

**Teaching Figured Bass with Keyboard Chorales
and C. P. E. Bach's *Neue Melodien zu einigen Liedern des
neuen Hamburgischen Gesangbuchs* (1787)**

Derek Remeš

The pedagogical method proposed in this article intends to teach undergraduate students how figured bass works in a historically informed way. It represents a break from mainstream Anglo-American undergraduate theory pedagogy in several respects: the method proposes new cadential terminology, focuses on bass degree (not root) identification, and shifts figuring to above the bass staff. These new perspectives stem from a desire for greater theoretical differentiation among stylistic eras, for such changes can greatly affect the way we hear, read, and understand baroque music. For instance, the omission of root-oriented thinking encourages teachers to rethink our predominantly harmony-centered understanding of baroque music so that contrapuntal considerations can play a greater role. Indeed, the division between harmony and counterpoint so prevalent today was foreign to that time.¹ The vertical and horizontal dimensions of music were united aurally, physically, and conceptually in the art of figured-bass accompaniment, which was simultaneously a laboratory for haptic learning and a gateway into composition. Although figured-bass accompaniment is possible on other instruments, like the lute, the dominant baroque continuo instrument was the keyboard (i.e., harpsichord, organ, clavichord, etc.).² For this reason, the historically informed curriculum proposed in this article is oriented around the piano, as this is the most common keyboard instrument today.

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¹ The division has been institutionalized in the Paris Conservatory's curriculum since 1822 and continues to inform present-day thinking. See Renate Groth, *Die Französische Kompositionslehre des 19. Jahrhunderts* (Wiesbaden: Franz Steiner Verlag, 1983), 14–16; Ludwig Holtmeier, "Heinichen, Rameau, and the Italian Thoroughbass Tradition: Concepts of Tonality and Chord in the Rule of the Octave," *Journal of Music Theory* 51, no. 1 (Spring 2007): 9n10.

² "The organ, harpsichord, pianoforte, and clavichord are the keyboard instruments most commonly used for accompaniment." C. P. E. Bach, *Essay on the True Art of Playing Keyboard Instruments*, trans. and ed. William J. Mitchell (New York: Norton, 1949), 172.

An Unacknowledged Generic Difference: Vocal vs. Keyboard Chorales

The keyboard-centered approach in this article aims to balance historical accuracy with pedagogical efficacy. Historically, we know that the chorale played a central role in eighteenth-century German pedagogy. Our initial thought may therefore be to turn to Bach's published vocal chorales, as these are standard fare in theory classrooms today. A growing body of evidence suggests, however, that the *keyboard* chorale—not the *vocal* chorale—played the decisive role in the pedagogy of Bach and his German contemporaries.³ As I have described elsewhere, the keyboard chorale differs from the vocal chorale in that it is primarily homophonic and unornamented.⁴ This unacknowledged generic distinction calls into question the place of honor Bach's vocal chorales have had in harmony curricula ever since C. P. E. Bach's first publication of them in 1765.⁵ The aim of this article is to take the first steps in developing a curriculum centered around the keyboard chorale that can replace our current focus on Bach's vocal chorales.

Susan McCormick's dissertation, which represents the first major attempt to catalog the sources related to the eighteenth-century German keyboard chorale tradition, has revealed the importance of multiple-bass harmonization as a pedagogical method.⁶ A majority of the sources McCormick discusses originate from Bach's students, Johann Christian Kittel (1732–1809) and Johann Philipp Kirnberger (1721–1783), suggesting a common origin in their teacher. Fascinatingly, many of the sources contain between two and twelve basses for a given chorale. Multiple-bass chorales also play important roles in Kittel's and Kirnberger's treatises.⁷ The purpose of the basses is to explore the contrapuntal and

³ See Robin A. Leaver, "Suggestions for Future Research into Bach and the Chorale: Aspects of Repertoire, Pedagogy, Theory, and Practice," *BACH: Journal of the Riemenschneider Bach Institute* 42, no. 2 (2001): 40–63; Leaver, "Bach's Choral-Buch? The Significance of a Manuscript in the Sibley Library," in *Bach and the Organ*, Bach Perspectives 10, ed. Matthew Dirst (Urbana: University of Illinois Press, 2016), 16–38; Susan McCormick, "Johann Christian Kittel and the Long Overlooked Multiple Bass Chorale Tradition" (PhD diss., Queen's University Belfast, 2015); and Derek Remeš, "J. S. Bach's Chorales: Reconstructing Eighteenth-Century German Figured-Bass Pedagogy in Light of a New Source," *Theory and Practice* 42 (2017): 29–53.

⁴ Remeš, "J. S. Bach's Chorales."

⁵ J. S. Bach, *Johann Sebastian Bachs vierstimmige Choralgesänge*, ed. C. P. E. Bach (Berlin and Leipzig: Friedrich Birnstiel, 1765/1769).

⁶ McCormick, "Johann Christian Kittel."

⁷ Johann Christian Kittel, *Der angehende praktische Organist* (Erfurt: Beyer und Maring, 1801–1808); and Johann Philipp Kirnberger, *Die Kunst des reinen Sazes in der Musik* (Berlin und Königsberg: Decker und Hartung, 1771–1779).

harmonic possibilities inherent in a given melody. This training was then applied both in the improvisation of varied harmonizations for different verses during the church service (a practical laboratory of figured bass), as well as in the more general sense of recognizing the available compositional options at any given point in time (a gateway to composition). The procedure of multiple-bass harmonization aligns with C. P. E. Bach's oft-quoted description of his father's pedagogy, where J. S. Bach first supplied the outer voices and figures and then later had his students write their own basses.⁸ Thus, a curriculum that aims to imitate the pedagogy of Bach should take figured-bass keyboard (not vocal) chorales as its point of departure. Because space is limited, I will not discuss the composition of original basslines to a given chorale.⁹ Instead, I focus on the introductory, yet essential, task of teaching thoroughbass to non-keyboard majors who have no prior experience with music theory.

When choosing keyboard chorales related to Bach for use in the classroom, the first instinct may be to reach for Bach's chorales in Georg Schemelli's *Gesangbuch*; however, they are generally too difficult for non-keyboard majors (although they are ideal for more advanced students).¹⁰ For this reason, a better choice is C. P. E. Bach's *Neue Melodien zu einigen Liedern des neuen Hamburgischen Gesangbuchs* (Hamburg, 1787).¹¹ Like

⁸ "In composition [J. S. Bach] started his pupils right in with what was practical, and omitted all the *dry species* of counterpoint that were given by Fux and others. His pupils had to begin their studies by learning pure four-part thoroughbass. From this he went to chorales; first he added the basses to them himself, and they had to invent the alto and tenor. Then he taught them to devise the basses [note the plural] themselves. He particularly insisted on the writing out of the thoroughbass in parts [Aussetzen der Stimmen im Generalbasse]. In teaching fugues, he began with two-part ones, and so on. The realization of a thoroughbass and the introduction to chorales are without doubt the best method of studying composition, as far as harmony is concerned." *The New Bach Reader*, ed. Hans T. David and Arthur Mendel, revised and expanded by Christoph Wolff (New York: W. W. Norton & Company, 1998), 399.

⁹ My dissertation examines this in greater detail. "J. S. Bach's Compositional Pedagogy: Reconstructing His *Fundamental-Regeln* with Historical Sources" (PhD diss., Hochschule für Musik Freiburg, Germany, forthcoming).

¹⁰ *Musicalisches Gesang-Buch* (Leipzig: Breitkopf, 1736). Reprint: Hildesheim: Olms, 1975.

¹¹ The only instructional text in the whole collection is the preface, which reads: "So that congregations might learn to sing the new melodies easily and quickly, organists will do well, in the beginning, to accompany these melodies, which are set with easy intervals, with the prescribed and underlying easy harmonies strongly and unartificially [ungekünstelt]." "Anmerkung: Damit die Gemeinen die neuen Melodien leicht und bald mitsingen lernen, werden die Herrn Organisten wohl thun, wenn sie im Anfange diese

Bach's Schemelli chorales, these fourteen settings give the chorale in the top voice with a figured bass, but C. P. E. Bach's chorales are in a much simpler style. The *Neue Melodien* are therefore ideal not only because of their simplicity and historical proximity to Bach, but also because they were appended to the seventh edition of David Kellner's (ca. 1670–1748) *Treulicher Unterricht* in 1789.¹² Kellner's treatise is significant for several reasons: it was the best-selling eighteenth-century German figured-bass treatise, it has ties to the Bach circle, and its publication with the *Neue Melodien* in 1789 shows that the connection between figured-bass pedagogy and chorale harmonization extended beyond the Bach circle.¹³

A Historically Informed Method for Today's Classroom

I suggest using C. P. E.'s *Neue Melodien* in a series of graduated levels in order to teach beginners how figured bass works. The levels progress from the most restricted to the least restricted. My intent is not that every student necessarily begin at Level 1. Rather, Level 1 is designed to meet the needs of students with no prior experience with figured bass; one could begin with Level 2 or 3 as well. The levels are as much a conceptual scaffolding as a practical one; they are a means of communicating to beginners what figured bass is and how its notational conventions work. It is assumed that students can read treble and bass clefs, know key signatures and scales, and can identify intervals. In each of the seven levels, the chorale is always in the top voice with a figured or unfigured bassline. The levels are:

1. Outer voices with one inner voice given as figures
2. Outer voices with two inner voices given as figures in score order
3. Outer voices with all figures in score order
4. Outer voices with all figures in numerical order

aus leichten Intervallen gesetzte Melodien mit der vorgeschriebenen und untergelegten leichten Harmonie stark und ungekünstelt mitspielen. Hamburg, den 30sten Julius, 1787. C. P. E. Bach." My translation. C. P. E. Bach's *Herrn Professor Gellerts Geistliche Oden und Lieder mit Melodien* (Berlin: George Ludewig Winter, 1758) are unsuitable because they are too difficult for beginners and already include realized inner voices.

¹² For an English translation of the second edition of Kellner's treatise (1737), together with an edition of C. P. E. Bach's fourteen chorales, see Derek Remeš and Robin A. Leaver, eds., *Realizing Figured-Bass Chorales in J. S. Bach's Circle* (Colfax, NC: Wayne Leupold Editions, forthcoming).

¹³ For more information on the connection between Kellner and C. P. E. Bach's *Neue Melodien*, see Robin A. Leaver and Derek Remeš, "J. S. Bach's Chorale-Based Pedagogy: Origins and Continuity," *BACH: Journal of the Riemenschneider Bach Institute* 48, no. 2 and 49, no. 1 (2018): 116–50.

5. Outer voices with abbreviated figures
6. Outer voices with no figures

The method outlined here differs from mainstream Anglo-American theory pedagogy in several respects. First, I have removed all traces of Rameau-influenced root identification (i.e., Roman numerals). Instead, the bass scale degree replaces the root as the primary conceptual reference point, in keeping with German baroque practice. This decision is based on both historical and practical grounds. Historically, Johann Heinichen's 1728 treatise *Der General-Bass in der Composition* offers a sophisticated examination of contemporaneous German theory in which bass degree, not chordal root, plays a central role.¹⁴ Rameau's theories, which first gained wide acceptance in Germany in the second half of the eighteenth century, are less suited to describing J. S. Bach's practice from a historical viewpoint.¹⁵ For instance, in the manuscript *P 401*, copied by Bach's student Bernhard Christian Kayser (1705–1758), Kayser analyzed the Fugue in C Minor and Prelude in D Minor from the *Well-Tempered Clavier* Book I using arabic numerals for the bass and thoroughbass for the upper voices.¹⁶ And although my notation of bass scale degrees in circles is borrowed from Ludwig Holtmeier's article examining Emanuel Förster's (1748–1823) method of harmonic analysis, the analytical orientation around the bass degree is the theoretical foundation of Heinichen's treatise and German baroque practice in general.¹⁷ Heinichen's theoretical views are particularly well matched with C. P. E. Bach's chorales because these chorales were appended to Kellner's treatise, and Kellner is largely a summary of Heinichen.

The second reason I reject root-oriented thinking in this curriculum is practical. Conceiving of common chords is harder for students than conceiving of common tones because it is easier for students to grasp that

¹⁴ *Rameaus langer Schatten: Studien zur deutschen Musiktheorie des 18. Jahrhunderts* (Hildesheim: Olms, 2017), 109–42, especially 138. See also George J. Buelow, *Thoroughbass Accompaniment According to Johann David Heinichen*, 2nd ed. (Lincoln: University of Nebraska Press, 1986), 17–25.

¹⁵ Regarding Marpurg and Kirnberger's dispute over Rameau's theories in relation to Bach, see Joel Lester, *Compositional Theory in the Eighteenth Century* (Cambridge, MA: Harvard University Press, 1992), 231–33, 246–57.

¹⁶ Regarding *P 401*, see Lester, *Compositional Theory*, 82–85. See also Alfred Dürr, "Ein Dokument aus dem Unterricht Bachs?," *Musiktheorie* 1 (1986): 163–70; and Heinrich Deppert, "Anmerkungen zu Alfred Dürr," *Musiktheorie* 2 (1987): 107–8.

¹⁷ Ludwig Holtmeier, "Funktionale Mehrdeutigkeit, Tonalität und arabische Stufen. Überlegungen zu einer Reform der harmonischen Analyse," *Zeitschrift der Gesellschaft für Musiktheorie* 8 (2011): 465–87.

a single bass note (rather than a chord) belongs to two keys. Calculating roots involves a constant mental “shuffling” of inversions back to root position; experts are used to this, but it is difficult for beginners. Thinking contrapuntally in terms of outer-voice intervallic frameworks results in more idiomatic basslines (i.e., parallel tenths, or 3–5 or 8–3 sequences).¹⁸ Moreover, the analytical orientation around the bass degree dovetails with another significant difference between this curriculum and current ones: my system of cadence identification. This system achieves both historical accuracy and simplicity by circumventing the current jumble of cadential terminology: authentic/inauthentic, perfect/imperfect, half, plagal, deceptive, evaded, contrapuntal, phrygian half (a particularly illogical term), and so on. Instead, I propose that we simply label the last two non-identical bass degrees at the end of a phrase. Therefore, an authentic cadence is ⑤-①, a plagal cadence ④-①, and a half cadence ②-③ (depending on the initial degree). Orienting the nomenclature around the bass scale degree automatically aligns the terminology with figured-bass practice.

Another difference between this curriculum and conventional Anglo-American theory is the omission of functional terms (i.e., tonic, dominant, subdominant). Functional labels serve primarily an analytical, not a compositional, purpose. As such, they are unnecessary (and, in some cases, a hindrance) to harmonizing a chorale in the baroque style. Instead, drawing on the south German and Austrian *fundamenta* tradition, I focus on the type of bass motion—step or leap.¹⁹ The *fundamenta* tradition was influenced in part by Georg Muffat’s (1653–1704) unpublished 1699 treatise, which imported many Italian ideas into Germany.²⁰ Heinichen’s treatise is also an indirect link between early eighteenth-century German practice and the Italian contrapuntal tradition, since Heinichen revised his 1711 treatise significantly after his time in Italy, resulting in the 1728

¹⁸ “[I]t is good to lead the upper voice in parallel thirds [i.e., tenths] with the bass.” C. P. E. Bach, *Essay on the True Art*, 204.

¹⁹ As Thomas Christensen has shown, the *fundamenta* tradition considers the distinction between step and leap of primary importance. “*Fundamentum Partiturae*: Thorough Bass and Foundations of Eighteenth-Century Composition Pedagogy,” in *The Century of Bach and Mozart: Perspectives on Historiography, Composition, Theory, and Performance in Honor of Christoph Wolff*, ed. Thomas Forest Kelly and Sean Gallagher (Cambridge, MA: Harvard University Press, 2008), 17–40. See also Holtmeier, *Rameaus langer Schatten*, 130–34.

²⁰ Georg Muffat, *Regulae concentuum partiturae*, ed. Hellmut Federhofer (Dallas, TX: American Institute of Musicology, 1961). The importance of this treatise in baroque figured-bass practice is generally under-recognized in the English-language literature.

Der General-Bass in der Composition. A final, minor difference between this curriculum and mainstream pedagogy is that I write the thoroughbass figures above the bassline because it is easier to conceptualize figured bass as intervals above the bass when the figures are actually written above the bass.²¹

I offer single examples of Levels 1–6 in this article, but ideally students would receive as many exercises as necessary at each level until they have fluency with the concept at hand. My intent here is merely to illustrate the conceptual progression. In all but example 7, I have adapted C. P. E. Bach's original figuring slightly, using the same harmonies but either listing all figures or changing their ordering.²² I have also omitted his chorale texts and changed the soprano clef to treble clef.²³

Example 1 shows Level 1, where the chorale is in the soprano (as it always is in this curriculum) with a figured bass. The figures indicate a single middle voice, making a three-voice texture in total. In C. P. E. Bach's original, the texture is presumably four-voice; I have omitted one of the middle notes, attempting to maintain the integrity of the middle voice while choosing the necessary pitches.²⁴ I would require students to supply the bass degrees and cadence labels in example 1. While some readers may scoff at the setting's simplicity, I intend this type of exercise to be a student's first introduction to figured bass. The primary goal is for students to understand what figured bass is: intervals above the bass that

²¹ C. P. E. Bach suggests that writing figures above the bass is better than below. *Essay on the True Art*, 187. He does admit, however, that sometimes figures must be written below the staff when there is no space above.

²² For instance, C. P. E. Bach only writes "2" in the *Neue Melodien*, which means " $\frac{6}{2}$." It is less clear, though, when he uses "5" as a diminished fifth. Should this mean merely "5" or " $\frac{6}{5}$ "? In the *Versuch*, C. P. E. Bach writes, "For the sake of convenience the sign of the diminished fifth is often placed over a bass which is to be realized as a six-five chord. Hence, voice leading alone must be the judge of whether the diminished triad or the six-five chord is intended." *Essay on the True Art*, 222. In every case, I interpret "5" to mean " $\frac{6}{5}$." In one instance (ex. 5, m. 11), I added a passing seventh to the resolution of a $\frac{6}{4}$ chord, which C. P. E. Bach also allows. *Essay on the True Art*, 227.

²³ This is not to imply that textual considerations were unimportant. On the contrary, C. P. E. Bach's preface to *Herrn Professor Gellerts Geistliche Oden und Lieder*, as well as accounts of J. S. Bach's teaching and the writings of Kirnberger, show that textual considerations played a primary role in chorale harmonization. I omit the text because the method is for beginners and because the text would overload the eye when other analytical symbols are included.

²⁴ Omitting the second from a $\frac{6}{3}$ chord in mm. 8 and 15 is a bit odd, but C. P. E. Bach allows for this chord. *Essay on the True Art*, 226.

Example 1. Level 1—Outer voices with one inner voice given as figures (C. P. E. Bach, *Neue Melodien*, 4)

“5 1” cadence

1 8

F: ① ⑦ ⑥ ⑤ ⑥ ⑦ ⑤ ① ① ④ ③ ② ⑤ ① ⑤
 C: ④ ③ ② ① ② ③

“5 1” cadence

10 15

F: ④ ③ ⑦ ⑤ ① ⑤ ④ ③ ② ① ④ ⑤ ①
 C: ⑥ ⑦ ① ② ③

may be placed in any octave. The issue of octave placement is negated here, however, since the alto should simply be placed as close to the soprano as possible. But before doing this, students must determine the key of each phrase, which for beginners is not as easy as it may appear. The first B₁ appears in m. 3, meaning one could analyze the music up to that point in F or C major, as shown with the bass degrees under the staff. That the descending sixth degree has a raised sixth is standard in the rule of the octave.²⁵ The third phrase repeats the first with a different bassline, the second time suggesting a stronger motion toward C major because of the B₂ in the bass in m. 10. The second and fourth phrases are clearly in F major.

After students have identified the bass degrees, they can label the cadence types. My revised, simplified cadence terminology merely identifies the last two non-identical scale degrees. Therefore, there are only two types of cadences in example 1: ⑤-① and ①-⑤. Some readers may object because this terminology does not identify which degree is in the upper voice of the final harmony. But the same is true of the list of “The Most Used Cadences” (Die gebräuchlichsten Clausulas finales) at the end of the *Vorschriften und Grund Sätze*, a source that likely stems from Bach’s teaching in Leipzig.²⁶ The *Vorschriften* lists the cadences only as figured basses, without realizations, although some may argue that the figures at times indicate the ordering of the upper voices. All this is not to say, however, that the interval between the outer voices in the final chord is unimportant. The teacher today should still mention that ⑤-① cadences ending with a fifth between the outer voices are not

²⁵ Heinichen says that the reason for this is that the descending upper half of the rule of the octave actually modulates to the dominant. “For when, for example, our authors [Rameau and Gasparini] figure the descending scale from the first degree to the fifth with {g [no figure], fis (6), e (#6), d (#)}, then this is already a half cadence and a modulation to D major, which has nothing to do with G major.” “Denn wenn z. E. unsere Autores im g dur die aus der 8ve in die 5te herabsteigende Claves also beziffern. {g [no figure], fis (6), e (#6), d (#)} so ist dieses schon eine halbe Cadenz und Ausschweifung in das D dur, womit das g dur nichts zu thun hat.” My translation. Johann David Heinichen, *Der General-Bass in der Composition* (Dresden: Author, 1728), 765.

²⁶ *Vorschriften und Grund Sätze* (Manuscript, 1738), trans. Pamela L. Poulin as *J. S. Bach’s Precepts and Principles for Playing the Thorough-Bass or Accompanying in Four Parts, Leipzig, 1738* (Oxford: Clarendon Press, 1994), 58, 101. The manuscript cannot be firmly attributed to J. S. Bach. See Thomas Braatz, “The Problematical Origins of the ‘Generalbaßlehre of 1738’” (unpublished manuscript, 2012), <http://www.bach-cantatas.com/Articles/GBLehre.pdf>.

allowed.²⁷ But I do not see this as important enough to justify burdening the terminology with a new label. Returning to example 1, after students have identified bass degrees and cadence types, they write out the interval indicated between the staves as close to the soprano as possible (i.e., in keyboard position). This is essentially “paint by numbers,” with no creativity whatsoever. Such a high degree of restriction is necessary for beginners to be able to focus on measuring intervals between staves with different clefs. Of course, advanced students could also perform the full three-voice realization without writing out the middle voice.

Level 2 (ex. 2) repeats this same procedure but with two inner voices.²⁸ What is significant here is that the figures are indicated in *score order*, with the upper figure always being the alto and the lower always being the tenor. Students should continue to realize the inner voices in “keyboard style,” where the left hand plays only the bass and the right hand plays the other voices in close position. In keeping with eighteenth-century German practice, the emphasis is on outer-voice scaffolding; if the outer voices move in good counterpoint, direct and sometimes even parallel perfect intervals are tolerated when they involve an inner voice. Keyboard style is also easier to play than “chorale style” (what C. P. E. Bach calls “divided accompaniment”), where the left hand takes the bass and tenor. The final reason for using keyboard style is that this is how Telemann introduced chorale harmonization for beginners in his *Lieder-Buch*.²⁹

²⁷ Muffat and C. P. E. Bach recommend against cadences ending with 5 in the upper voice; instead, the upper voice should descend to the third degree on the final chord. “When the sustained fourth voice [i.e., the voice holding 5–5 in a simple cadence] is placed in the highest voice instead of the discant, this sounds poor. But this sounds somewhat better when the 7th descends to the 3rd on the last chord.” “Wan aber solche schlecht singende vierte Stim das oberste Orth an stat des Discants nimbt, so lautet es schlecht. Doch lautet es etwas besser, wan mit der Sept zu der Final in der Terz abgestiegen wird.” My translation. Muffat, *Regulae concertuum partiturae*, 108. C. P. E. Bach says the octave is best, the third next best, and the fifth is not allowed. *Essay on the True Art*, 204.

²⁸ The key of example 2 has been lowered from B-flat major to G major to make the melody easier to sing and the exercise as a whole easier to play (i.e., fewer black keys). Transposing chorales to match the congregation’s range was commonplace for eighteenth-century organists, so there is no reason to prohibit it here. The originally written-out repetitions are shown in example 2 with repeat signs in order to save space.

²⁹ G. P. Telemann, *Fast allgemeines Evangelisch-Musicalisches Lieder-Buch* (Hamburg: Philip Ludwig Stromer, 1730), 181–88, especially 183. Reproduced in Werner Rackwitz, ed., *Georg Philipp Telemann, Singen ist das Fundament zur Musik in allen Dingen: Eine*

Example 2. Level 2—Outer voices with two inner voices given as figures in score order (C. P. E. Bach, *Neue Melodien*, 3)

The image displays two systems of musical notation for a piano piece. Each system consists of a grand staff (treble and bass clefs) with figured bass notation below the notes. The first system covers measures 1 through 9, and the second system covers measures 10 through 15. The music is in G major (one sharp). Two cadences are highlighted with dashed boxes and labels: a “②①” cadence at the end of measure 5 and a “⑤①” cadence at the end of measure 9 in the first system; and a “①⑤” cadence at the end of measure 13 and a “⑤①” cadence at the end of measure 15 in the second system. The figured bass notation uses numbers 1-7 for notes and letters G and D for chords. The first system starts with a G chord (G: ①) and ends with a G chord (G: ⑤). The second system starts with a G chord (G: ①) and ends with a G chord (G: ①).

*Original key: B \flat major

Rather than labeling the cadence in example 2, mm. 3–4, a “contrapuntal cadence” (as is encountered in some curricula), my cadence terminology labels this simply: ②-①.³⁰ The second and fourth cadences (mm. 8–9, 17–18) are ⑤-① cadences. The $\frac{5}{4}$ chords play no role because they do not change the bass degree. For this reason, the third cadence (mm. 12–13), usually termed a “half cadence,” is simply ①-⑤. That is, the terminological system labels merely the last two non-identical bass degrees. The task of cadence identification is thus simplified and made more historically accurate.

It is contentious whether three voices or four voices was the foundational “background” in baroque music. Holtmeier argues that a four-voice baroque texture is essentially a three-voice one with an added voice.³¹ This view aligns generally with the Italian trio sonata style of Corelli, which Muffat’s treatise describes quite accurately. On the other hand, J. S. Bach and indeed most of his German contemporaries held four-voice realizations to be the ideal, at least pedagogically. C. P. E. Bach’s description of his father’s teaching says he required students to write out realizations in four voices.³² Moreover, the *Vorschriften und Grund Sätze* concludes with a section titled “Principles of Playing in Four Parts” (Grundsätze zum Enquatre Spielen).³³ And finally, Heinrich Gerber’s realization of the figured bass of Albinoni’s Violin Sonata, which J. S. Bach corrected, uses four voices throughout.³⁴ Thus, four-voice realization is the ideal in my curriculum as well.

In Level 3 (ex. 3), all upper voices—including the chorale melody—are given as figures in score order. We see such notation often used in

Dokumentsammlung (Leipzig: Reclam, 1985), 155–62. Telemann’s *Lieder-Buch* is also an excellent resource of keyboard chorales for beginners.

³⁰ Muffat, whose understanding of cadences is essentially Italian, refers to a cadence ending with a descending second as *cadentia minima descendens*. Muffat, *Regulae concertuum partiturae*, 120–26. In every musical example Muffat lists, the *cadentia minima descendens* is a ②-① cadence.

³¹ “Vierstimmigkeit war eine Dreistimmigkeit, zu der eine weitere Stimme hinzugetreten war, eine Füllstimme (ad libitum), die auch fehlen konnte.” Holtmeier, *Rameaus langer Schatten*, 113.

³² See note 8 above. C. P. E. Bach also advises “It is best to begin with four-part accompaniment and establish its foundations. Those who learn this style thoroughly will find it easy to go on to others.” *Essay on the True Art*, 176–77.

³³ *Vorschriften und Grund Sätze*, 46–55.

³⁴ Philipp Spitta, *Johann Sebastian Bach, His Work and Influence on the Music of Germany, 1685–1750*, trans. Clara Bell and J. A. Fuller Maitland (London: Novello and Company, 1884–1885), 3:388–98.

Example 3. Level 3—Outer voices with all figures in score order (C. P. E. Bach, *Neue Melodien*, 5)

“1 5” cadence

“5 1” cadence

C: ① ③ ① ⑤ ⑥ ⑦ ① ⑤ ⑤

G: ① ⑦ ③ ② ① ⑦ ① ⑤ ①

“5 1” cadence

“5 1” cadence

C: ① ⑥ ④ ③ ④ ⑤ ① ① ④ ③ ② ① ④ ⑤ ①

the *fundamenta* tradition and even by C. P. E. Bach in the *Versuch*.³⁵ The obvious advantage of listing the figures in score order is that these define the best position (beste Lage) of the right hand in the absence of a given chorale melody. As in the previous examples, I would not provide the bass degrees or cadences to students.

In Level 4 (ex. 4), we take the crucial step of disassociating figured-bass ordering from score ordering. All three upper voices in Level 4 are now listed completely, but in descending *numerical* order, not score order. I would not dwell long on Level 4 when teaching, as the notation is cluttered and difficult to read. This is done purposefully, though, in order to illustrate to students why figured-bass symbols are abbreviated. Comparing example 4 with example 5 makes clear how much easier abbreviated figures are to read. Additionally, that “no figure” means “5-chord” and “6” means “6-chord” indirectly reinforces a basic tenet of baroque music: that 5-chords are the most common, and therefore the logical “default” when nothing else is written (the so-called “ordinary chord”).³⁶

Example 5 (Level 5) includes a hypothetical realization of the inner voices in smaller notes, which the student would normally provide. The only difference between this exercise and normative baroque accompanimental practice is that the chorale here defines the upper voice. Thus, the outer voices still act like training wheels, simplifying the task of adding two inner voices, since these are to be added as close to the upper voice as possible in keyboard style. According to C. P. E. Bach’s account, his father began with such exercises.³⁷ If the aim of the present article is historical accuracy, then why not begin directly with Level 5? The reason is that it is too difficult for most non-keyboard majors today. The purpose of Levels 1–4 is to prepare the beginner for a more historically accurate Level 5, which aligns more with J. S. Bach’s approach. After having students compose middle voices to a given outer-voice framework, Bach would have them compose their own basses. As a sort of introductory step toward this, I propose Level 6 (ex. 7), which is the harmonization of a non-figured outer-voice framework. The chorale helps determine what

³⁵ *Essay on the True Art*, 208. One of the most popular treatises in the *fundamenta* tradition was Matthäus Gugl’s *Fundamenta Partiturae*, which uses figures in score order throughout. *Fundamenta Partiturae in Compendio Data* (Salzburg: Mayr, 1719). Neither C. P. E. Bach nor Gugl, however, include a written-out upper voice.

³⁶ 5-chord refers to a chord with $\frac{8}{3}$; 6-chord refers to $\frac{8}{3}$ or some other common doubling, such as $\frac{6}{3}$ or $\frac{6}{3}$.

³⁷ See note 8.

Example 4. Level 4—Outer voices with all figures in numerical order (C. P. E. Bach, *Neue Melodien*, 7)

The musical score consists of two systems of music, each with a treble and bass staff. The key signature is B-flat major (two flats). The time signature is common time (C). The score is annotated with numerical figures (1-6) and cadence markings ("1 5" and "5 1").

System 1 (Measures 1-11):

- Measures 1-3: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ①, ③, ⑤.
- Measures 4-5: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ①, ⑤.
- Measure 6: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ⑥, ⑤.
- Measures 7-8: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ①, ⑤.
- Measures 9-10: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ①, ⑤.
- Measure 11: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ①, ⑥, ③, ②, ①, ⑤.

System 2 (Measures 12-21):

- Measures 12-13: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ⑥, ⑤, ①, ⑤.
- Measures 14-15: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ⑥, ⑤.
- Measures 16-17: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: ①, ⑤, ①.
- Measures 18-19: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: F: ②, ⑤, ①.
- Measures 20-21: Treble staff has notes G4, A4, Bb4. Bass staff has notes Bb3, G3, F3. Figures: Bb: ⑤, ①, ⑤, ⑥, ⑤, ①, ⑤, ①.

Cadence markings are placed above the treble staff: "1 5" above measures 4-5, "5 1" above measures 7-8, "1 5" above measures 10-11, "5 1" above measures 14-15, "1 5" above measures 18-19, and "5 1" above measures 20-21.

Example 5. Level 5—Outer voices with abbreviated figures (C. P. E. Bach, *Neue Melodien*, 8); suggested realization of middle voices given in small notes

The image displays two systems of musical notation for a piece by C. P. E. Bach. Each system consists of a grand staff (treble and bass clefs) and a line of figured bass. The first system covers measures 1 through 8, and the second system covers measures 9 through 16. The music is in G major (one sharp) and common time. The outer voices (treble and bass clefs) are shown with notes and stems. The middle voices are indicated by small numbers (figures) placed below the bass line. Three specific cadences are highlighted with dashed boxes and labeled: "5 1" cadence at measures 3-4, "5 1" cadence at measures 7-8, and "5 1" cadence at measures 13-14. The final cadence at measures 15-16 is labeled "7 1".

System 1 (Measures 1-8):

- Measures 1-4: "5 1" cadence. Figures: D: ① ④ ⑤ ① ⑥; e: ③ ②
- Measures 5-6: Figure 3 above measure 5. Figures: D: ② ③; e: ①
- Measures 7-8: "5 1" cadence. Figures: D: ④ ⑤ ① ⑦ ⑥; b: ① ⑦ ①

System 2 (Measures 9-16):

- Measures 9-12: Figure 9 above measure 9. Figures: b: ①; A: ② ⑦ ⑤ ① ④ ⑤ ①
- Measures 13-14: "5 1" cadence. Figures: G: ⑤; D: ① ④ ① ⑦ ① ④ ⑤ ①
- Measures 15-16: "5 1" cadence. Figures: D: ④ ① ⑦ ① ④ ⑤ ①

the figures should be, but when there is a third or octave between the outer voices (rather than a fifth or sixth), the student still has to decide whether it should be a 5-chord or a 6-chord. To help with this process, I offer example 6, based on Kellner's tables, which themselves summarize Heinichen's views.³⁸

The purpose of example 6 is to aid students in harmonizing unfigured basses. I am aware, however, that C. P. E. Bach expressly critiqued such efforts:

Some have gone to great trouble to systematize the realization of unfigured basses, and *I cannot deny that I have undertaken similar experiments*. But the more I have thought about it, the richer have I found harmonic usages. And these are increasing to such an extent, what with the fineness of our tastes, that *it is impossible to formulate hard and fast rules* which will at once shackle free creations and enable one to surmise the optional twists of a composer to whom bountiful nature has granted a glimpse of the inexhaustibility of the art. *Even granting that some formulating is possible*, are we to rack our memories in learning rules which by their nature must be numerous and not always valid? And having finally learned the given rules, are we then to squander endless time and energy on mastering of exceptions? *Even if we did all of this, the results would be of only small value*, for the ablest musician can err when presented with only one alternative, let alone several [emphasis mine].³⁹

Clearly C. P. E. Bach takes a critical stance against descriptions of the type found in Heinichen's chapter on playing unfigured basses.⁴⁰ My rationale for nevertheless "undertaking such an experiment" is, first, that example 6 is much more compact than Heinichen's chapter, and memorizing it would therefore not be too difficult. Second, beginning students do indeed profit from learning a rule, even if it includes exceptions. Third, the results are not "of only small value," but represent the foundation for more advanced music-theoretical concepts, such as composing original basslines to a given chorale. Besides, it is probably safe to assume that the above quotation from C. P. E. Bach refers to more complex basses, not the relative simplicity of chorale harmonization, for which a degree of generalization is possible.

³⁸ David Kellner, *Treulichter Unterricht im General-Bass*, 2nd ed. (Hamburg: Herold, 1737), 96–97.

³⁹ *Essay on the True Art*, 411.

⁴⁰ Heinichen, *General-Bass*, 725–68.

Example 6. Beginner's guide for determining an appropriate figure for a given bass scale degree

		Bass Degree								
		↑⑦ ↓⑦ +	①	②	③	④	⑤	↑⑥ ↓⑥ +		
						up	down			
Bass Motion	by step*	$\begin{matrix} 6 \\ [5] \\ 3 \end{matrix}$	$\begin{matrix} 5 \\ 3 \end{matrix}$	$\begin{matrix} 6 \\ [4] \\ 3 \end{matrix}$	$\begin{matrix} 6 \\ 3 \end{matrix}$	$\begin{matrix} 5 \\ 3 \end{matrix}$	$\begin{matrix} 6 \\ [5] \\ 3 \end{matrix}$	$\begin{matrix} 6 \\ 4 \\ 2 \end{matrix}$	$\begin{matrix} [8]-[7] \\ [6]-5 \\ [4]-3 \end{matrix}$	$\begin{matrix} 6 \\ 3 \end{matrix}$
	by leap*			$\begin{matrix} [7] \\ 5 \\ 3 \end{matrix}$					$\begin{matrix} [8]-[7] \\ [6]-5 \\ [4]-3 \end{matrix}$	$\begin{matrix} [7] \\ 5 \\ 3 \end{matrix}$

* This refers to the bass's motion *after* a given note.
 +Arrows refer to chromatic alterations, not melodic direction.

To use the table in example 6, one must first determine the scale degree of the bass note (upper row). Then one looks at the type of motion following the given bass note (leftmost column)—step or leap. Some pedagogies today include a third category of cadences, but this is redundant, since cadential motion too proceeds by either step or leap. Where the two factors (degree and motion) intersect, there are a few options for figuring. In keeping with Heinichen's theories, the most important thing for students to memorize is whether a given degree has a 5-chord or a 6-chord. Additional optional figures are in brackets.⁴¹ As J. S. Bach wrote at the end of his *Einige Regeln vom General-Baß*, "The other precautions that must be observed are better explained in oral instruction than in writing."⁴² Such precautions likely refer to C. P. E. Bach's "four expedients": 1) the left hand taking a middle voice when necessary; 2) two voices coming to a unison; 3) the right hand adding a fifth voice to avoid parallels; and 4) changing position of the right hand over a held bass note.⁴³ Other "precautions" might include a reminder to raise the seventh degree in minor or an explanation of how the $\frac{6}{4}$ chord on the fifth degree can resolve directly to a $\frac{4}{2}$ chord on the fourth degree (i.e., how dissonance can resolve to dissonance).

Example 7 (Level 6) illustrates how a student can use the table in example 6 to determine the figures of an unfigured bassline. The figures in example 7 are included only to show that a student could have determined the figures using example 6; the figures themselves come from C. P. E. Bach. The brackets indicate which row of example 6 can be employed to determine the figuring. Nearly every chord is accounted for. (Note that connections between the last note of a phrase and the first note of the next are not considered.) The only exceptions are the pickup to m. 17 and the downbeat of m. 17, both of which involve leaping 6-chords (marked with arrows). The downbeat of m. 17, however, could be understood as related to the following chord by inversion (what C. P. E. Bach and Heinichen call *Verwechslung*, in contrast to Rameau's

⁴¹ Although Kellner includes the raised fourth degree as a special case, I consider this to be the seventh degree in the dominant key, and therefore do not include "raised 4" as a scale degree in the table.

⁴² "Die übrigen *Cautelen*, so man *abhibiren* muß, werden sich durch mündlichen Unterricht beßer weder schriftlichen zeigen." *Bach-Dokumente, Supplement zu Neue Bach-Ausgabe*, ed. Bach-Archiv Leipzig (Kassel: Bärenreiter, 1963–2017), 1:253. My translation.

⁴³ Mitchell translates *Hilfsmittel* (literally "aid") as "expedient." C. P. E. Bach, *Essay on the True Art*, 177.

Example 7. Level 6—Outer voices with no figures given to students (C. P. E. Bach, *Neue Melodien*, 11); added figures are original

The musical score consists of three systems, each with a treble and bass clef staff. Fingerings are indicated by circled numbers 1-5. Movement annotations include Leap, Step, Leap (5① Cadence), Step (R. of O.), and Leap (①⑤ Cadence). Measure numbers 6, 9, 13, 17, and 21 are marked. The first system includes a '6 8' figure in the bass staff. The second system includes a '4/2' figure in the bass staff and a '4—3' figure in the treble staff. The third system includes a 'G: 6' figure in the bass staff and a '6 4 4/2' figure in the treble staff. An 'Exceptions' label points to measures 17 and 18.

System 1: Leap, Step, Leap (5① Cadence), Step (R. of O.), Leap, Step, Leap (①⑤ Cadence).
 System 2: Step, Leap (5① Cadence), Leap, Step, Leap (5① Cadence).
 System 3: Leap, Step, Leap (①⑤ Cad.), Step, Leap (5① Cadence).
 Exceptions: measures 17 and 18.

renversement) with a passing dissonance in the chorale, and the pickup could also be satisfactorily harmonized with a 5-chord.⁴⁴ I do not claim that the table in example 6 accounts for all situations, only that it is a useful heuristic for beginners. A hypothetical Level 7 would be to have students begin composing their own basslines, just as J. S. Bach did.

Conclusion

The purpose of this article has been to develop a more historically accurate method based on sources from Bach's circle, while at the same time making these ideas workable in today's classroom. There are several aspects that depart significantly from current methods. The first reform that will be difficult to implement is shifting the focus from Bach's vocal chorales (usually used in written counterpoint class) to a keyboard-chorale style that emphasizes active playing. The second new idea is my method of cadential analysis, which focuses on the bass degree. The third and most controversial change is the omission of root-oriented thinking. Not only is such a view more in line with German thoroughbass pedagogy in Bach's day, but it also simplifies current methods and allows a conceptual gap so that a figured-bass-centered approach can bring contrapuntal considerations to the fore.⁴⁵ The driving force behind these proposed reforms is my general dissatisfaction with many current approaches to baroque music pedagogy, which are often handicapped by a desire to oversimplify centuries of music within the so-called "Common Practice Era." May the curriculum proposed in this article be a useful step forward in introducing a more historically nuanced approach that is still viable for beginners. My hope is that students today will come to appreciate thoroughbass at the keyboard as an effective tool for fusing contrapuntal/harmonic dimensions and practical/theoretical perspectives in a manner that resonates meaningfully with Bach's music.

⁴⁴ Heinichen, *General-Bass*, 624–30; C. P. E. Bach, *Essay on the True Art*, 193. The concept of inversion does not necessarily require the notion of a generative root. Heinichen's and C. P. E. Bach's treatises, along with other writings before Rameau, such as Andreas Werckmeister's, clearly exhibit an awareness that chords can be shuffled in invertible counterpoint. Rameau was unique, however, in positing a generative root that determines the "default" inversion (root position) for consonant as well as dissonant harmonies.

⁴⁵ For instance, a contrapuntally oriented extension of my method of cadential analysis could introduce the four traditional clausulae lines, which combine to make a cadence. Kellner, *Treulicher Unterricht*, 23.

Abstract

This article proposes a historically informed method for introducing today's students to figured-bass practice in J. S. Bach's circle. Rather than using Bach's vocal chorales, as is common today, this method imitates Bach's pedagogy by using figured-bass keyboard chorales. C. P. E. Bach's *Neue Melodien* (1787) are used within a series of six increasingly difficult levels. Soprano and bass are always given, while students supply the middle voice(s). The levels are: (1) add one voice indicated by figures; (2) add two voices indicated by two figures in score order; (3) add two voices indicated by all figures in score order; (4) add two voices indicated by all figures in numerical order; (5) add two voices indicated by abbreviated figures; and (6) add two voices with no figures given. In keeping with the theoretical outlook given in sources near to J. S. Bach (Johann Heinichen, David Kellner, and C. P. E. Bach), root identification via Roman numerals plays no role in this method. Instead, the scale degree of the bass is the analytical focal point. In keeping with the method outlined in Heinichen's *Der General-Bass in der Composition* (1728), particularly as summarized in Kellner's *Treulicher Unterricht* (1737), the bass voice's scale degree and type of motion (step or leap) are the two factors that determine the appropriate harmony for unfigured basses. In the absence of Roman numerals, a simplified system of cadential terminology is also proposed. Moreover, figures are moved above the bass staff to conceptualize them better as intervals above the bass voice. The overarching goals of this article are: (1) to take the first steps in developing a curriculum centered around the keyboard chorale, replacing our current focus on Bach's vocal chorales; (2) to strike a compromise between historical accuracy and the needs of today's students; (3) to emphasize contrapuntal considerations equally with harmonic ones; (4) to simplify the current jumble of cadential terminology; (5) to use the keyboard as a means of "performing" music theory; and (6) to argue that J. S. Bach's music requires a greater degree of historical and theoretical differentiation than we tend to give it as part of the so-called "Common Practice Period."