

**An Evaluation of Wiedeburg's Method of Diminution for the
Purpose of Stylistic Composition: Embellishing
Descending-Fifths Sequences in the Style of Bach's Two-part
Inventions**

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Abstract

The objective of this project is to evaluate Michael Wiedeburg's (1720-1800) method of diminution to facilitate the embellishment of descending-fifths sequences in the style of the fifteen Inventions by Johann Sebastian Bach (BWV 772-801). Diminutions constructed with the method by Wiedeburg are compared to select descending-fifths sequences by Bach. Comparisons of Bach's descending-fifths sequences and diminutions constructed with Wiedeburg's method show what additional steps students of stylistic composition need to take to achieve some competency in writing sequences in the style of Bach. Overall, this project highlights aspects of Bach's technique of embellishing descending-fifths sequences. The results of this project indicate that in addition to applying Wiedeburg's method of diminution, one must also apply the diminution techniques Bach uses such as melodic leaps and chordal arpeggiation. One must also utilize the material of the subject since Bach tends to use this material in his sequences.

Keywords: Bach – Invention – Diminution – Figuration – Stylistic Composition – Model
Composition

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Introduction

The objective of this paper is to evaluate Michael Wiedeburg's (1720-1800) method to diminution for the purpose of embellishing descending-fifths sequences in the style of the fifteen inventions (BWV 772-801) by Johann Sebastian Bach. More specifically, select descending-fifths sequences by Bach are compared to elaborations created with Wiedeburg's method to diminution. Comparisons between these elaborations and Bach's descending-fifths sequences highlight special features of Bach's diminutions in sequential passages. The comparisons help students of stylistic composition understand what steps are needed to achieve competency in embellishing descending-fifths sequences in the style of the fifteen inventions by Bach. In the first chapter, I discuss Michael Wiedeburg's method of diminution and his six figures of embellishment. In the second chapter, I briefly discuss the initial statements and descending-fifths passages in Bach's inventions. I then compare diminutions produced with Wiedeburg's method to Bach's original passages. My research suggests that in order to achieve competency in writing stylistically authentic descending fifths sequences one must do the following: (1) utilize the subject in the sequence as Bach does, (2) in addition to the figures in Wiedeburg's method of diminution, apply the techniques Bach uses, such as melodic leaps and chordal arpeggiation, (3) ensure that enough variety is provided throughout the sequence, with techniques such as imitation or the exchange of textures in the right and left hands, and (4) feature continuous motion as Bach does.

Chapter 1: Bach's Descending-Fifths Sequences and Wiedeburg's Method of Diminution

In this paper, I will discuss two approaches to ornamentation that may facilitate the composition of stylistically embellished descending-fifths sequences. The goal is to gain a better understanding of J.S. Bach's art of diminution. More specifically, this paper discusses how to use Michael Wiedeburg's method of diminution to write descending-fifths sequences in inventions in the style of Bach, so that students of stylistic composition can gain a better understanding of Bach's compositional techniques. The Sibelius Academy, University of the Arts Helsinki, Finland offers a course called "Satsioppi", which is best translated as "stylistic composition". According to the Sibelius Academy website, stylistic composition can be understood as "the rigorous study of compositional resources as well as their relationships with musical effects, expression, and quality in any given stylistic context."¹ Since counterpoint plays a crucial role in satsioppi, students typically study the inventions and fugues by Bach. The first step in satsioppi is analysis that focuses on aspects such as the construction of the subject at the beginning and formal design. However, satsioppi does not stop at analysis. Students then compose short subjects (expositions) and after that longer passages. Eventually, students compose entire movements. However, even composing a short subject for an invention in the style of Bach proves to be challenging for most students. Even more difficult is managing the transition from the subject to the first sequence. In addition to voice leading, students have to take into consideration aspects of register when writing sequences. Only by composing regularly in addition to doing analysis can students acquire the skills necessary for achieving some proficiency in stylistic composition.

In satsioppi, the process of composing a Bach-style invention is typically as follows: Students first analyze all or some of the inventions by Bach. Analysis can focus on aspects such as the form, harmonies and transformations of the subject. Next students compose a subject

1. Olli Väisälä, Marika Haapanen, and Andreas Metz, "Harmony, Counterpoint, and Stylistic Composition," Accessed February 27, 2019, <https://www.uniarts.fi/en/study-options/composition-and-music-theory>.

and then an exposition. The melodic and rhythmic motives of the subject are then used to construct later passages such as sequences. Inventions are so tight-knit that subject occurrences and sequences provide, with the exceptions of cadences, enough material to write an entire invention. After composing a subject most students often face the challenge of composing musically convincing material for less tight-knit passages such as episodes. Students usually know how to compose a syntactically correct chord progression. However, they often do not know how to turn such progressions into musically convincing compositions.

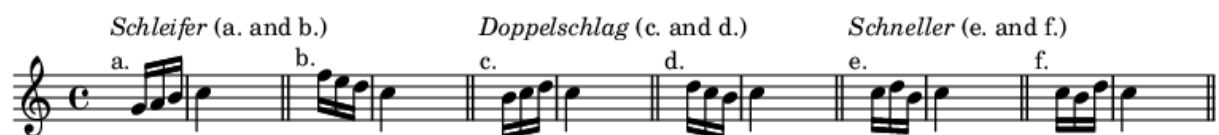
One way to understand the underlying harmonic framework of Bach's descending-fifths sequences is to relate them to the "bass motions" of the partimento tradition. The partimento tradition originated in Italy and was already flourishing in the Baroque period. Fedele Fenaroli (1730-1818) is considered to be perhaps the most influential partimento master of his time. His *Regole* (rules) from his work *Regole musicali per quelli che vogliono suonare coi numeri* can be described as slightly embellished cadential and sequential progressions that can be used as a basis for improvisation and stylistic composition; they are presented with partimento exercises and organized according to difficulty. For example, he shows in the *Regole* how to accompany diatonically ascending or descending bass lines. His "bass motions" are perhaps the most useful resource with respect to embellishing descending-fifths sequences in the style of Bach. The bass motions by Fenaroli are slightly embellished sequences which can be further elaborated by applying additional diminutions. Of all the historical partimento masters, I have chosen Fenaroli and his bass motions because he was perhaps the most influential partimento master of his time. In the analysis part of this paper, I rely on Fenaroli's bass motions to show the origin of several of Bach's descending-fifths sequences.²

The other way to better understand the diminution technique of Bach's descending-fifths sequences is based on a method of diminution discussed in an eighteenth-century treatise by Michael Wiedeburg (1720-1800). Wiedeburg's work has received recent attention in scholarly

2. Fedele Fenaroli, *Regole musicali per quelli che vogliono suonare coi numeri* (Naples: Fedele Fenaroli, 1775).

contributions by Michael Callahan.³ In his treatise *Der sich selbst informirende Clavierspieler*, Wiedeburg discusses three different four-note figures that can be applied in a given melodic context. The figurations Wiedeburg proposes can be used to embellish a given outer-voice framework. More specifically, the figures can be used to approach the next target note of a given unadorned melodic line. The three types of figuration are the *Schleifer* (ascending or descending stepwise four-note segment), the *Doppelschlag* (turn figure) and the *Schneller* (double neighbor). In various examples throughout this paper, I will refer to these figurations with the following abbreviations: SL (Schleifer), DS (Doppelschlag) and SN (Schneller). To limit the number of possibilities of diminution, I will exclude the Schneller and only use the Schleifer and Doppelschlag in my diminutions produced with Wiedeburg’s method. Example 1.1 shows the three types of figuration by Wiedeburg. Example 1.2 shows how an unadorned melodic line can be embellished using one of Wiedeburg’s figurations, the Schleifer (SL).⁴

Example 1.1: The six figures of diminution in Michael Wiedeburg’s *Der sich selbst informirende Clavierspieler*



3. Michael Callahan, “Improvising Motives: Applications of Michael Wiedeburg’s Pedagogy of Modular Diminutions,” *Integral* 24 (2017); Michael Callahan, “Teaching Baroque Counterpoint Through Improvisation: An Introductory Curriculum in Stylistic Fluency,” *Journal of Music Theory Pedagogy* 26 (2012): 29–56.

4. Callahan, “Improvising Motives,” 33.

Example 1.2: Example of Wiedeberg's Schleifer from *Der sich selbst informirende Clavierspieler* applied to an unadorned line



Wiedeberg's method of diminution is remarkable for at least two reasons: (1) It is likely to produce stylistically authentic material because he proposed his method in the eighteenth century. (2) Unlike other diminution methods, it focuses on approaching the next melodic note as opposed to embellishing a given note, resulting in more fluent and less static-sounding elaborations. If the students already have a chord progression as a voice-leading framework, they can use the figures to embellish the melody (soprano). Thus, whereas the partimento bass motions are useful as chordal frameworks for passages, Wiedeberg's method facilitates stylistically authentic ornamentation. The advantage of Wiedeberg's system is that it can be learned quickly and that unlike other methods of diminution it requires little memorization.⁵

This paper focuses solely on sequential passages in Bach's inventions because almost every invention features a descending-fifths sequence after the exposition and often also later in the movement. Therefore, the skill of embellishing descending-fifths sequences is absolutely essential for students. In this paper, I will compare select descending-fifths sequences from Bach's two-part inventions with progressions I have created with Wiedeberg's method of diminution. I compare them to be able to determine the additional steps one needs to take from mechanically applying figurations to a voice-leading framework to writing material that is comparable in style to that of Bach's inventions. In Chapter 2, which is the analysis part of this paper, I first relate Bach's sequential passages to sequential bass motions from the partimento tradition (Fenaroli) to show the contrapuntal origin of Bach's descending-fifths sequences. I then compare Bach's

5. Callahan, "Improvising Motives," 30.

sequences to sequences embellished with Wiedeburg's method of diminution to evaluate Wiedeburg's system for the purpose of stylistic composition. I also take into account compositional devices that pertain to stylistically authentic diminution such as imitation or the way voices establish a given suspension chain. In order to determine the number of active voices in Bach's passages, I make a harmonic reduction. I then relate the reduction to one of the sequential Fenaroli bass motions to highlight any standard diminutions that are associated with this type of progression. Finally, to gain a better understanding of Bach's art of diminution, I then compare the original sequence, harmonic reduction and the partimento (Fenaroli) bass motions to the diminutions I have produced using Wiedeburg's method of diminution. See Ex. 1.3.

Example 1.3: Bach, Invention in D Minor, BWV 775, No. 4, mm. 1-4, example comparison sheet

The image displays four systems of musical notation for comparison, all in 3/8 time and D minor. The first system, labeled 'Bach', shows the original sequence starting at measure 6. The second system, 'Reduction', shows a harmonic reduction of the sequence. The third system, 'Fenaroli', shows the corresponding partimento bass motion version. The fourth system, 'Wiedeburg \ Callahan', shows a version with annotations 'SL' and 'DS' above the treble clef staff and a '1' below the bass clef staff.

At the very top of Ex. 1.3, the original sequence by Bach is shown. The second system shows a harmonic reduction which clarifies the harmonic progression of the descending-fifths sequence. The third system shows the corresponding partimento (Fenaroli) bass motion version of a descending-fifths sequence. This partimento bass motion shows the standard embellishment for this type of descending-fifths sequence. Of all the progressions in Fenaroli's treatise, I always choose the bass motion that most closely resembles the harmonic reduction of Bach's sequence. I have transposed Fenaroli's bass motion to the key of the Bach invention for easier comparison. At the bottom of the comparison sheet (Ex. 1.3) is a diminution example based on the diminution

method of Wiedeburg. The slurs and letters indicate the Wiedeburg figurations I have used to embellish the outer-voice framework underlying Bach's sequence.

Chapter 2: A Comparison of Bach's Descending-Fifths Sequences with Elaborations Created with Wiedeburg's Method of Diminution

In this chapter, I will compare some of the descending-fifths sequences in the inventions of Bach to the bass motions of Fenaroli and to my own diminutions created with Wiedeburg's method. I rely on Wiedeburg's method of elaboration to produce stylistically convincing diminutions. The purpose of this comparison is to determine whether Wiedeburg's method of diminution produces sequences that are stylistically comparable to those of Bach.

The relationship between Fenaroli's bass motions and Bach's passages usually becomes clear once a passage is reduced to its essential harmonies. Often Bach's sequential passages are more embellished versions of Fenaroli's bass motions. In his treatise, Fenaroli shows that the descending-fifths sequence should be embellished with suspensions.¹ According to the rules of Fenaroli, descending-fifths sequences should always be decorated with suspensions or other non-chord tones. The addition of non-chord tones helps enliven the texture of descending-fifths sequences and renders otherwise predictable harmonic patterns more expressive. Close analysis of Bach's and Fenaroli's progressions reveals that Bach and Fenaroli both favor the use of interlocked seventh chords and suspensions in descending-fifths sequences. The sequential bass motions are partially embellished (with suspensions) and therefore provide students of stylistic composition with the standard diminutions characteristic of the various types of sequence.

I will now discuss the diminution method by Wiedeburg. I will also compare my own diminutions created with Wiedeburg's method with sequential passages by Bach. As mentioned in the previous chapter, the three types of figuration are the *Schleifer* (ascending or descending stepwise four-note segments), the *Doppelschlag* (turns) and the *Schneller* (double neighbors). I will focus on the first two. According to Callahan, these three figurations do not only embellish

1. Fenaroli, *Regole musicali per quelli che vogliono suonare coi numeri*, 56-57.

a given melody note but also smoothly lead to the next melody note. What students have to figure out is on what note to start the Schleifer, Doppelschlag or Schneller. The Schleifer and the Doppelschlag figures have a simple rule regarding the starting notes: The Schleifer or Doppelschlag should either begin by step and from the preceding note, or as a consonant if preceded by a leap. In his article about Wiedeburg's diminution method, Callahan also shows how to embellish the bass by using chordal arpeggiation, usually resulting in descending or ascending eighth-note third leaps.² In the following subchapters, I will comment on the differences between passages produced with Wiedeburg's diminution method and sequential passages from Bach's two-part Inventions.

Chapter 2.1: The Descending-Fifths Sequence in Bach's Invention in D Minor, No. 4, mm. 7-14

Since the exposition of Bach's Invention in D minor, no. 4 in mm. 1-7 introduces material that is reused in the opening descending-fifths sequence in mm. 7-14. I will first discuss the exposition and then the opening sequence. Example 2.1 shows the initial statement (exposition) of Invention, no. 4.

Example 2.1: Bach, Invention in D Minor, BWV 775, No. 4, mm. 1-6 (initial statement)



Bach's Invention in D minor is characterized by its 3/8 time signature, implying a fast tempo. The subject features continuous sixteenth-note motion. The opening descending-fifths

² Callahan, "Teaching Baroque Counterpoint Through Improvisation: An Introductory Curriculum in Stylistic Fluency," 68-79.

sequence of this invention consists mostly of stepwise melodic ascents or descents. After the subject in mm. 1-6, the opening sequence follows in mm. 7-14. Example 2.2 below shows a detailed comparison sheet of the opening descending-fifths sequence. As my harmonic reduction indicates, the opening sequence consists of interlocking seventh chords. The corresponding Fenaroli sequence is identical except for the order of voices. This suggests that interlocking seventh chords are commonly found in descending-fifths progressions.

I will now discuss the right-hand part of the first four measures of Bach's opening descending-fifths sequence in mm. 7-10. See the first system of Example 2.2 for the score. At the beginning of Bach's opening sequence, the right hand continues the sixteenth-note motion. Save for the leaps, the melodic contour of the right-hand part consists of alternating stepwise ascents and descents. Especially the two consecutive seventh leaps, first down and then back up, hint at the existence of two voices instead of only one in the right-hand part. The right-hand part follows this sequential pattern in mm. 7-10 for four full measures. Bach's sequential descending-fifths passage in mm. 7-10 features overlapping suspension chains. More precisely, one suspension chain occurs in the soprano, the other in the alto.

The last three systems of the provided comparison sheet show my own diminutions based on Wiedeburg's diminution method. See Ex. 2.2 below. As stated in the previous chapter, I have excluded the Schneller, and only included the two other figures, namely Schleifer and Doppelschlag, to reduce the total number of diminution possibilities. However, even with only the Schleifer and the Doppelschlag, it would be unreasonable to include all diminution possibilities. Only one diminution would not suffice, since almost always more than one diminution is musically convincing. Usually two or three diminutions have stood out as musically most convincing to me, and have featured a distinct melodic contour, thus seeming the most reasonable number of diminutions for inclusion. I have created diminutions with Wiedeburg's diminution method as follows. First, I have created a harmonic reduction of the descending-fifths sequence of a Bach

Example 2.2: Bach, Invention in D Minor, BWV 775, No. 4, mm. 7-14, comparison sheet

(SL=Schleifer, DS=Doppelschläge, SN=Schneller)

7

Bach

Reduction

Fenaroli

Wiedenburg / Callahan 1

Wiedenburg / Callahan 2

Wiedenburg / Callahan 3

Invention. Next, I have applied either of the two figurations, the Schleifer or the Doppelschlag, to a given note in the soprano voice of the harmonic reduction. Since I create a sequential passage, the figurations repeat accordingly in a sequential manner. I have also embellished the bass line using Callahan's method of applying chordal arpeggiation (descending or ascending eighth-note third leaps).³

Of the three passage diminutions created with Wiedeburg's method, the third one (at the very bottom of Ex. 2.2) most closely resembles Bach's passage. The continuous sixteenth-note motion Bach introduces in the exposition is used throughout the entire first sequence (mm. 7-14). Diminution no. 3, like all my three diminutions at the bottom of Ex. 2.2, follow a rhythmical pattern of dotted eighth notes and three consecutive sixteenth notes to enable the use of the four-note figures. As previously discussed, Callahan's article mentions a rule that a motivic figure should be approached by step or begin with a consonant note, i.e. not from an arbitrary dissonance.⁴ One might then wonder why the second measure of diminution no. 3 begins the Schleifer from a dissonant note, a². However, this could be seen as continuation of the melodic descent one octave higher. Otherwise, the Wiedeburg diminutions begin the four-note figures from consonances.

In Bach's sequence in mm. 6 and 8, beats two and three have a dissonant passing tone. However, in mm. 7 and 9, when the right hand makes melodic descents, the situation is different, and only consonant passing tones occur on beats two and three. Since the method by Wiedeburg uses only four-note figures, the method ensures that only one dissonant passing tone may occur before reaching the target note. When students write Bach-style figurations that are longer than four notes, they should pay attention to how many dissonant passing tones they can feature in succession in Bach's style. In other words, students have to take care in balancing dissonances and consonances. Another difference between diminution no. 3 and Bach's descending-fifths

3. Callahan, "Teaching Baroque Counterpoint Through Improvisation: An Introductory Curriculum in Stylistic Fluency," 68-79.

4. Callahan, "Improvising Motives," 37-38.

sequence is that in diminution no. 3 the two voices of the right hand, the upper (soprano) and the lower (alto), feature an equal number of notes. In Bach's sequence in mm. 6-9, most of the notes of the right hand belong to the soprano, except for the first note of m. 7 and m. 9, which belong to the alto of the suspension chain. Because Bach features most of the continuous motion in the soprano, the alto appears very static. This application of the alto creates an illusion of a long line that carries over measures while the soprano contains the continuous motion. Bach applies this type of sustaining alto by featuring two consecutive leaps in mm. 7 and 9, the first leap being from a² to b-flat¹, and then the consecutive second leap being back from b-flat¹ to a². By extending Wiedeburg's method two include two consecutive leaps, it would be possible to create the contrast of a long sustaining voice against continuous motion present in Bach's style. Instead of the two consecutive seventh leaps, Wiedeburg diminution no. 3 contains a leap of a sixth and a leap of a seventh. In the Wiedeburg diminution, the sixth and seventh leaps occur metrically after the dotted eighth notes. This metric placement, with its alternating Doppelschlags and Schleifers, creates a different melodic contour in comparison to the melodic contour in Bach's opening descending-fifths sequence.

The opening descending-fifths sequence by Bach begins with the sixteenth-note motion introduced in the right hand in the subject, but after four measures into the sequence, at m. 10, Bach shifts the sixteenth-note motion into the left hand. In longer sequential passages, Bach seems to favor changing the texture at some point for the sake of variety and to keep the listener engaged. In contrast, the approach of Wiedeburg assigns prefixed roles to the right and left hands: diminution in the right hand and chordal bass arpeggiation in the left hand. Even after the texture change, Bach ensures that the sixteenth-note motion is continuous. In m. 10, Bach does not simply shift the material from the right hand to the left hand, but shifts the sequence by a third.

The exchange of textures is not featured in Wiedeburg's method. However, it could

easily be applied as an additional technique when writing Bach-style inventions. The exchange of textures provides textural variety. Much of the discussion of Wiedeburg diminution no. 3 applies also to diminution no. 1. Wiedeburg diminution no. 1 is melodically quite linear. The third skip up in m. 7 in the right hand of Bach's realization causes that the b-flat¹ can be heard as a suspension that ultimately resolves to a¹ in m. 9 in Bach's sequence. Whereas the ambitus of the soprano in Bach's opening sequence is a seventh because of the sequentially repeated pattern (two measures), in the first Wiedeburg diminution the ambitus for the soprano per two measures is only a fifth. The only leap is a leap of a third in Wiedeburg diminution no. 1, occurring on the second beats of mm. 7, 9 and 11. The third leaps are less dramatic in terms of melodic contour compared to the seventh leaps of Bach's sequence. Wiedeburg diminution no. 2 takes the Doppelschlags from diminution no. 3 and Doppelschlags from diminution no. 1, creating yet another diminution possibility. The repetition of multiple Doppelschlags creates a more fragmented texture, which contrasts with the alternating stepwise ascending and descending motions in Bach's opening descending-fifths sequence.

The left-hand texture in Bach's opening descending-fifths sequence in mm. 7-10 is quite similar to the bass in the Wiedeburg diminutions. Callahan's technique for bass diminutions has been applied and can be seen in diminutions 1, 2 and 3 in the comparison sheet. In Callahan's application of bass, each harmony is arpeggiated in a similar way. In the case of the descending-fifths sequence of Invention no. 4, all the bass arpeggiations of my own diminutions (last three systems) make a third leap up, none a third leap down. Bach, on the other hand, first uses arpeggiation in one measure, and then for a change in the following measure he uses passing tones to connect chord tones. This method can be used to achieve a style that more closely resembles that of Bach. One difference is that Bach's bass is less triadic and has a more melodic profile when compared to the chordal diminution based on Callahan's advice for bass diminutions. Bach changes the bass texture in mm. 10-14, and this type of change could also be

applied to the student's diminution.

To summarize, Bach's realization is based on the material of the subject (exposition). In the case of this invention, especially the rhythm and the melodic contour Bach introduced in the subject continue in the descending-fifths sequence. The rhythm in my Wiedeburg diminutions, on the other hand, depend on the spacing of the target notes, and consequently the figurations leading to them. Bach's realization also features continuous sixteenth-note motion. By contrast, in the right hand of my Wiedeburg diminutions the rhythm of the soprano stops in the middle of the measure. Bach features the exchange of the right and the left hand textures to provide variety. My diminutions created with Wiedeburg's method, by contrast, show predefined roles for the soprano of the right hand and the bass of the left hand. This also entails that Bach's sequence features imitation between the right- and left hands, whereas imitation is absent in the Wiedeburg diminutions.

Chapter 2.2: The Descending-Fifths Sequence in Bach's Invention in F major, No. 8, mm. 21-25

The descending-fifths sequence in mm. 21-25 in Bach's Invention in F major, no. 8 uses material introduced in the exposition (initial statement) in mm. 1-4. I will discuss the exposition and then the descending-fifths sequence. For the initial statement, see Ex. 2.3.

Example 2.3: Bach, Invention in F Major, BWV 779, No. 8, mm. 1-4 (initial statement)

The left hand features imitation at the octave already in the subject in m. 2 and begins a

long canonic episode that lasts until the downbeat of m. 12. The piece has more similar canonic episodes. However, the descending-fifths sequence in mm. 21-25 is not a canon. Example 2.4 shows a detailed comparison sheet of the descending-fifths sequence. My harmonic reduction shows that the alto and bass are inverted in m. 24. Therefore, the chord position changes. In mm. 24-25, the latter half notes of the measures feature root chords instead of the first inversions that appear in the latter half notes in mm. 21-23. Bach's sequence begins with natural minor because the sequence leads towards the key of F major. However, in mm. 22 and 23, Bach uses the melodic minor mode to emphasize the key of D minor. The d-minor chord in m. 24 is not only the harmonic goal of the melodic minor motion but also a turning point where Bach switches the textures between the right and left hands.

The descending-fifths sequence in mm. 21-25 features the eighth-note leaping motif of the subject. However, this time the leaping motif is first in the left hand and then in the right hand, unlike in the subject. The chordal nature of the subject is also apparent in the descending-fifths sequence. The subject in m. 1 begins with an F-major triad, whereas the left hand in the sequence features arpeggiated seventh chords. At the beginning of the descending-fifths sequence, the right hand features sixteenth-note arpeggiation, which is reminiscent of music for strings. The right hand in mm. 21-23 can be seen as alternating between two voices in which the upper voice (soprano) sounds the seventh and the lower voice (alto) sounds the root tone of a seventh-chord. In m. 24, the hands exchange textures. The left hand seemingly continues the pattern of the right hand in m. 24. Bach tweaks the pattern by leaping to the last notes in the right hand in mm. 24-25. Bach also slightly modifies the first four sixteenth notes in the left hand in mm. 24-25. What the descending-fifths sequence in mm. 21-25 shows is that tweaking may facilitate the exchange of textures. Perhaps the slight change in the right hand of mm. 24-25, namely the last note of mm. 24 and 25 gives a clearer sense of melodic direction, and more convincingly leads to the next measure. Perhaps also the change in the left hand strengthens the role of the

Example 2.4: Bach, Invention in F Major, No. 8, BWV 779, mm. 21-26, comparison sheet

(SL=Schleifer, DS=Doppelschläge, SN=Schneller)

21

Bach

Reduction

Fenaroli

Wiedenburg / Callahan 1

Wiedenburg / Callahan 2

bass voice. An important consequence of the inversion of the right- and left-hand textures is the change in the chord positions, which contains root instead of first-inversion chords. In addition to extending the diminution method of Wiedeburg with the exchange of right- and left-hand textures, students can slightly modify the material to facilitate the exchange, as Bach does.

The points discussed in the previous subchapter (2.1) also apply to this sequence (mm. 21-25). In particular, Wiedeburg diminution no. 1 utilizes Schleifers in which the target notes have been shifted an octave below, like those of the Wiedeburg diminutions of the previously discussed sequence. All the Wiedeburg diminutions in Ex. 2.4 show that Wiedeburg's method produces diminutions that are melodic instead of chordal in nature. The surface texture in the sequence by Bach emphasizes chord arpeggiation. The diminution produced with Wiedeburg's method creates a distinct melodic profile because of the melodic shape of the diminution figures. In Bach's case the melodic contour can be seen as more subtle, hidden behind the arpeggiated texture. Also, the shape of Bach's diminutions in sequential passages is largely determined by the subject at the beginning of the invention. In Bach's sequence in mm. 21-23, the right hand first plays a four-note motive and reaches b-flat². Then by utilizing chordal arpeggiation, Bach sustains the high b-flat² every other sixteenth note as an upper voice (soprano).

Bach's arpeggiation on the last two beats of mm. 21-23 of his realization makes it easy to distinguish between the implied upper and lower voices. My diminutions in the last two systems at the bottom of Ex. 2.4 differ in how they separate the soprano and alto voices, as opposed to Bach's realization. In Wiedeburg diminution no. 1, the leap down a seventh after the initial four-note figure in mm. 21-23 articulates quite clearly a lower voice. Otherwise, Wiedeburg diminution no. 1 with its Schleifers does not contain diminution that distinguishes as clearly between upper and lower voices as does Bach's chordal arpeggiation. Whereas Bach's diminution in mm. 21-23 sustains an upper voice by repeating the B-flat for the rest of the measure, Wiedeburg diminution no. 1 does not perhaps have the same kind of sustaining effect,

since the b-flat does not return later. Whereas the Wiedeburg diminutions stop in the middle of the measure, the chord arpeggiation of Bach's realization provides motion throughout the measure.

Wiedeburg diminution no. 2 features Doppelschlags. The right hand in this diminution creates a rather distinct sustaining upper voice similar to the upper voice in Bach's realization in mm. 21-23. In particular, the first b-flat² of Wiedeburg diminution no. 2 is isolated by the sixth leap down to a lower d². In mm. 21-23, after the tied quarter note of the second beat, the seventh leap up on the last beat maintains a clear distinction between the soprano and the alto voice. In mm. 21-23 of Bach's realization, by contrast, the upper voice in the right hand, the high b-flat (the upper sustaining voice) is sounded multiple times throughout the measure. In mm. 21-23 of the Wiedeburg diminution no. 2, however, the high b-flat is sounded only twice: as the first note of m. 21, and on the last beat of the measure. The chordal arpeggiation of Bach's realization sustains implied voices differently in comparison to those of the diminutions created with Wiedeburg's method.

Regarding harmonic rhythm, the harmony of the subject in mm. 1-4 is stable and prolongs F-major harmony. In most of the piece, one measure has only one harmony. In other words, the rate of the harmonic rhythm is a dotted half note. However, in the sequential passage, Bach changes the harmonic rhythm to an unstable alternation of quarter and half notes. This latter harmonic rhythm is unstable because the quarter note occurs on the downbeat rather than the last beat. Both Wiedeburg diminutions have the following rhythmical pattern: first a four-note figure, then a tied quarter note and finally another four-note figure leading to the next measure. This rhythmical pattern highlights the second beat of a measure as a different kind of beat from the others, since the motion stops for a beat. This stems from the fact that the four-note figures are always approaching the next note in a given harmonic context. Bach's diminution does not have similar rhythmic changes inside a measure. In Bach's diminution, the unstable harmonic

rhythm is also emphasized by the texture of the diminution. More specifically, the diminution features chordal arpeggiation on the last two beats.

In the left hand of the diminutions created with Wiedeburg's method (the last two systems at the bottom of Ex. 2.4), the first beats of mm. 21-25 feature eighth-note arpeggiation, the latter two beats featuring quarter notes. The left hand of Bach's realization in comparison features eighth notes for the whole measure in mm. 21-23, deriving the material from the subject (exposition). Students could easily extend Callahan's approach to enlivening the bass by diminishing all quarter notes of the bass with eighth notes. Students could further get closer to the style of Bach by imitating the enlivened bass in the right hand at some point in a given sequence. As can see in Bach's realization in mm. 24-25, during the exchange of the right- and left hand textures, students can modify the material slightly if it provides a more desirable melodic profile.

To summarize, Bach reuses material from the subject (exposition) in his realization in mm. 21-25. The diminutions created with Wiedeburg's method feature rhythm that stops in the middle of the measure. Bach, on the other hand, features continuous motion throughout the sequence. He also changes the textures of the right- and left hands in the middle of the sequence, and thus features imitation, unlike the Wiedeburg diminutions.

Chapter 2.3: The Descending-Fifths Sequence in Bach's Invention in C Major, No. 1, mm.

15-19

The descending-fifths sequence in mm. 15-19 in Bach's Invention in C major, no. 1 uses material introduced in the exposition in mm. 1-2. I will first discuss the exposition, and then the descending-fifths sequence. For the initial statement, see Ex. 2.5.

Example 2.5: Bach, Invention in C Major, No. 1, BWV772, mm. 1-2 (initial statement)



The subject is very short, and can be seen consisting of only seven notes. The following leap up to g^1 already begins the countersubject as the subject is introduced in the bass. In m. 2 the subject and the countersubject occur on the dominant. Later in mm. 15-19 a descending-fifths sequence occurs. Example 2.6 shows a detailed comparison sheet regarding the descending-fifths sequence. The imitative nature of the sequence is also reflected in my harmonic reduction in the second system of Ex. 2.6. In the first measure of the sequence, the right hand features a passing tone g^2 that leads to the f^2 of the next measure. In the second measure, the left hand features the passing tone c that leads to the B of the next measure. Such dialog of passing tones is absent from the corresponding Fenaroli sequence. Another difference is that the Fenaroli sequence features four voices instead of the two voices present in my harmonic reduction. Additionally, the Fenaroli sequence does not feature the c -sharp leading tone that puts emphasis on the D -minor harmony, but features a natural c instead. In Bach's realization, the c -sharp in m. 15 of the left hand suggests a D -minor harmony, and the b -flat in m. 18 indicates that the trajectory of the sequence is towards F major. In summary, the Fenaroli sequence differs in its non-imitative nature, in the absence of passing tones, in the absence of the D -minor leading tone and in its number of voices.

In m. 15, the sixteenth-note figure in the right hand of Bach's realization is the inversion of the subject in a different transposition from the original one. In m. 16, however, the figuration

Example 2.6: Bach, Invention in C Major, BWV772, No. 1, mm. 15-19, comparison sheet

(P=Passing tone, SL=Schleifer, DS=Doppelschläge, SN=Schneller)

15

Bach

Reduction

Fenaroli

Wiedeburg / Callahan 1

Wiedeburg / Callahan 2

Wiedeburg / Callahan 3

is the subject itself in a different transposition. The sequence features a dialog between the right and left hands. The right hand features figurations for the first two beats of a given measure, and for the last two beats the left hand features imitation of the right hand. The reader might notice that the sequence by Bach is both melodic in nature and consists entirely of the motivic figures used in Wiedeburg's method. More specifically, this invention's last sequence is an exception among the fifteen Inventions by Bach, for no other sequence consists of only the figurations present in Wiedeburg's method. The other sequences by Bach feature other types of diminution absent from Wiedeburg's method instead. For an analysis of how the sequence consists of Wiedeburg's figurations, see Ex. 2.7.

Example 2.7: Bach, Invention in C Major, BWV 772, No. 1, mm. 15-19, (descending-fifths sequence)

(SL=Schleifer, DS=Doppelschläge, SN=Schneller)

The musical score for Example 2.7 shows measures 15-19 of Bach's Invention in C Major, BWV 772, No. 1. The score is in C major, 3/4 time, and features a descending-fifths sequence. The right hand (RH) and left hand (LH) are shown in separate staves. The RH part starts at measure 15 and continues through measure 19. The LH part starts at measure 16 and continues through measure 19. The sequence is characterized by a descending-fifths pattern in the RH, which is imitated in the LH. The RH part is marked with SL (Schleifer) and SN (Schneller) figures. The LH part is marked with SL (Schleifer) and SN (Schneller) figures. The sequence is in C major, and the RH part is in the key of C major, while the LH part is in the key of F major (one flat). The sequence is in C major, and the RH part is in the key of C major, while the LH part is in the key of F major (one flat).

Wiedeburg diminution no. 1 utilizes Doppelschlags as figurations. The imitation in Bach's sequence causes both hands to have similar roles. In contrast, Wiedeburg diminution no. 1 assigns different roles for the right and left hands. The kind of imitation found in Bach's sequence could easily be applied to sequences that utilize the method by Wiedeburg. Since the imitation in Bach's

sequence is shown also in my harmonic reduction of the sequence, and since the Wiedeburg figures are applied to predetermined target notes, there are no obstacles in applying imitation in the right hand to the left hand in Wiedeburg diminutions. Bach's sequence and Wiedeburg diminution no. 1 are both very melodic, and there are no big leaps. In Wiedeburg diminution no. 1, the two first Doppelschlags of the sequence begin by repeating the previous sustaining quarter note. The repetition of the previous sustaining note combined with the presence of leaps no greater than a third creates a very compact melodic contour in comparison to Bach's sequence.

Rhythmically, the application of four-note figures in diminutions created with Wiedeburg's method as opposed to the longer subject of Bach creates a more fragmented sequence. The continuous sixteenth-note motion is present in Bach's sequence and absent in the Wiedeburg diminutions. In Bach's sequence, the figurations last for two beats per measure, and the ensuing sustaining note lasts for another two beats. In the Wiedeburg diminutions, however, motion stops in mm. 15 and 17 for the first and third beats, and in mm. 16-18 for the first three beats of the measures. This rhythmic activity is slower in comparison to the activity in Bach's realization. Students could extend the method of Wiedeburg by including imitation similar to the imitation in Bach's sequence at hand. They should take into account that the length of the figurations being imitated affects the rhythmic activity of a given sequence.

Wiedeburg diminution no. 2 consists of the alternation between Schleifers and two Doppelschlags. Both Wiedeburg diminution no. 2 and Bach's figurations in his sequence contain leaps no greater than a third. The soprano of the right hand in Bach's realization has an ambitus of a fourth: in mm. 15-16, the ambitus spans from e^2 to a^2 , and the span is a second lower in mm. 17-18. In Wiedeburg diminution no. 2, on the other hand, the ambitus of the soprano spans a sixth, from e^2 to c^3 in mm. 15-16 (the span being a second lower in mm. 17-18). In other words, Bach's texture creates a more smooth melodic profile, whereas Wiedeburg diminution no. 2 features a more dramatic melodic contour. In particular, Bach's subject with only stepwise

motion and leaps of third causes that the narrow melodic profile perhaps does not draw attention the same way as melodic figures involving leaps. The tied half notes in Bach's realization in mm. 15-19 also highlight the suspensions that resolve in the ensuing figurations. If one applied imitation of the right hand to the left hand regarding Wiedeburg diminution no. 2, the sequence would be very different in nature. The sequence would have a bolder melodic profile in comparison to the more narrow melodic profile Bach has in his sequence. Wiedeburg diminution no. 3 is otherwise similar to Wiedeburg diminution no. 2, except that the third figuration is this time a Schleifer instead of a Doppelschlag. This further widens the overall ambitus of the melodic figures, and creates an even more dramatic melodic contour for the diminutions.

Regarding the bass, the diminutions created with Wiedeburg's method do not this time feature Callahan's approach to enliven the bass. The left hand of the harmonic reduction in m. 17 features a whole note, unlike the other measures of the sequence. Moreover, the left hand of Bach's realization features imitation absent from Wiedeburg's method. However, both Bach and the diminutions created with Wiedeburg's method include left-hand parts that feature a stable half note for the two first beats of mm. 15-18. If students extend Wiedeburg's method to diminution by applying imitation of the right hand to the left hand, they should ensure that the bass of the left hand clearly states the underlying harmony at the beginning of a given measure.

To summarize, in this invention Bach builds the sequence by using the subject directly, either as is or as an inversion. The right and left hands feature conversation-like alternation of sixteenth-note material and a tied half note, together featuring continuous sixteenth-note motion. The diminutions created with Wiedeburg's method, on the contrary, do not feature such continuous sixteenth-note motion, but stop the motion in the middle of measures. As opposed to subchapters 2.1 and 2.2, in this case Bach does not feature the exchange of right and left hands in the middle of the sequence, but instead the alternating material between the right- and left hands is distributed evenly throughout the sequence. From another perspective, Bach's

sequence is based on continuous imitation of the subject material between the right- and left hands, whereas the Wiedeburg diminutions do not feature such imitation.

Chapter 2.4: The Descending-Fifths Sequence in Bach's Invention in E-flat Major, No. 5, mm. 20-23

The exposition in Bach's Invention in E-flat major, no. 5 in mm. 1-4 introduces material that is used in the descending-fifths sequence in mm. 20-23. I will first discuss the exposition, and then the descending-fifths sequence. For the initial statement, see Ex. 2.8.

Example 2.8: Bach, Invention in E-flat Major, BWV 776, No. 5, mm. 1-4 (initial statement)

Bach's Invention in E-flat major features continuous sixteenth-note motion, initially in the left hand. The subject in mm. 1-4 is two-voiced. The material in the right and left hands is treated as one unit, and the material in one hand never occurs separated from the other hand. The subject is a modulating subject, beginning from the tonic, but over the discourse of the harmony modulating to the dominant. After the subject in mm. 1-4, later a descending-fifths sequence occurs in mm. 20-23. Example 2.9 shows a detailed comparison sheet of the descending-fifths sequence. My harmonic reduction indicates that there are two voices, which form intervals of

Example 2.9: Bach, Invention in E-flat Major, BWV776, No. 5, mm. 20-23, comparison sheet

(SL=Schleifer, DS=Doppelschläge, SN=Schneller)

20

Bach

Reduction

Fenaroli

Wiedeburg / Callahan 1

Wiedeburg / Callahan 2

Wiedeburg / Callahan 3

thirds. The thirds ascend in parallel motion by a fourth and then descend by a fifth, forming a descending-fifths sequence. The corresponding Fenaroli sequence differs in that there are four voices instead of two. Also, the second harmony in a given measure features the root note of the chord in soprano, whereas the soprano of Bach's realization features the third of the chord.

In the descending-fifths sequence by Bach in mm. 20-23, the right hand contains the material with continuous sixteenth-note motion originally prevalent in the left hand of the subject, and correspondingly the left hand contains the subject material of the right hand. The Wiedeburg diminutions do not feature such continuous motion. Both the Wiedeburg diminutions and Bach's sequence assign specific roles to the right and left hands. Regarding the register of the soprano, the first two beats in mm. 20-22 of Bach's realization feature diminution in the lower register, and the last two beats in the upper register. The registers are separated by seventh leaps on the third beats in mm. 20-23. In my Wiedeburg diminutions no. 1 and 3, the ascending Schleifers cause the register to change fast during the four-note figures. The register is balanced by a leap on the last beat. Bach's figurations are narrow in melodic profile and occur in two distinct registers, separated by a seventh leap. The right hand in Bach's sequence spans the ambitus of an octave. Wiedeburg diminutions no. 1 and 2 also both feature an ambitus of an octave, but are linear in nature and do not create distinction of figurations in different registers, as Bach does. Especially the melodic contour of Wiedeburg diminution no. 2 features a much bolder melodic contour in comparison to Bach's narrower melodic profile. Wiedeburg diminution no. 3 features figurations with a narrower melodic profile in comparison to the other two Wiedeburg diminutions, and perhaps most closely resembles the original Bach sequence. Bach highlights the first note of the next measure by repeating the note twice already in the last two beats of a given measure. For example, on the last two beats of m. 20, the a-flat² is repeated twice before being repeated a third time as the first note of m. 21. This emphasis of a-flat² by repetition is absent in all the three diminutions created with Wiedeburg's method.

The harmonic rhythm features a dotted half note for the first harmony of a given measure and a quarter note for the next harmony. Bach diminishes the left hand by filling the first three beats of a given measure with stepwise notes towards the quarter note of the last beat in mm. 20-22. Extending Wiedeburg's method by adding quarter- and eighth-note passing tones in the left hand facilitate the embellishment of the left-hand part in the style of Bach.

To summarize, so far the previous subchapters have featured sequences where the right and left hands change textures. However, in the case of the sequence in mm. 20-22, Bach features established roles for the right and left hands. Both the diminutions created with Wiedeburg's method and the right hand of Bach's realization feature sixteenth-note motion, and the bass features less motion. In Bach's case, the sixteenth-note motion is continuous whereas the Wiedeburg diminutions stop in the middle of the measure. The material of the sequence is derived from the subject. However, in the subject (exposition), the left hand features continuous sixteenth-note motion, whereas in the sequence the right hand features continuous sixteenth-note motion. Therefore, the roles of the right- and left hands are different in the sequence when compared to the initial statement.

Chapter 2.5: The Descending-fifths Sequence in Bach's Invention in E Minor, No. 7, mm. 3-5

The exposition introduces material present in the opening descending-fifths sequence in mm. 3-5 in Bach's Invention in E minor, no. 7. I will first discuss the exposition. For the initial statement, see Ex. 2.10.

Example 2.10: Bach, Invention in E Minor, BWV 778, No. 7, mm. 1-2 (initial statement)



The subject is very short, similar to the subject in Bach's Invention in C Major, no. 1, discussed in subchapter 2.3. The next note b^1 can already be seen as part of the countersubject for the subject occurrence in the left hand. Since what I call the countersubject occurs only seldom throughout the invention, it could also be called free counterpoint. In m. 2 the subject and countersubject occur on the dominant harmony. In mm. 3-5 a descending-fifths sequence occurs. Example 2.11 shows a detailed comparison sheet of the descending-fifths sequence. The harmonic reduction in the second system of Ex. 2.11 shows that the two voices form thirds and follow a descending-fifths pattern, as was the case in the previous subchapter. Except for the number of voices and the melodic contour of the upmost voice, the corresponding Fenaroli sequence is also very similar when transposed to the key of the invention.

Bach's descending-fifths sequence in mm. 3-5 features figurations identical to the subject, albeit in a different register. The sequence derives also the rhythm from the subject. As opposed to the the descending-fifths sequences in the previous subchapters, the sequence at hand does not feature continuous sixteenth-note motion. Bach's sequence features imitation between the right and left hands. The application of imitation in Wiedeburg diminution no. 3 would form parallel thirds: the Schleifer of the right hand on the second beat of m. 3 would be imitated in the left hand during the fourth beat. Imitation would give more balanced roles between the right and left hands in the Wiedeburg diminutions. Bach's realization in mm. 3-5 includes descending figurations on beats two and four, contrasted with a leap up on the third beat. Wiedeburg

Example 2.11: Bach, Invention in E Minor, BWV 778, No. 7, mm. 3-5, comparison sheet

(SL=Schleifer, DS=Doppelschläge, SN=Schneller)

Bach

Reduction

Fenaroli

Wiedeberg / Callahan 1

Wiedeberg / Callahan 2

Wiedeberg / Callahan 3

diminutions no. 1 and 3, on the other hand, feature the opposite: ascending figurations on the second beat, contrasted with a leap down after reaching the highest note in the fourth beat. The descending Schleifer in Wiedeburg diminution no. 2 is perhaps most reminiscent of the stepwise descent in Bach's sequence. In Bach's sequence, however, the last figuration of stepwise descent is a six-note figuration as opposed to the four-note figuration of the method by Wiedeburg. The fact that Wiedeburg diminution no. 2 alters between ascending and descending Schleifers means there are no leaps at all.

The high c^3 in Bach's realization is the highest note Bach uses in his fifteen Inventions. Since c^3 is also part of the harmonic reduction, it restricts the use of an ascending Schleifer at the beginning of every Wiedeburg diminution. All other four-note figurations in the approach by Wiedeburg would be above the target note, too high for a Bach-style invention. If a Doppelschlag (turn) were possible as the first four-note figuration instead of an ascending Schleifer, there would be more possibilities for leaps and therefore different melodic contours in the diminutions.

The left hand of Bach's realization in mm. 3-5 begins with an octave leap down, followed by imitation of the subject material in the right hand. Both the octave leap down and imitation are absent both from Wiedeburg's diminution method, and also from Callahan's approach to enliven the bass. The fact that Bach features an eighth-note rest in the middle of mm. 3-4 (third beat), drastically affects the rhythmic profile of Bach's sequence. The eighth-note rest in the middle is also the point where the right hand features its highest note in a given measure. The sixth leap up further highlights the highest note of the right hand in mm. 3-4.

In summary, Bach's descending-fifths sequence at hand does not feature continuous sixteenth-note motion, prevalent in the sequences discussed in subchapters 2.1, 2.2 and 2.3. The right- and left hands of Bach's realization have defined roles and a different rhythmic profile. Yet, the left hand features imitation of the subject in the right hand in both measures (mm. 3 and 4). The diminutions created with Wiedeburg's method do not feature such imitation, but they

do feature distinct roles for the right- and left hands. Bach's realization features sixteenth-note motion that stops for the duration of an eighth note, whereas the Wiedeburg diminutions stop for a quarter note.

Chapter 2.6: The Descending-fifths Sequence in Bach's Invention in B-flat Major, No. 14, mm.

4-5

Since the exposition in Bach's Invention in B-flat major, no. 14 in mm. 1-3 introduces material that occurs in the opening-fifths sequence in mm. 4-5, I will first discuss the exposition and then the opening sequence. For the initial statement, see Ex. 2.12.

Example 2.12: Bach, Invention in B-flat Major, BWV 785, No. 14, mm. 1-3 (initial statement)

The image displays a musical score for the first three measures of Bach's Invention in B-flat Major, BWV 785, No. 14. The score is written in B-flat major (two flats) and common time (C). It consists of two systems of staves. The first system shows measures 1 and 2, and the second system shows measures 2 and 3. The right hand (treble clef) features intricate sixteenth-note patterns, while the left hand (bass clef) provides a simple harmonic accompaniment. The key signature is B-flat major, and the time signature is common time.

The alternation between the thirty-second-note figurations and the arpeggiations continue throughout the subject in the right hand. The last note of m. 1 in the right hand, a-flat¹, turns the B-flat major harmony into an applied chord of E-flat major, the subdominant. The A natural does not occur until m. 3, reconfirming the key of B-flat major. After the subject in mm. 1-3, the opening sequence directly follows in mm. 4-5. Example 2.13 shows a detailed comparison sheet regarding the opening sequence. Similarly to my harmonic reductions in subchapters 2.4 and 2.5, the two voices form thirds and follow a straightforward descending-fifths pattern. Like

in the previous subchapter, the corresponding transposed Fenaroli sequence in the key of the invention in question is very similar to Bach's sequence, except for the number of voices and the melodic profile of the upmost voice. The descending-fifths sequence in Bach's Invention in B-flat major, no. 14 is characterized by the alternation of the thirty-second-note figure derived from the subject between the right and left hands. The figurations of the left hand are identical to the original subject, and the figurations of the right hand are inversions of the subject. The Wiedeburg diminutions of the sequence in Invention no. 14 are the first ones to feature continuous sixteenth-note motion, which, however, is absent in Bach's realization. In Bach's sequence, the figurations to be imitated are followed by rests: the right and left hands do not play simultaneously, except for the end the sequence. In the imitation in Bach's realization, the figurations are melodic in nature, and the target notes are approached by a leap. For example, the first figuration of the left hand in m. 4 spans an interval of third from b-flat up to d¹, followed by a leap up to e-flat¹. Conversely, the right hand in m. 4, on beat 2 features a figuration spanning an interval of third from g² down to e-flat², followed by a leap down to c². This forms a dialog between two voices, where one voice has a motive and the other one has an inversion of the same motive. The Doppelschlags in Wiedeburg diminution no. 2 also span a third, like the figurations in Bach's realization. To more closely resemble the style of Bach, students can apply inversions to motivic material in a given sequence. In Wiedeburg diminution no. 2, the Doppelschlags revolve around the target notes, whereas in Bach's realization, the leaps cause the target notes to become either the highest notes in the right hand, or lowest notes in the left hand.

In Wiedeburg diminution no. 3 in the first and third beats of a measure feature note repetitions. The note repetitions and octave leaps present in Wiedeburg diminution no. 3 are absent from Bach's realization. Bach does not feature a stable note in the left hand at the beginning of a given measure as he did in the sequence in subchapter 2.3, with the exception of the end of the sequence. In beats two and four of a given measure, Bach's left hand features the

Example 2.13: Bach, Invention in B-flat Major, BWV785, No. 14, mm. 4-5, comparison sheet

(SL=Schleifer, DS=Doppelschläge, SN=Schneller)

4

Bach

Reduction

Fenaroli

Wiedeburg / Callahan 1

Wiedeburg / Callahan 2

Wiedeburg / Callahan 3

same notes as the corresponding diminutions created with Wiedeburg's method of diminution. By contrast, the left hand in mm. 4 and 5 has rests on the first and third beats. As the sequence ends in m. 5, both right- and left hands of Bach's realization play the figurations simultaneously on the second beat. The third beat of m. 5 features a note in the bass and a change in the rhythm of the sequence and thus gives the impression that the sequence has ended. In addition to imitation, students can extend Wiedeburg's method of diminution by changing the rhythm of the sequence in the right- and left hands.

To summarize, Bach's realization of the sequence in mm. 4-6 does not feature continuous sixteenth-note motion, albeit a continuous rhythmic pattern. The diminutions created with Wiedeburg's method, on the other hand, feature continuous sixteenth-note motion, absent from the Wiedeburg diminutions in all the previous subchapters. Similar to the case in subchapter 2.3, in this sequence Bach's realization features the sequence material alternating between the right- and left hands. His realization is conversation-like in nature, the right- and left hands alternate between sixteenth-note motion and rests, and feature imitation. The diminutions created with Wiedeburg's method, on the other hand, feature established roles between the right- and left hands.

Conclusion

One significant, consistent difference between Fenaroli's bass motions and my harmonic reductions of Bach's descending-fifths sequences is register. Fenaroli's bass motions are often in a register lower than my harmonic reductions of Bach's sequences. When students choose a harmonic framework to which to apply Wiedeburg's method of diminution, they should be aware that the framework should be high enough in register. In most inventions by Bach, an ascent in register occurs in the initial statement prior to the ensuing descending-fifths sequence. If the beginning of a descending-fifths sequence occurs in too low a register, the passage as a whole will end up in too low a register and therefore be musically unconvincing. Therefore, students should begin a descending-fifths sequence high enough in register when attempting to compose a stylistically authentic sequence in the style of Bach's inventions.

Passages produced with Wiedeburg's diminution method differ sometimes significantly from those by Bach. Most of the sequences in Bach's inventions cannot be reconstructed solely with Wiedeburg's diminution method. Although Bach often uses figures that commonly occur in diminutions produced with Wiedeburg's method, he also uses devices such as melodic leaps and chordal arpeggiation. Bach utilizes the subject throughout an invention almost without exception. Since no subject of Bach contains only four notes, the Wiedeburg diminutions are never identical to Bach's realizations. The subjects that are melodic in nature, such as those of Invention No. 4 in D major, mm. 1-6 and Invention No. 1 in C major mm. 15-19, resemble more closely the sequence diminutions that utilize Wiedeburg's method than subjects that rely on techniques such as chordal arpeggiation or violin-like string skipping to indicate voices. It appears that Bach sometimes employs diminutions that resemble those found in the string-instrument repertoire. More specifically, the diminutions resemble the technique whereby the string player moves the bow between adjacent strings. The diminutions constructed with the

approach of Wiedeburg, by contrast, are less characteristic of string repertoire. Regarding rhythm, realizations created with Wiedeburg's method of diminution tend to feature longer note durations in the middle of the measure, whereas Bach's realizations tend to feature continuous motion. Imitation-based descending-fifths sequences tend to feature more distinct patterns of rhythmic alternation (Examples 2.6, 2.11, and 2.13). This contrasts with the sequences featuring an exchange of the textures in the middle of the sequence, which tend to have more stable rhythmic patterns (Examples 2.2 and 2.4). If students want more elaborate rhythmic patterns in sequences, they should introduce the patterns already in the subject. In sequences featuring an exchange of textures, Bach tends to feature the sixteenth-note motion first in the right hand, then the left hand (Inventions 4 and 8). The diminution pattern can also be slightly modified in the exchange of textures in the right and left hands, especially to create a more distinct melodic profile in the right hand, as seen in subchapter 2.2.

By becoming familiar with Wiedeburg's approach, students might learn to further recognize how Bach utilizes stepwise motion and turns in his subjects. Also, students can analyze in which ways Bach modifies the stepwise motions and turns in the descending-fifths sequence figurations, i.e. the application of the subject in the descending-fifths sequences. Wiedeburg's method already provides many different types of diminutions, but extending the method in ways such as allowing longer figures and allowing imitation would provide a larger number of possibilities. If Wiedeburg's method is extended by allowing a greater number of notes than four per figuration, then one can get closer to the style of Bach in sequences. Approached from another point of view, students could first compose a melodic subject and then regard it as a figuration to be used in a sequence. Students could try and compose different harmonic frameworks, taking harmonic reductions of Bach's descending-fifths sequences or Fenaroli's bass motions as role models. Then students could apply the subject, either unchanged, as in Invention 1, or with a minor modification, as in Invention 4, and apply the subject in a similar manner as Wiedeburg

figurations are applied. Students could also take notice of the rules that apply to Wiedeburg's method, and then break them only for reasons that Bach has, such as motivic coherence and imitation in either hand.

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