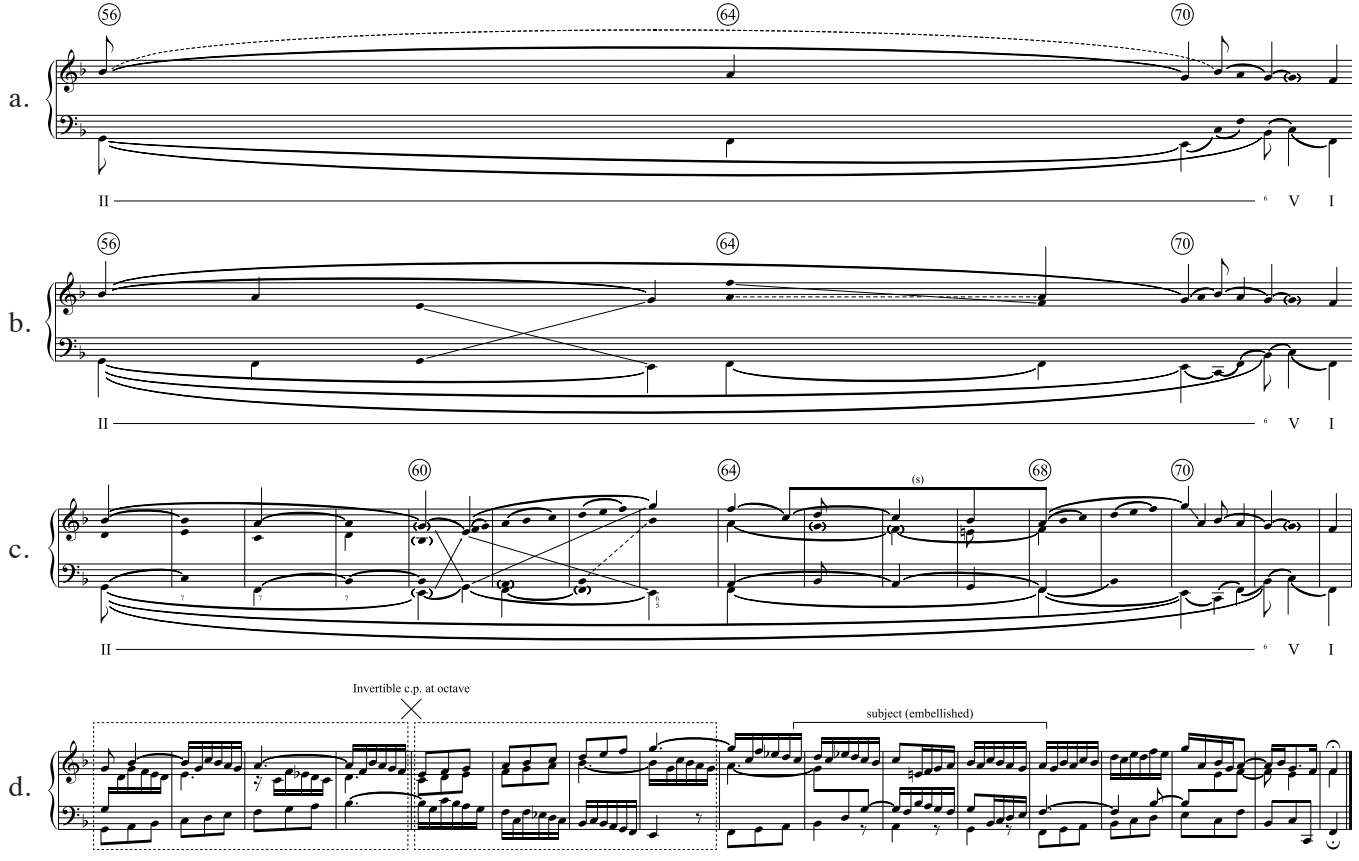


Example 19
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 29–36.

The final episode, mm. 56–64, is the most difficult to analyze. Students should first note that Example 20 includes two tonal segments instead of just one. The episode technically concludes with the tonic sonority in m. 64, and this tonic arrival is immediately followed by a final, embellished subject entry (mm. 65–68). I examined each of these segments separately at first, but later realized that they participate in a larger, more significant part of the tonal structure. For this reason I decided that they should be presented together, but will explain each segment separately below.

The episode (mm. 56–64) clearly projects root motion by descending fifths, but the stepwise ascent (first in the left-hand part, then in the right-hand part starting in m. 60) poses some initial voice-leading complications. To simplify, Example 20c retains only the roots of these harmonies (the implied inner voices are active in the upper lines as well) revealing a series of root-position seventh chords in mm. 56–59. The descending third-progression (B♭–A–G) in the upper voice is supported by parallel tenths in the bass voice (G–F–E). Implied tones, G and E, are notated on the downbeat of m. 60 to show a continuation of the voice leading; these implied tones are absent in the score, replaced by their exchanged substitutions. The tonal function of the ascending eighth-note pattern also changes when it is transferred to the upper voice in m. 60. Where the pattern initially emphasized chordal roots (mm. 56–59), it now highlights chordal thirds (mm. 60–62). Because of the change in context, this line projects an ascending third (E–F–G), which is counterpointed with a descending third-progression (G–F–E) in the bass to reveal a large-scale voice exchange. In sum, mm. 56–64 feature a series of parallel tenths followed by a voice exchange, which combine to prolong G minor (Example 20b).

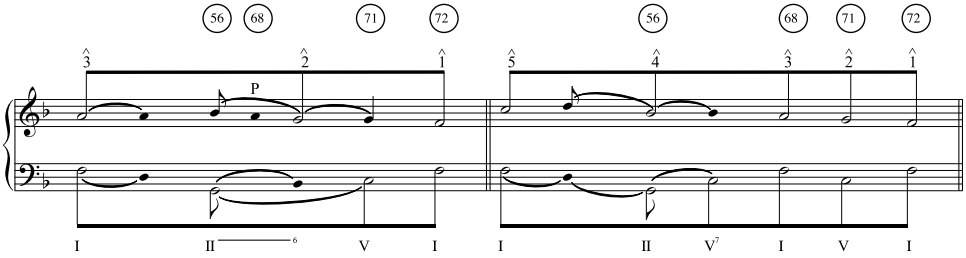
The second tonal segment (mm. 64–end) features one final entrance of the ascending eighth-note pattern (m. 68). Applying the process from mm. 56–59 highlights bass tones F–B♭–E, and then the pattern breaks in m. 70. The simplified texture in Example 20b shows a descent from F to E in the bass (and A to G in the upper line); this is reduced even further in Example 20a, to reveal a series of parallel tenths governing the entire passage from mm. 56–70 (the middle dyad A/F represents the last subject entry). Considering Example 20a even further, we can view B♭ as active until m. 70, where a second descending third-progression (B♭–A–G) leads to G on the downbeat of m. 71. Detailed examination of the voice leading therefore suggests that the rhetorical return of the final subject entry in tonic (mm. 65–68) is, in fact, functioning as a passing motion within a large-scale prolongation of the pre-dominant (mm. 56–71).



Example 20
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, mm. 56–end.

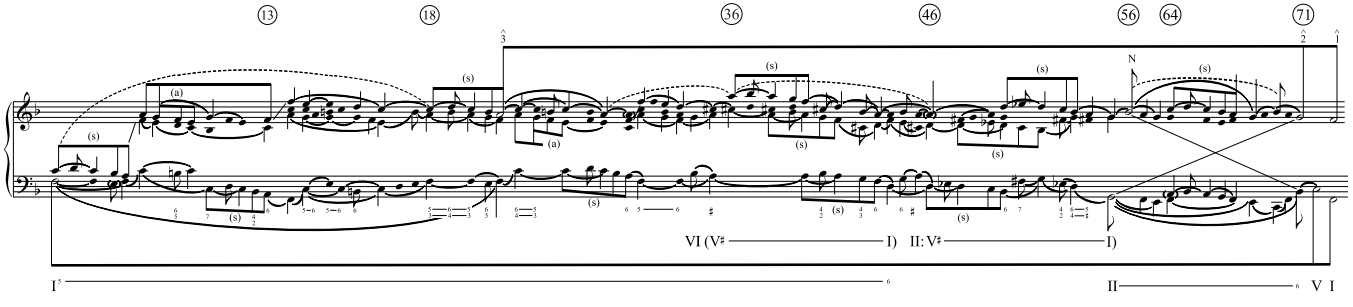
3. Examine the fugue's contrapuntal structure.

With the most difficult work now completed, students can move on to the final stages of analysis and consider how these tonal segments fit into a large-scale middleground structure. Example 21 offers two possibilities. The structures represent either a double bass arpeggiation (Example 21b) or treat the later arrival of $\hat{3}$ in m. 68 as a consonant passing tone (Example 21a). This fugue does not contain convincing structural support $\hat{3}$ in m. 68, however. There are two tonic returns in mm. 64 and 68, but in both instances, tonic is approached by an inversion of the dominant, and thus weakens its arrival. This view is reinforced by the detailed voice-leading analysis discussed in Example 20. The final subject entry, although it clearly articulates a tonic harmony at the musical surface, in fact functions as a passing progression within a large-scale pre-dominant prolongation. This function is reiterated on the musical surface in mm. 70–71, where there is a premature return to tonic (m. 70, beat 3) followed by the structural close in m. 72.



Example 21
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, plausible middleground structures.

The previous examples provide convincing support for a $\hat{3}$-line reading of this fugue, and close examination of the middleground sketch in Example 22 will demonstrate how the *Kopfton* ($\hat{3}$) is established. Although there are two earlier arrivals of $\hat{3}$ in mm. 4 and 13, neither is introduced in the proper register. One might consider the A ($\hat{3}$) in the tonal answer (m. 5) as the *Kopfton*, but this A appears within the middle of a descending fifth-progression ($\hat{5}$–$\hat{4}$–$\hat{3}$–$\hat{2}$–$\hat{1}$). My sketch suggests that the *Kopfton* does not occur until after the subject returns in m. 18. The answer continues to descend as expected, leaving the upper voice free to place added emphasis on A and keeping it active in the highest register. This reading provides a strong argument for the counter-exposition as a structurally significant element in the F-major fugue: it allows for the stable presentation of the *Kopfton*, and also explains why the voice entries are reversed here.



Example 22
J. S. Bach, Fugue in F major from the *Well-Tempered Clavier* Book I, middleground sketch.

Conclusion

This essay attempts to clarify the process for graphing tonal fugues in Schenkerian analysis. I provide a concrete list of steps to follow at the beginning stages of the analytic process, followed by two descriptive analyses to demonstrate how the process can be applied. Fugues are notably absent from the Schenkerian pedagogical literature, but I suggest that analyzing fugal textures is beneficial even in introductory lessons. In my experience working with graduate students in an introductory-level Schenkerian analysis course, I find that, more often than not, they rely heavily on their musical intuitions in analysis. They quickly grasp the bigger picture of Schenker's theory, and are often able to immediately identify the majority of the structural melody and bass within a short musical excerpt. While their intuitions are very sophisticated and will frequently lead to correct interpretations, the finer details are often unclear and under-defined in their early attempts to use Schenkerian graphic notation. As an instructor, this lack of clarity reflects areas where students have not yet fully learned parts of the theory (and are subsequently areas we work on together as a class). Because fugal textures exacerbate these problems, relying on one's musical intuition will not likely yield a correct reading of a passage. When we take the security of our musical intuition out of the equation completely, it forces us to be more focused and intentional in analysis. In the end, this will lead to a better understanding of the theory.

Through the process I have outlined here, students will not only learn how to analyze fugues specifically, but they more generally can learn how to use the theory to problem-solve when they encounter complex passages. My analyses demonstrate that even the simplest, seemingly straightforward passages require careful consideration in order to accurately and consistently apply Schenker's theory in analysis. In so doing, we can begin to overcome the view that any analysis happens by "magic" or merely through instinct.

Appendix A: Additional Examples for Study

For instructors or students looking to explore isolated excerpts rather than full-length fugues, I suggest a few options by topic below:

Polyphonic Melody

It is not difficult to find examples of polyphonic melody in Bach's fugues since nearly every one of his fugue subjects exhibits this feature. For students still gaining familiarity with this concept, however, I recommend beginning with examples of accompanied melodies. Start by showing them the melody alone, decide on the implied harmonic rhythm, number of voices, and linear motions, and then look at the complete score to provide confirmation of the reading. Here are a few excerpts that are appropriate for discussion toward the end of the semester in introductory-level Schenkerian analysis courses.

J. S. Bach, Sinfonia no. 3 in D major, mm. 1–3.
J. S. Bach, Sinfonia no. 4 in D minor, mm. 1–3.
J. S. Bach, Sinfonia no. 10 in G major, mm. 1–3.
J. S. Bach, Sinfonia no. 15 in B minor, mm. 1–3.

Sequential Passages

Sequential passages are discussed at length in the current textbooks on Schenkerian analysis. Here are a few simple passages where students can practice tracing voice leading in baroque textures:

J. S. Bach, Invention no. 6 in E major, mm. 9–15.
J. S. Bach, Invention no. 13 in A minor, mm. 3–6.
J. S. Bach, Invention no. 14 in B-flat major, mm. 3–4.
J. S. Bach, Fugue in D minor from the *h* Book I mm. 9–13 and mm. 15–17.[54]

54 Compare with Schenker's sketch of the fugue ([1935] 1977, Fig. 156/1).

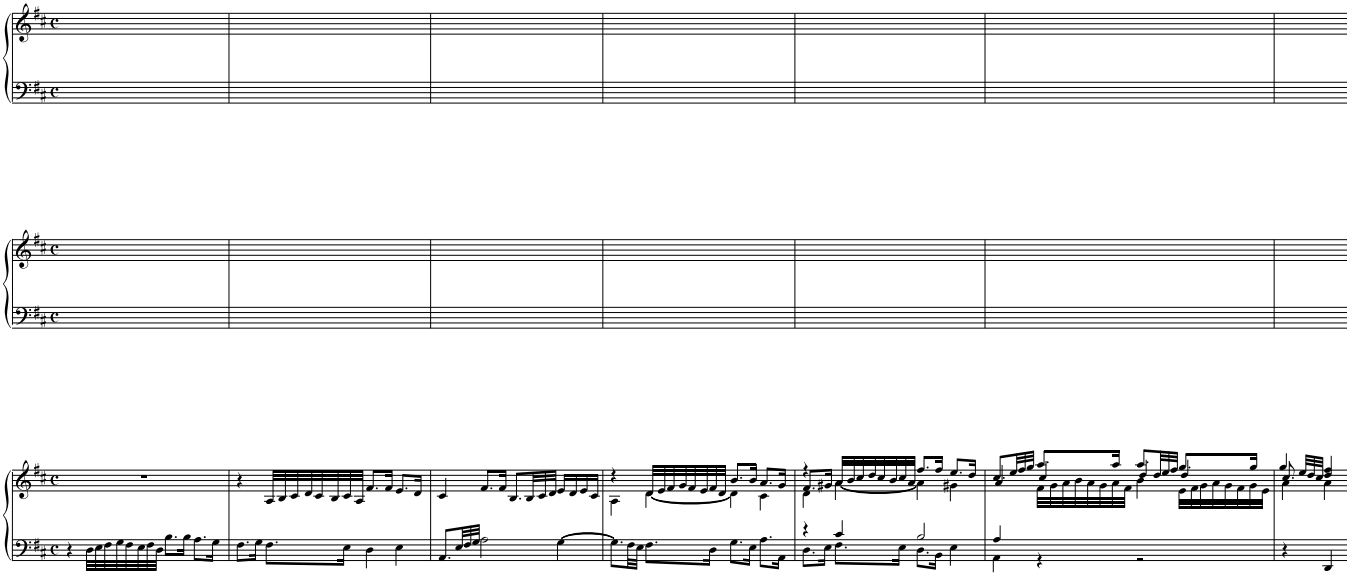
Complete Imitative Works

Although never "easy", the following is a list of some fugues that are similarly approachable (as compared to Bach's Fugue in D major discussed in the article):

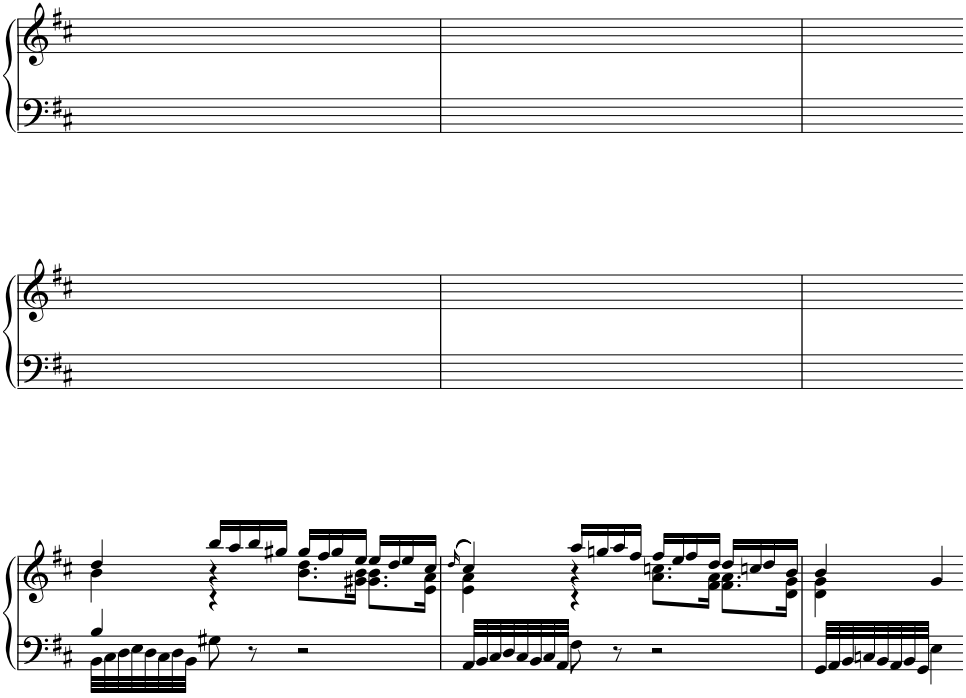
J. S. Bach, Fugue no. 7 in E-flat major from the Well-Tempered Clavier Book I.
J. S. Bach, Fugue no. 1 in C major from the Well-Tempered Clavier Book II.
J. S. Bach, Fugue no. 7 in E-flat major from the Well-Tempered Clavier Book II.
J. S. Bach, Fugue no. 9 in E major from the Well-Tempered Clavier Book II.

Appendix B: Worksheets for Independent Study

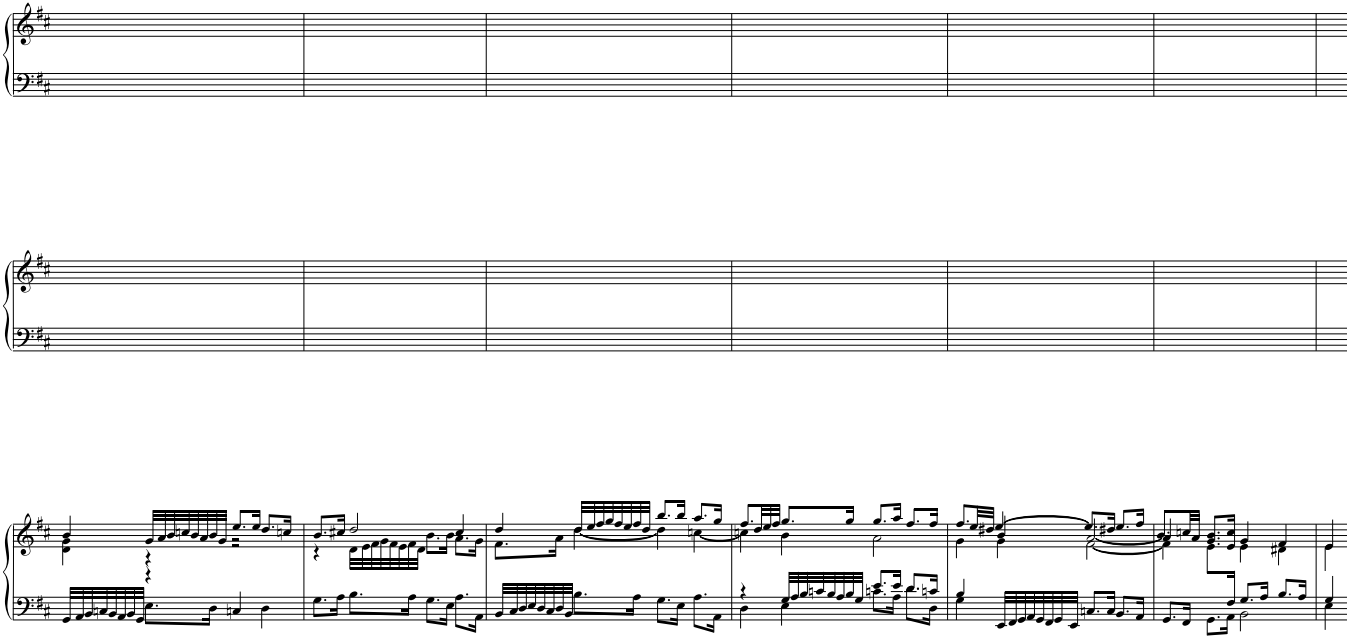
These worksheets are similar to worksheets I create for students in my introductory-level Schenkerian analysis course. Students seem to find the task of creating a Schenker graph much more manageable when they can see everything all on a single page, and these worksheets additionally ensure that their finished product is formatted accurately. The worksheets provided here are organized by tonal segments as described earlier in the paper. When analyzing a new fugue, students minimally will need to complete step 1a before they can decide which segments they will need to extract for further study.



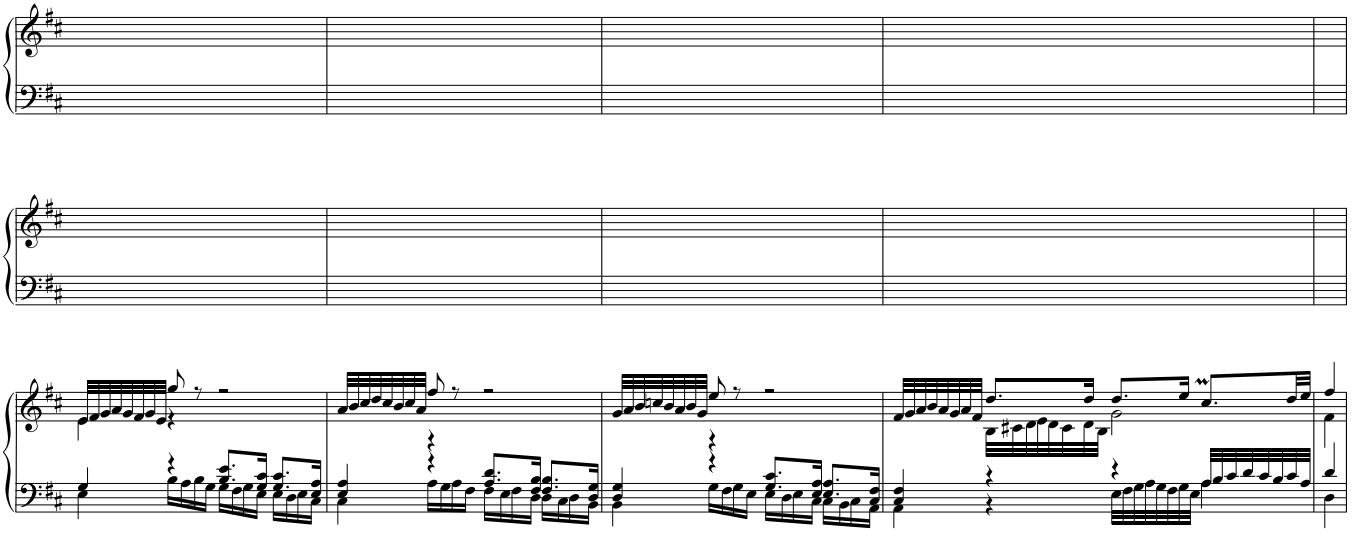
Worksheet B1-a
J. S. Bach, Fugue in D major, mm. 1-7.



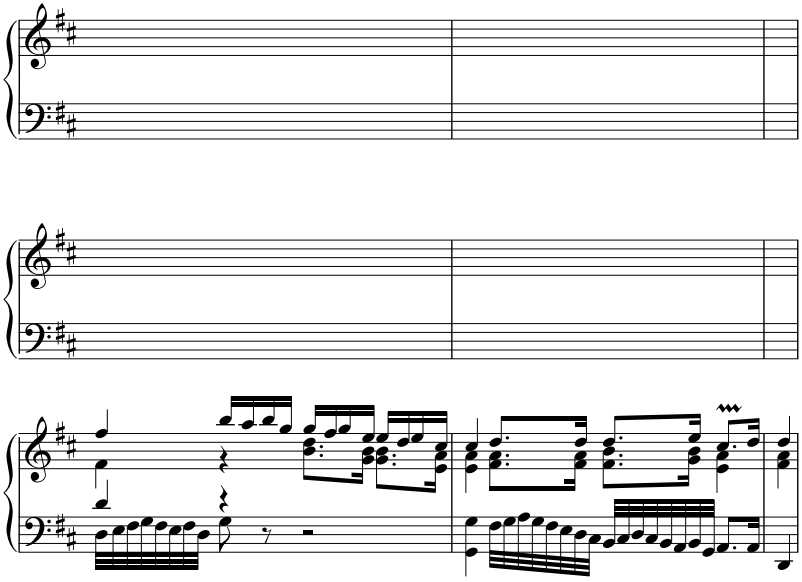
Worksheet B1-b
J. S. Bach, Fugue in D major, mm. 9-11.



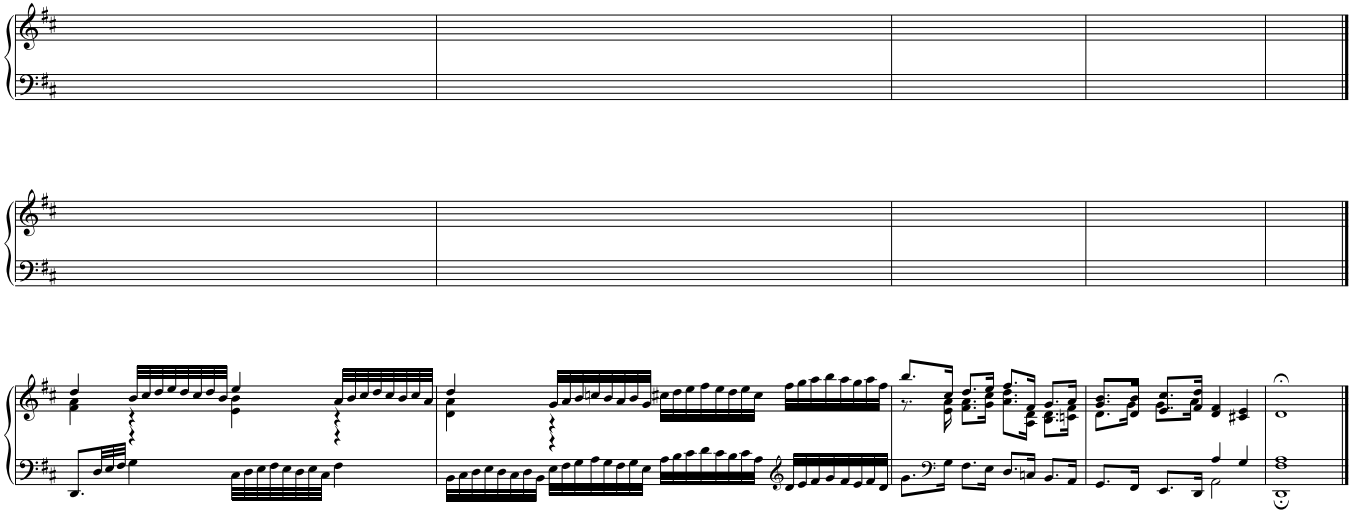
Worksheet B1-c
J. S. Bach, Fugue in D major, mm. 11-17.



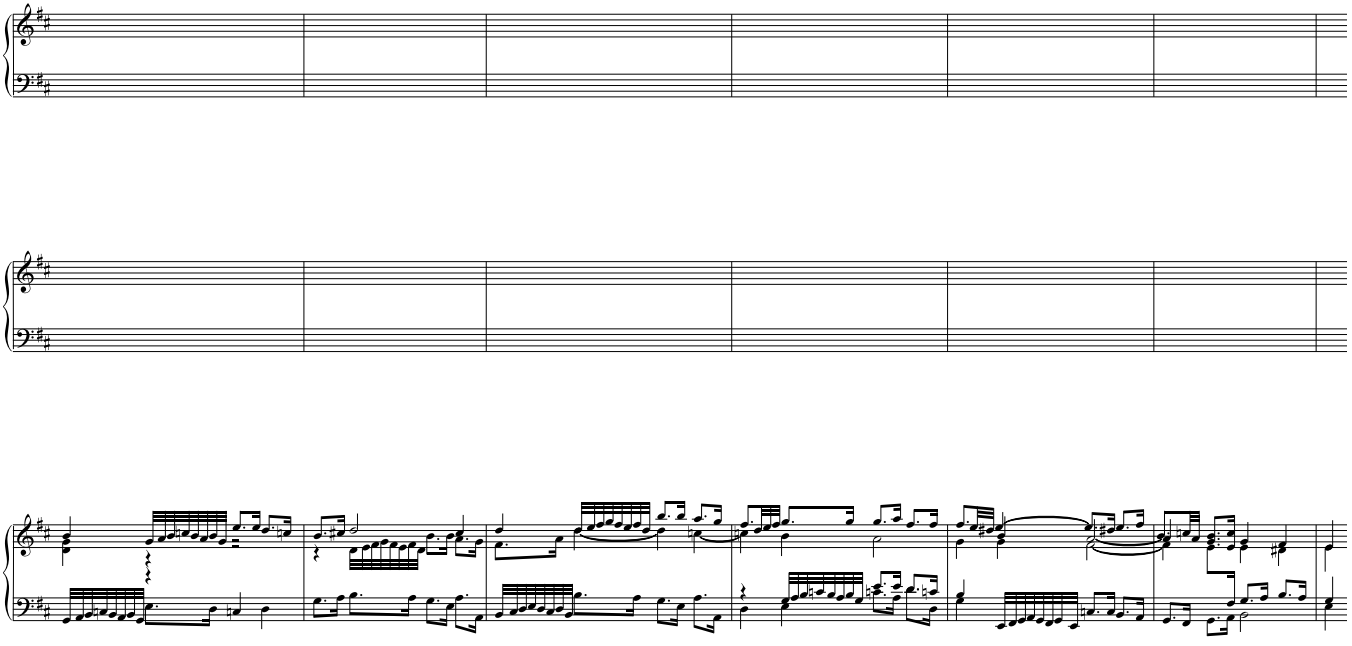
Worksheet B1-d
J. S. Bach, Fugue in D major, mm. 17-21.



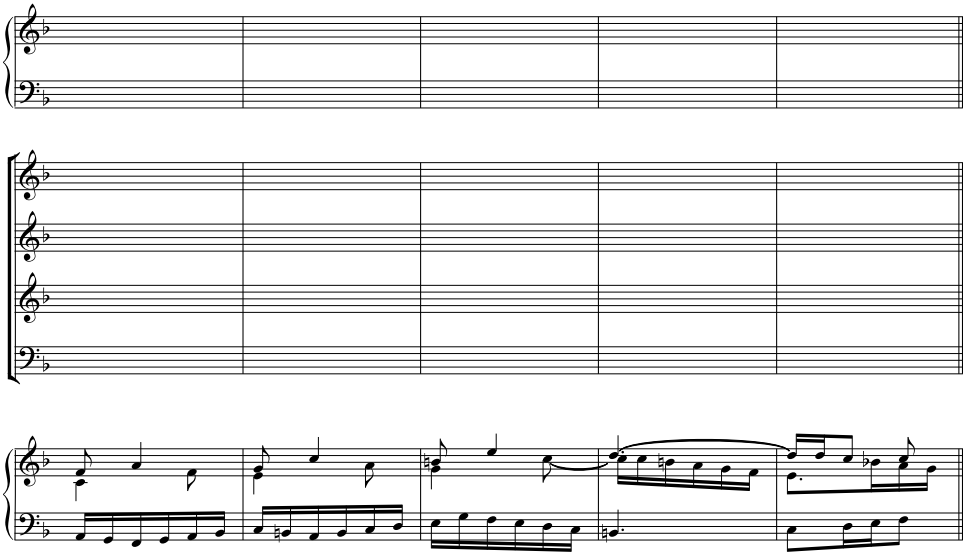
Worksheet B1-e
J. S. Bach, Fugue in D major, mm. 21-23.



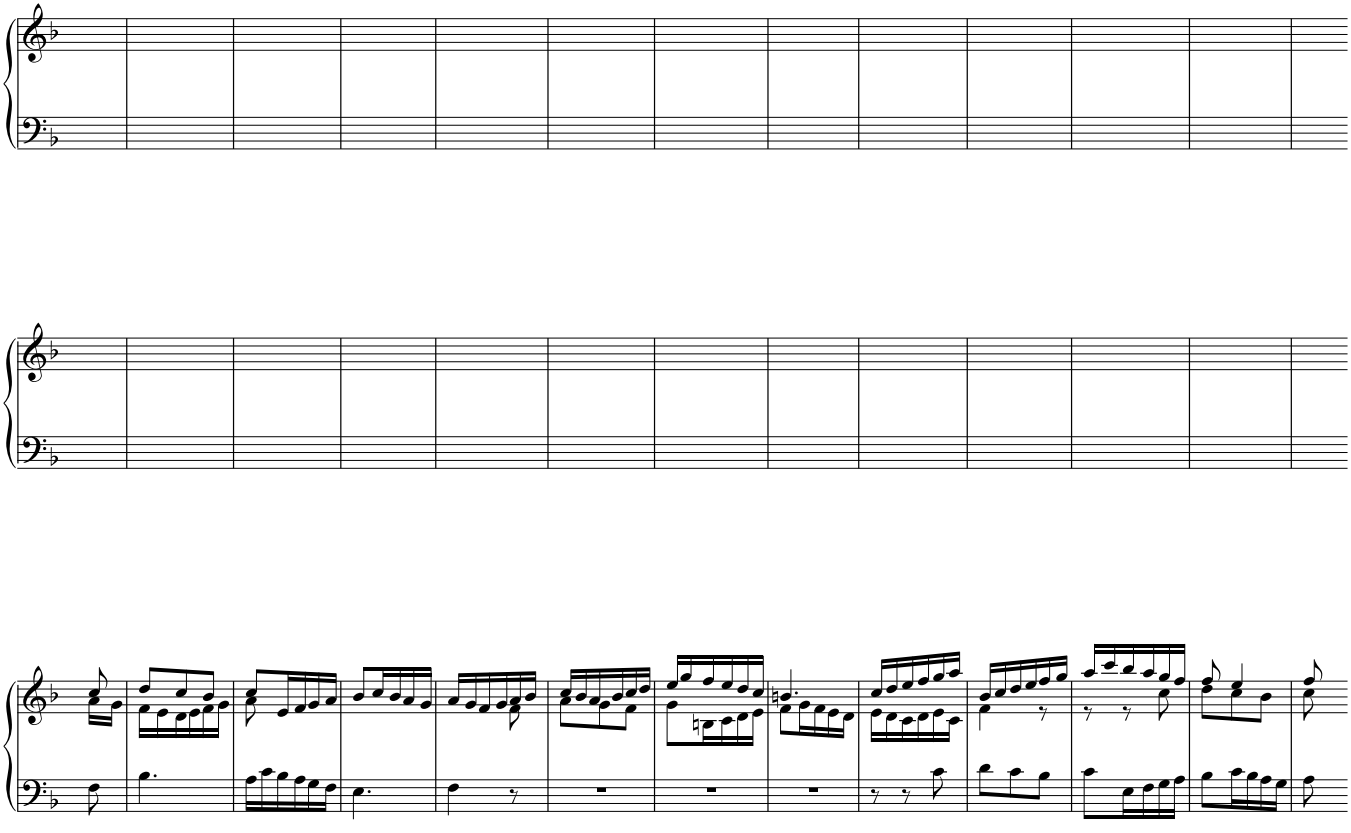
Worksheet B1-f
J. S. Bach, Fugue in D major, mm. 23-end.



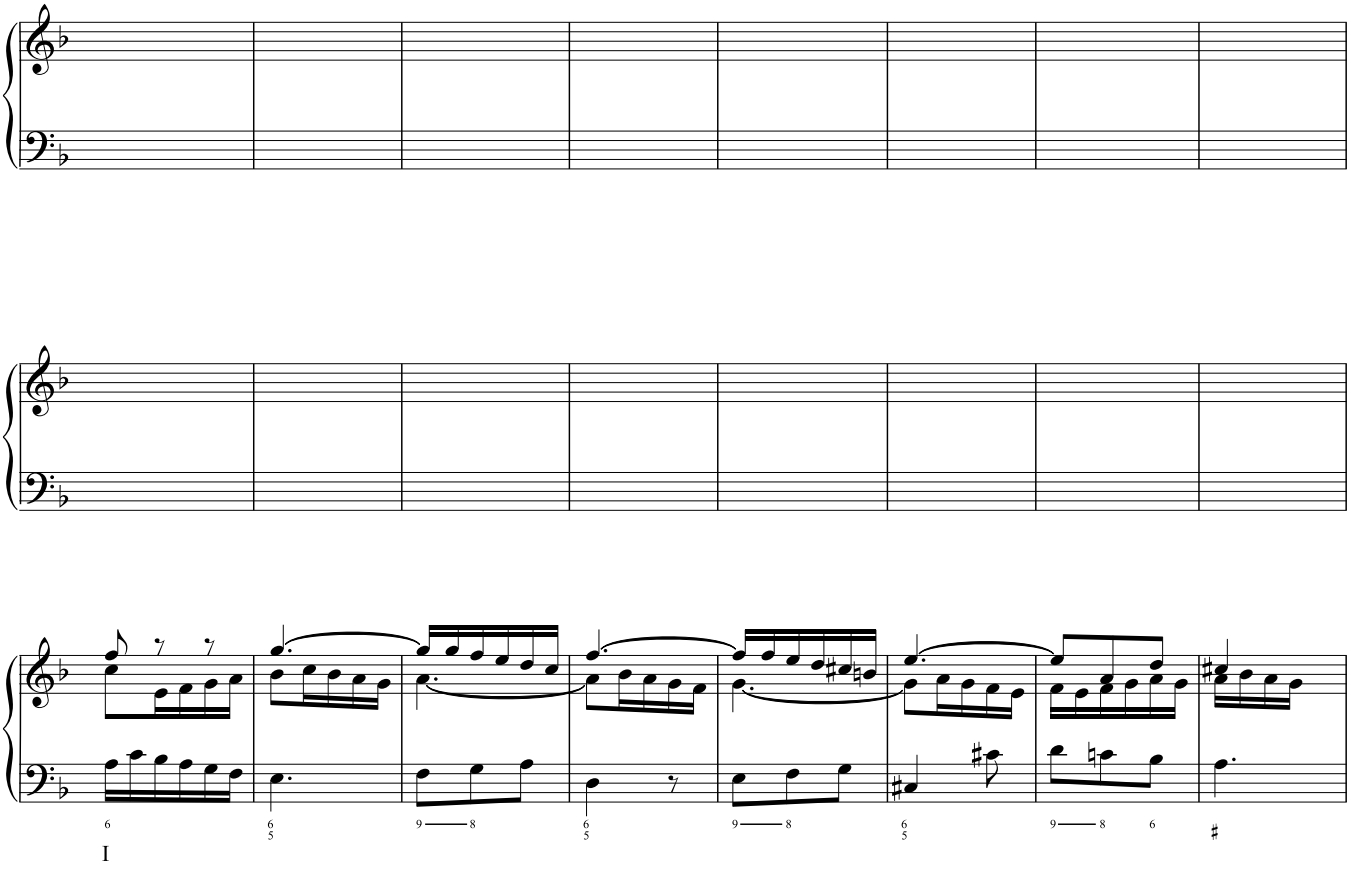
Worksheet B2-a
J.S. Bach, Fugue in F major, mm. 1-13.



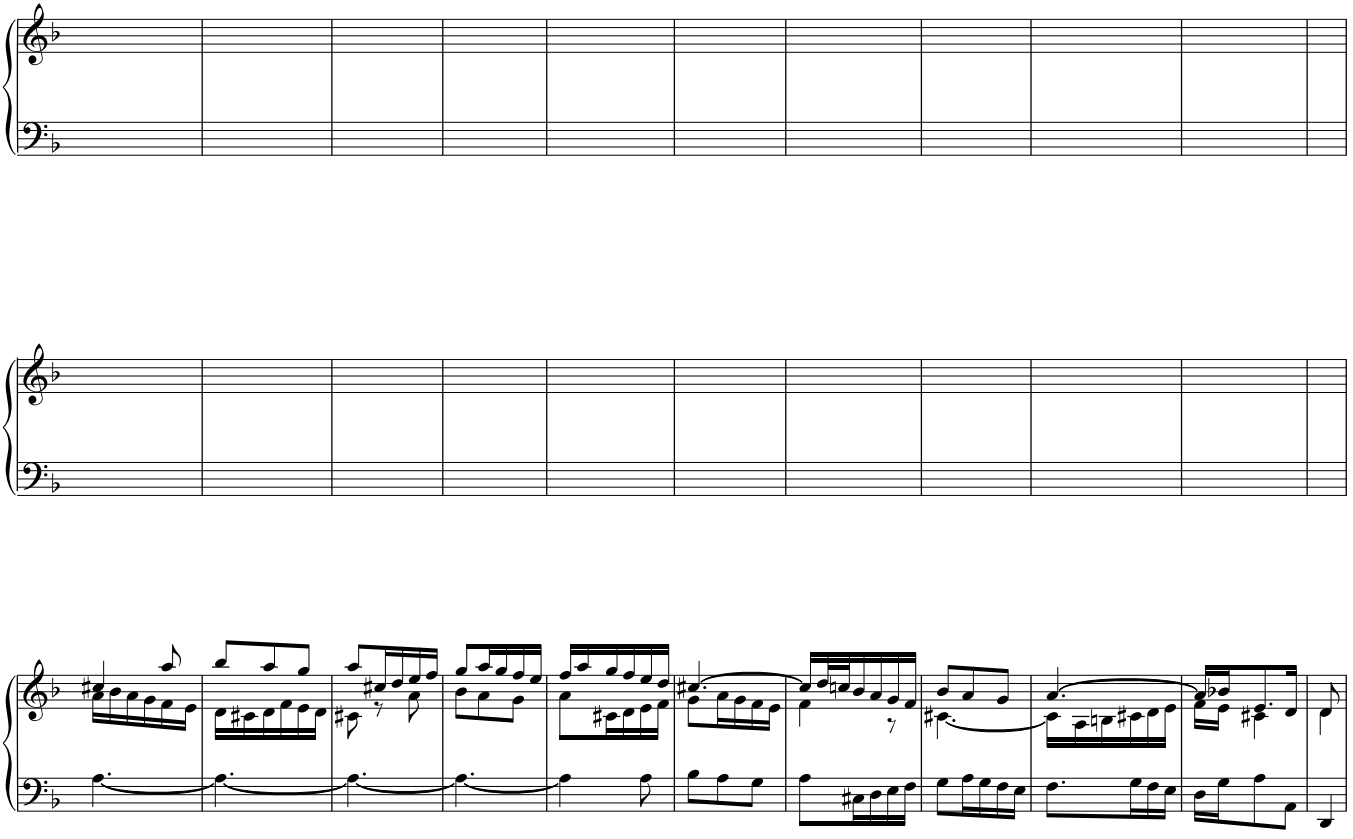
Worksheet B2-b
J.S. Bach, Fugue in F major, mm. 13-17.



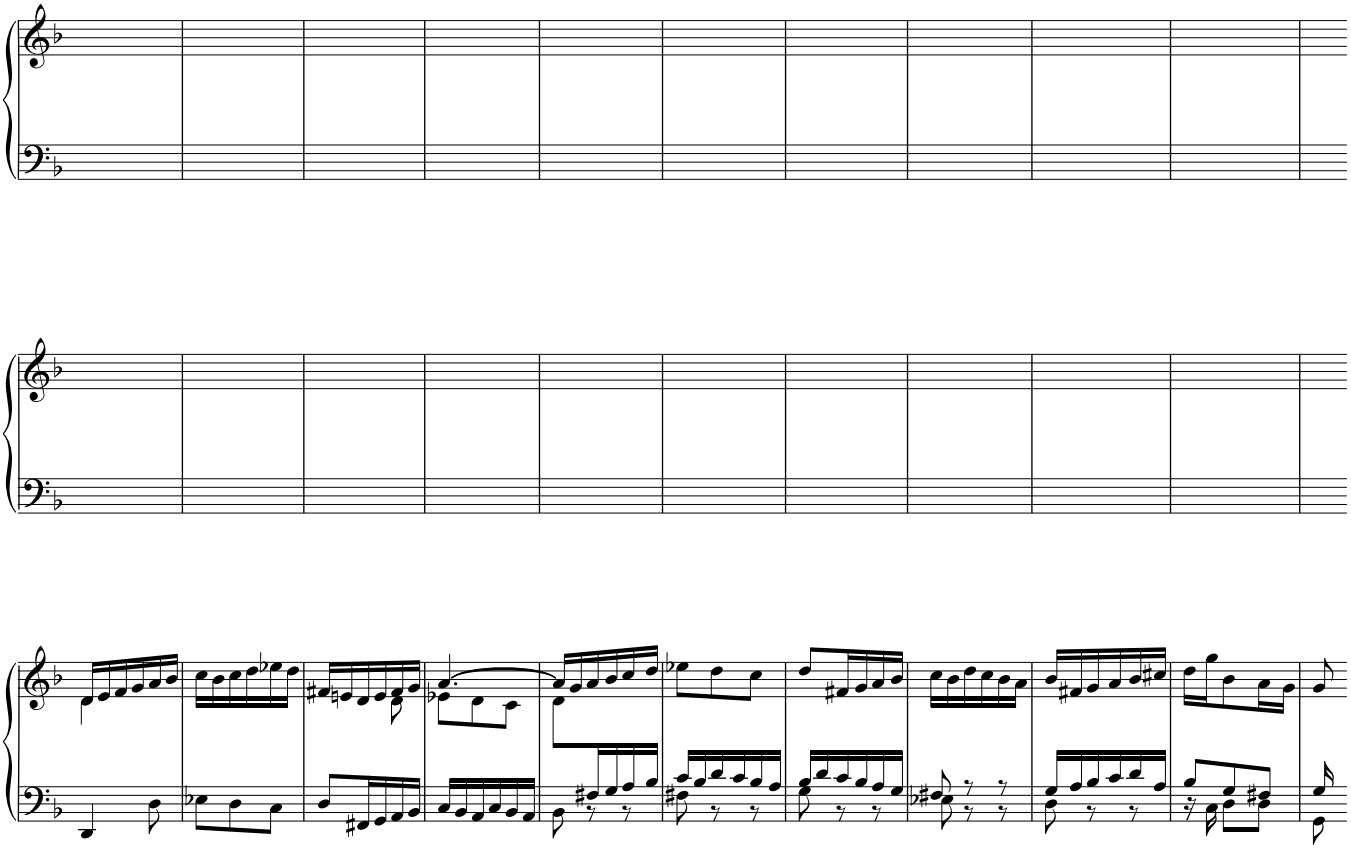
Worksheet B2-c
J.S. Bach, Fugue in F major, mm. 18-29.



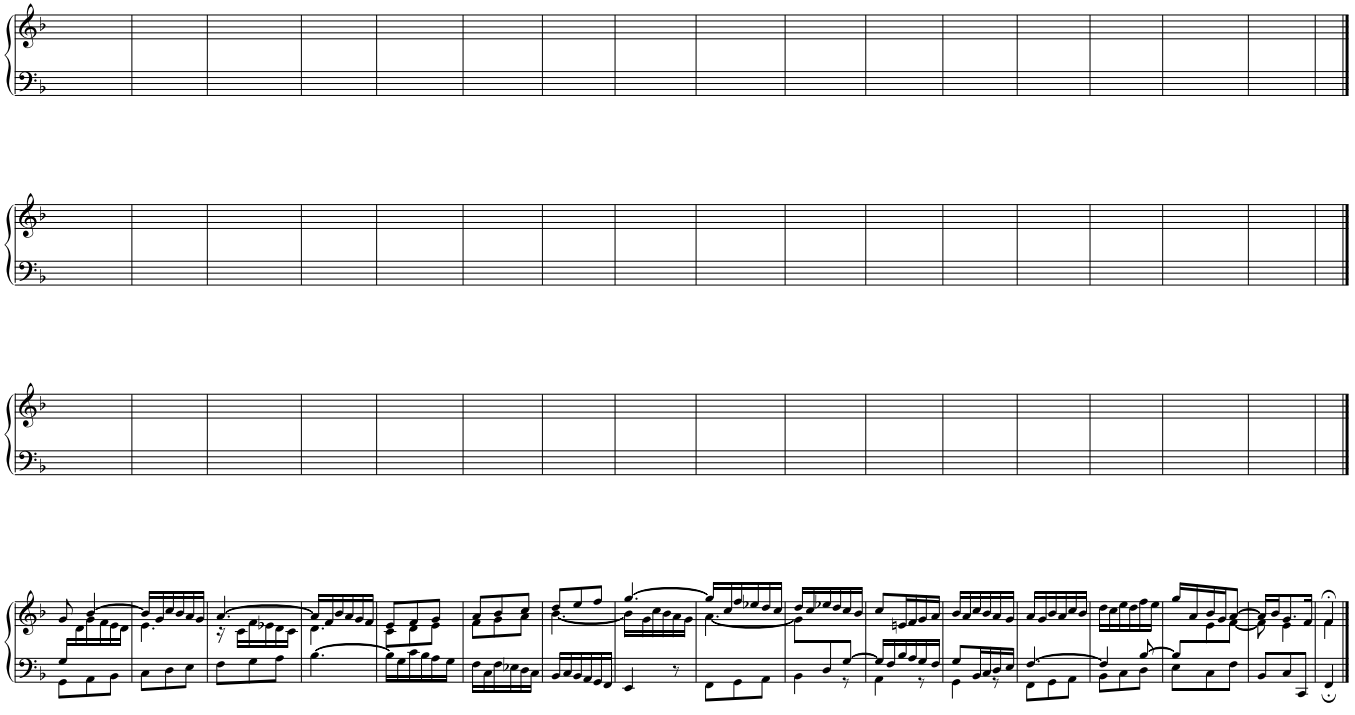
Worksheet B2-d
J.S. Bach, Fugue in F major, mm. 29-36.



Worksheet B2-e
J.S. Bach, Fugue in F major, mm. 36-46.



Worksheet B2-f
J.S. Bach, Fugue in F major, mm. 46-56.



Worksheet B2-g
J.S. Bach, Fugue in F major, mm. 56-end.

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