

# New Sources and Old Methods

## Reconstructing and Applying the Music-Theoretical Paratext of Johann Sebastian Bach's Compositional Pedagogy

Derek Remeš

In attempting to determine how Johann Sebastian Bach taught composition, this article draws on recent archival discoveries to claim that it was not the ornamented, vocal *Choralgesänge*, but the simpler, thoroughbass-centered *Choralbuch* style that played a central role in Bach's pedagogy. Fascinatingly, many newly-rediscovered chorale books from Bach's milieu contain multiple basses under each melody, suggesting that Bach too may have employed this technique. What theoretical perspectives shall we bring to bear on this long-lost multiple-bass chorale tradition? This article asserts that it is a fallacy to assume that any pattern-yielding methodology offers a valid window into Bach's teaching. Rather, an attempt is made to recover modes of music-theoretical understanding that existed contemporaneously with Bach. Such a coterminous theoretical "paratext" potentially offers more insight into Bach's pedagogy because it establishes a horizon of possibilities from which we can draw when examining multiple-bass composition. Foremost within this paratextual horizon is the centrality of thoroughbass for Bach's understanding of composition. In particular, Bach was immersed in the pre-Rameau thoroughbass tradition as represented by the writings of Johann David Heinichen. In contrast to many modern harmonic perspectives, chordal roots and root progressions played little to no role in the pre-Rameau thoroughbass tradition. Dissonance was understood not harmonically, but dyadically in terms of *syncopatio* (suspension) and *transitus* (passing and neighbor) figures. Drawing from a variety of sources from Bach's circle, particularly those of his pupil, Johann Christian Kittel, this article posits that Bach may have understood multiple-bass chorale harmonization in terms of interlocking *clausulae* – that is, as a series of overlapping cadential modules. In sum, this article contributes to an ongoing revisionist project of recent years that aims to elevate early eighteenth-century thoroughbass from mere "pre-theoretical" accompaniment practice to its true place as the theoretical and practical basis of compositional understanding in Bach's day.

In der Absicht zu rekonstruieren, wie Johann Sebastian Bach Komposition unterrichtete, und ausgehend von Archivfunden aus jüngster Zeit stellt dieser Artikel die Behauptung auf, dass nicht die reich ausgestalteten, vokalen *Choralgesänge*, sondern der einfachere, generalbassbasierte *Choralbuch*-Stil in Bachs Pädagogik eine zentrale Rolle spielte. Faszinierenderweise enthalten viele neu aufgefundene Choralbücher aus Bachs Umfeld mehrere Bassstimmen unter jeder Melodie, was nahelegt, dass auch Bach diese Technik angewandt haben könnte. Welche theoretischen Perspektiven sind aus dieser lange Zeit aus dem Blick geratenen Tradition des Choralatzes mit multiplen Bässen abzuleiten? Dieser Artikel bezweifelt, dass eine auf historisch späteren Denkweisen basierende Methodik tragfähige Perspektiven auf Bachs Unterricht gewähren kann. Stattdessen wird versucht, musiktheoretische Konzepte nutzbar zu machen, die aus Bachs Zeit stammen. Solch zeitgenössischer theoretischer »Paratext« bietet möglicherweise einen besseren Einblick in Bachs Pädagogik, da er einen Horizont von Möglichkeiten bietet, auf die man sich bei der Betrachtung der Komposition mit multiplen Bässen beziehen kann. Besonders wichtig ist die zentrale Rolle, die innerhalb dieses paratextuellen Horizonts der Generalbass für Bachs Verständnis von Komposition spielt. Insbesondere war Bach von der vor-Rameau'schen Generalbasstradition geprägt, wie sie in den Schriften Johann David Heinichens repräsentiert ist. Anders als viele moderne, von der Harmonielehre informierte Zugänge spielten Akkordgrundtöne und Grundtonfortschreitungen in der vor-Rameau'schen Generalbasstradition kaum eine bzw. gar keine Rolle. Die Dissonanz wurde nicht harmonisch, sondern als zweistimmiges Phänomen, als *syncopatio* (Vorhalt) oder *transitus* (Durchgang oder Nebennote) verstanden. Auf der Grundlage einer Auswahl von Quellen aus Bachs Umkreis, besonders denen seines Schülers Johann Christian Kittel, postuliert dieser Artikel,

dass Bach die auf multiplen Bassstimmen basierende Choralharmonisierung im Sinne ineinandergreifender Klauselkombinationen, also als eine Folge einander überlappender Kadenzmodule verstanden haben könnte. Im Ergebnis trägt dieser Artikel zu einem seit einigen Jahren laufenden Projekt bei, das darauf abzielt, den Generalbass des frühen 18. Jahrhunderts vom Status einer bloßen ‚vor-theoretischen‘ Begleitpraxis zu befreien und ihn in seiner wahren Bedeutung zu würdigen, die ihm als der theoretischen und praktischen Grundlage des Verständnisses von Komposition zur Bach-Zeit zukommt.

Schlagworte/Keywords: choral setting; Choralsatz; Generalbass; historical models of composition; historische Satzlehre; Johann Sebastian Bach; Kompositionsunterricht; Quellenstudien; source studies; teaching composition; thoroughbass

## INTRODUCTION: CHOOSING SOURCES AND METHODS

How did Johann Sebastian Bach teach composition? Up until now, the reigning scholarly consensus has been more or less that Bach taught composition using his own keyboard works. Indeed, the pedagogical function of works like the *Inventions*, *The Well-Tempered Clavier*, and the *Orgelbüchlein* is indicated directly on their title pages.<sup>1</sup> Moreover, Bach's use of such works in lessons is substantiated by at least one contemporaneous account.<sup>2</sup> What more could we want? All that remains, it would seem, is to analyze “the notes,” since any insight into the structure of Bach's compositions inevitably informs the general consensus of what constitutes “Bachian pedagogy.” The result in Bach studies has been essentially a methodological free-for-all, where any music-theoretical approach yielding a modicum of analytical insight can find credence as a pattern-finding tool. Take, for example, Laurence Dreyfus's 1996 study *Bach and the Patterns of Invention*. Dreyfus attempts to develop a “mechanistic” model of Bachian composition based on motivic material undergoing a series of developmental transformations. To be sure, Dreyfus draws from historical evidence to buttress his theory; but ultimately it remains just that – his theory.

- 1 The title page of the *Inventions* (to an edition which also contains the *Sinfonias*) reads: “Auffrichtige Anleitung, Wormit denen Liebhabern des *Clavires*, besonders aber denen Lehrbegierigen, eine deutliche Art gezeiget wird, nicht allein (1) mit 2 Stimmen reine spielen zu lernen, sondern auch bey weiteren *progreifen* (2) mit dreyen *obligaten Partien* richtig und wohl zu verfahren, anbey auch zugleich gute *inventiones* nicht alleine zu bekommen, sondern auch selbige wohl durchzuführen, am allermeisten aber eine *cantable* Art im Spielen zu erlangen, und darneben einen starcken Vorschmack von der *Composition* zu überkommen [...] 1723” (Bach-Archiv Leipzig 1963–2017 [henceforth: Bach-Dok], vol. 1, 220–221, emphasis original). The *Well-Tempered Clavier* title page reads: “Das Wohltemperirte *Clavier*. oder *Prælua*, und *Fugen* durch alle *Tone* und *Semitonien*, So wohl *tertiam majorem* oder *Ut Re Mi* anlangend, als auch *tertiam minorem* oder *Re Mi Fa* betreffend. Zum Nutzen und Gebrauch der Lehrbegierigen *Musicalischen* Jugend, als auch derer in diesem *studio* schon *habil* seyenden besonderem Zeitvertreib [...] 1722” (Bach-Dok, vol. 1, 219, emphasis original). The *Orgelbüchlein* title page reads: “Orgel-Büchlein Worinne einem anfahenden Organisten Anleitung gegeben wird, auff allerhand Arth einen *Choral* durchzuführen, anbey auch sich im *Pedal studio* zu *habilitiren*, indem in solchen darinne befindlichen *Choralen* das *Pedal* gantz *obligat tractiret* wird [...]” (Bach-Dok, vol. 1, 214, emphasis original). The *Orgelbüchlein* appears to have been mostly completed by 1717. See Faulkner 1997, 7.
- 2 For instance, according to Ernst Ludwig Gerber, his father, Heinrich Nicolaus Gerber, took lessons with Bach that involved Bach playing his *Inventions*, various suites, and *Well-Tempered Clavier*, finally closing with thoroughbass realizations to an Albinoni sonata, for which documentary evidence survives. Regarding Gerber, see Wolff 1998, 322; Bach-Dok, vol. 3, 474–481; and Dürr 1978. D-B Mus.ms. 455 is the Albinoni source; Spitta gives a transcription (1873/80, vol. 2, appendix following page 1014). All library sigla follow the RISM standards: <http://www.rism.info/sigla.html> (15 Dec 2019).

There is an obvious problem with studies of this sort when used to answer the question “How did J. S. Bach teach composition?” The reason is that, even if one engages with “authentic” pedagogical sources (the *Inventions*, etc.), it is a fallacy to assume that any pattern-yielding methodology offers a valid window into Bach’s pedagogy. This is the central critique of the present article: an approach based on “old sources and new methods” – wherein Bach’s pedagogical compositions (old sources) are coupled with any music-theoretical perspective (new methods) – is inherently limiting when attempting to answer the above question. This is because such an approach inevitably ends up revealing as much or more about the analyst and the chosen method as it does about Bach’s teaching. Instead, this article advocates for an inverse approach based on “new sources and old methods,” wherein recently surfaced manuscripts from Bach’s circle (new sources – actually old ones newly examined) are paired with means of musical organization coterminous with Bach (old methods). Naturally, the project at hand succeeds only to the degree that we can understand bygone theoretical perspectives and adopt them as our own. Despite the ultimate fallibility of such an endeavor, the present article aims to reconstruct some of the music-theoretical “paratext” coterminous with Bach and apply it to the interpretation of newly resurfaced pedagogical sources stemming from Bach’s circle of pupils. Linking sources from Bach’s circle with contemporaneous theory will hopefully lead to a more fitting reply to the question of how Bach taught composition.

A common element among recent archival discoveries related to Bach is that many sources involve chorale harmonization in a rather simple style, often with multiple figured basslines under each chorale. Though none of these sources stem directly from Bach, they have nevertheless prompted a reappraisal of long-held assumptions about the materials and procedures of Bach’s pedagogy. Chief among these is the widespread assumption that Bach’s teaching involved chorale harmonization in the style of his four-voice, vocal *Choralgesänge*. This view, which is still common today, was first propagated by Johann Philipp Kirnberger (1721–1783), whose status as “Bach pupil” is, it turns out, not as certain as previously assumed.<sup>3</sup> In contrast, many recently surfaced documents from Bach’s circle generally employ a much simpler style of harmonization involving improvised thoroughbass – what I call the *Choralbuch* style. Taken together, these documents shed light on a hitherto unexplored pedagogical tradition of thoroughbass chorales in Bach’s circle, suggesting that it was not the *Choralgesang*, but instead the *Choralbuch* style with multiple basses that played the central role in Bach’s pedagogy.<sup>4</sup> As mentioned above, we should be deliberate in our choice of interpretive lens. I argue that we can draw maximum insight from these new sources if we attempt to understand them using the music-theoretical paratext of Bach’s day (to the extent that this is knowable).

In the present article, a “paratext” is defined as a set of foundational music-theoretical precepts. By virtue of being coterminous with Bach and exhibiting connections to his circle, it is possible that such precepts may have informed Bach’s compositional pedagogy. Thus, the paratext reconstructed below begins to define a horizon of possibilities that helps frame our interpretation of newly surfaced sources. Such framing involves the creation of boundaries, and boundaries naturally include and exclude. On the one hand,

3 See below regarding Kirnberger’s status as a Bach pupil.

4 See Remeš (forthcoming [a]) for more on this distinction. This finding has enormous implications for historically-oriented teaching today, since chorale harmonization is still a standard activity in music theory classrooms. Unfortunately, space does not permit a detailed exploration of the ramifications of these findings for contemporaneous pedagogy. See Remeš 2017a and 2018.

those ideas we permit to inform our interpretation must be reconstructed (however imperfectly) from historical sources near to Bach. On the other hand, those music-theoretical concepts found to be anachronistic with Bach's day must be excluded from our purview (however imperfectly). Chief among the ideas that need to be excluded are the concepts of chordal roots and root progressions as presented in the theories of Jean-Philippe Rameau (1683–1764). Root-oriented thinking in the Rameauian model has so deeply penetrated nearly every aspect of present-day music theory (even if received nowadays through an intermediary source) that it is difficult to imagine tonal analysis without it. Yet there is scant evidence to suggest that Bach or any of his German-speaking contemporaries thought in terms of chordal roots or root progressions as we conceive of them today or as defined by Rameau. It was only after Bach's death that Rameau's ideas began to be disseminated into German-speaking lands. Indeed, J. P. Kirnberger's adoption of some Rameauian principles is one of the primary reasons for disqualifying Kirnberger as a valid witness to Bach's teachings, as we will see.<sup>5</sup> Instead, it was thoroughbass theory that held pride of place in Bach's conception of compositional pedagogy.

The central importance of thoroughbass for Bach is the rationale for providing English translations of four previously unexamined manuscript thoroughbass treatises from Bach's day in a collection of editions intended to supplement the present article.<sup>6</sup> Along with the work of Ludwig Holtmeier, Felix Diergarten, Johannes Menke, and others, the present article and its supporting translations thus contribute to an ongoing revisionist project intent on redefining pre-Rameau thoroughbass practice from mere "pre-theoretical" accompaniment to its true status as the highly developed and nuanced basis of eighteenth-century composition.<sup>7</sup> It is my intent to explicitly link Bach with this revised conception of thoroughbass. But because the image of thoroughbass presented in the sources near Bach is unique in certain ways, I must re-tread some music-theoretical territory that will already be familiar to readers who are immersed in this scholarly discourse.

In sum, the present article aims to revise our image of "Bach as teacher" by providing an overview of newly surfaced sources from Bach's circle and by interpreting these sources using a coterminous theoretical paratext relying predominantly on a pre-Rameau thoroughbass paradigm. For reasons outlined below, my understanding of thoroughbass in Bach's day is indebted primarily to Johann David Heinichen's monumental treatise, *Der General-Bass in der Composition* (Dresden 1728). Heinichen's treatise will provide the cornerstone for a wide-ranging discussion of music-theoretical concepts including scale degree, dissonance treatment, *clausulae*, and cadences. This article concludes with a culminating example of multiple-bass chorale harmonization that applies and contextualizes the paratext reconstructed in the body of the article.

## NEW SOURCES: THOROUGHBASS *CHORALBÜCHER* WITH MULTIPLE BASSES

In 2016, Robin A. Leaver reassessed the so-called *Sibley Chorale Book* (SCB) as likely originating from J. S. Bach's circle of pupils.<sup>8</sup> What follows is a summary of Leaver's find-

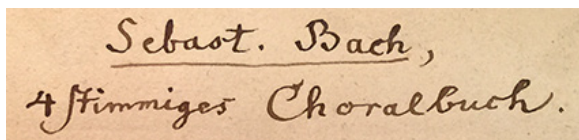
5 Holtmeier 2017 argues that Rameau's influence on German theorists in the eighteenth century was far more limited – and of a different nature – than previously thought. See below.

6 Remeš 2019b.

7 See, for example, Holtmeier 2007 and 2017, Diergarten 2015 and 2017, and Menke 2017.

8 See Leaver 2016. The SCB is named for the library at the Eastman School of Music in Rochester (New York).

ings. Philipp Spitta and Hans-Joachim Schulze had already examined the SCB, but their investigations ended prematurely once they concluded that Bach was not the scribe.<sup>9</sup> Yet Leaver, who has analyzed the SCB's provenance and content in far more detail than Spitta or Schulze did, has determined that the paper's watermark originates from Dresden sometime before 1740.<sup>10</sup> There were three Bach pupils active in Dresden in the 1730's and 1740's: Bach's eldest son, Wilhelm Friedemann (1710–1784), Gottfried August Homilius (1714–1785), and Christian Heinrich Gräbner (1705?–1769). Given that the SCB's title page ascribes the work to Bach (Ex. 1), the watermark alone would seem enough to attribute the SCB at least to Bach's circle of pupils.



Example 1: Anonymous, *Sibley Chorale Book*, title page inscription, Dresden c. 1720–40

Yet Leaver has also determined that the SCB is very likely the lost chorale book that Breitkopf listed for sale in 1764: “Bachs, J. S. Vollständiges Choralbuch mit in Noten aufgesetzten Generalbaße an 240 in Leipz. gewöhnlichen Melodien. 10 thl.” [Complete Chorale Book with notes set with figured bass comprising 240 melodies in use in Leipzig].<sup>11</sup> As Leaver has shown, the SCB is a match in all four respects: (1) it is a “complete” chorale book with melodies for the entire church year; (2) the melodies are set with a figured bass; (3) the number of chorales (240) corresponds roughly to the SCB (227), the difference due to how one counts double entries; and (4) the chorales in the SCB were in use in Leipzig. In conclusion, Leaver writes that the SCB

looks very much like an anthology either made by or for an organ pupil at the beginning of his studies with Bach, though it may not have come directly from Bach but rather indirectly via one of his pupils, and therefore it could be a copy of a copy. This source served, in other words, as a workbook for learning how to create four-part settings. But it had a double usefulness: Bach could assign particular chorale melodies for the pupil to work on as test pieces, while the anthology could serve to accompany chorale singing at services. The aim was for the pupil to become proficient, by composing alternative basslines with appropriate harmonies and ultimately by improvising such settings.<sup>12</sup>

Thus, the SCB offers a new and valuable window into compositional pedagogy in Bach's circle. Let us briefly examine the type of setting found in the SCB.<sup>13</sup>

Example 2 is a facsimile of the chorale “Vom Himmel hoch” from the SCB. It is completely representative of the collection.

Example 3 gives a modern transcription of Example 2 with editorial inner voices in *Griffnotation* (i.e. three voices in close position in the right hand, one voice in left).

9 See Spitta 1873/80, vol. 2, 589 note 2; Spitta 1884–99, vol. 3, 108 note 149; Schulze 1981.

10 See Leaver 2016, 20.

11 Bach-Dok, vol. 3, 165–166.

12 Leaver 2016, 31.

13 For those readers seeking more information on the SCB, a modern edition can be found in volume 2 of Remeš 2019c. A complete facsimile is also freely available online; see <http://derekremes.com/research/sources> (15 Dec 2019).



Example 2: Chorale “Vom Himmel hoch da komm ich her” (cf. Zahn 1889–93, vol. 1, 98, No. 346), *Sibley Chorale Book*, p. 9

Example 3: Chorale “Vom Himmel hoch da komm ich her” *Sibley Chorale Book*, p. 9, modern transcription with hypothetical inner voices

As we can see, the melody is set in a very simple manner in half notes with a figured bass-line. The style, which is intended to support congregational singing, is quite distant from Bach’s highly ornamented *Choralgesänge*. To facilitate this comparison, Example 4 shows Bach’s four-part vocal setting of the same chorale from the *Weihnachts-Oratorium* (BWV 248).

Such *Choralgesänge* are far more embellished than the SCB’s settings. Of course, Bach was by no means unfamiliar with the style of chorale harmonization found in the SCB. Example 5 shows Bach’s organ setting of “Vom Himmel hoch” from a manuscript copied by his pupil, Johann Tobias Krebs.<sup>14</sup>

Like the SCB, Example 5 contains only outer voices and figured bass in a simple style with a half-note pulse. Example 5 also includes two *Zwischenspiele* (interludes) that were commonly improvised between phrases during congregational singing. That the SCB does not include *Zwischenspiele* suggests either that the author/scribe could already improvise them, or that the collection was used primarily for practice in composing and realizing figured-bass chorales. In this regard, it is curious that the SCB’s title page (see Ex. 1) contains the phrase “4stimmiges Choralbuch” (four-part chorale book), since the settings in the SCB only ever include outer voices. We know, however, that Bach’s pedagogy involved harmonizing chorales in four voices (see below). Thus, the title page’s reference to four parts could be a vestige of Bach’s instruction.

14 A facsimile is available at [https://www.bach-digital.de/rsc/viewer/BachDigitalSource\\_derivate\\_00068011/00000242.jpg](https://www.bach-digital.de/rsc/viewer/BachDigitalSource_derivate_00068011/00000242.jpg) (15 Dec 2019).

Example 4: J. S. Bach, *Weihnachts-Oratorium* BWV 248, part 1, Nr. 9, *Choralgesang* setting of the chorale “Vom Himmel hoch” (score reduced from four voices)

Example 5: J. S. Bach, *Choralvorspiel* BWV 738a, organ setting of the chorale “Vom Himmel hoch” (D-B Mus.ms. Bach P 802)

The settings found in the SCB only ever contain one bassline per chorale melody. What of the growing body of newly surfaced multiple-bass sources heralded in the introduction? In her 2015 dissertation, Susan McCormick catalogued several thoroughbass chorale books originating from Bach’s pupils and grand-pupils, a number of which contain multiple unrealized figured basses. For instance, Example 6 shows a facsimile from a *Chorallbuch* attributed to Bach’s pupil, Johann Christian Kittel (1732–1809).

First two phrases of the chorale (soprano clef)

Multiple Figured Bass

Example 6: Johann Ch. Kittel, *Chorallbuch* (c. 1750–60), “Vom Himmel hoch” with multiple figured basslines (private possession of Yo Tomita, Newtownabbey, UK)

As in the previous examples, the upper staff shows the chorale “Vom Himmel hoch” (only the first two phrases). Below there are five unrealized figured basslines. Though it is in quarter notes, the setting otherwise resembles the simpler *Choralbuch* style of the SCB more than the ornamented style of the *Choralgesänge*. Yet this is only one of very many recently rediscovered multiple-bass chorale sources.

Example 7 builds on McCormick’s work by attempting to map all multiple-bass chorale sources known at present.

Note that this diagram only contains those chorale-based sources containing *multiple basses*. (Thus, the SCB is not shown.) To include all single-bass German *Choralbücher* from the eighteenth century would have made Example 7 unmanageably complex. Besides, it is the technique of multiple-bass harmonization that is to be highlighted in particular. Solid lines in Example 7 represent teacher-pupil relationships; dashed lines represent another relationship, as indicated. Though no multiple-bass sources can be attributed to Bach directly, Bach clearly forms a central node in this philological web, since he has more connections than anyone else. The person with the second-most connections is Kittel, to whom at least seven multiple-bass sources can currently be attributed (see bibliography). Space restrictions do not permit a detailed analysis of every source in Example 7.<sup>15</sup> I will simply note that, given the number of sources listed in Example 7, the technique of multiple-bass chorale harmonization was certainly well known in some eighteenth-century German circles and that it survived well into the nineteenth century with connections to prominent musicians like Robert Schumann and Felix Mendelssohn Bartholdy. With time, more sources will certainly come to light. Rather than providing a complete historical overview of this tradition, the present article will focus primarily on the teachings of Kittel. The reasons for this are: (1) Kittel has a central position in Example 7; (2) accounts of Kittel’s teaching confirm he used multiple bass; (3) Kittel claims to represent Bach’s teachings in his treatise; and (4) unlike Kirnberger, Kittel is known to have studied with Bach. We will return to Kittel below.

Given this abundance of multiple-bass sources stemming from Bach’s circle, the pressing question becomes: Did Bach utilize multiple-bass harmonization in his compositional pedagogy? Carl Philipp Emanuel Bach’s description of his father’s teaching suggests that he did:

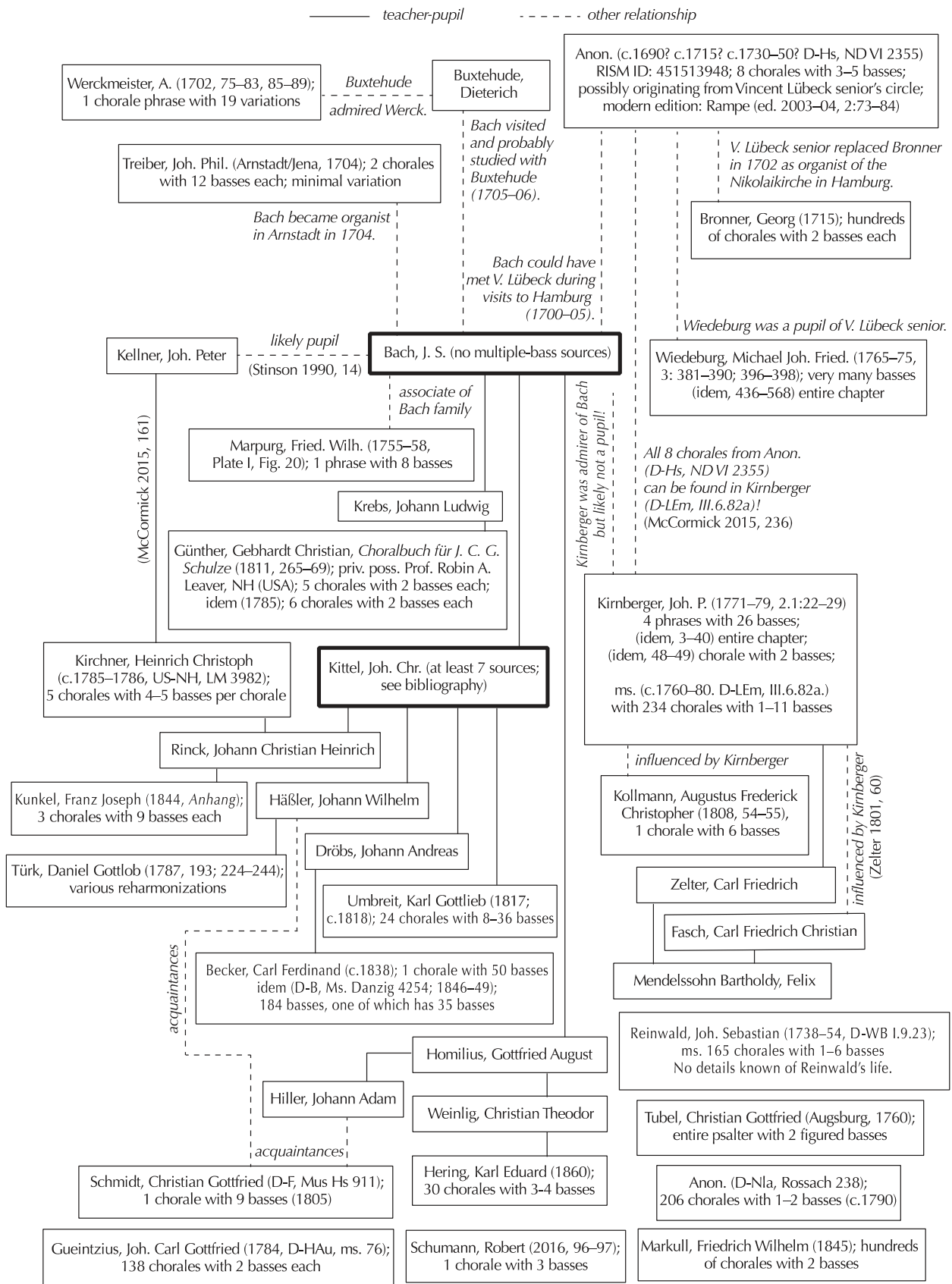
In composition he [J. S. Bach] went directly to what was practical with his students, omitting all the dry species of counterpoint given by Fux and others. His pupils had to begin by learning pure four-part thoroughbass. From this he went to chorales; first he added the bass to them himself, and they had to invent the alto and tenor. *Then he taught them to make the basses themselves.* He particularly insisted in the writing out of the thoroughbass in parts. His instruction in fugue began with two-voice ones, and so on [*Inventions* and *Sinfonias*?]. 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 [emphasis added].<sup>16</sup>

15 I undertake a more thorough analysis in my forthcoming dissertation. See also Leaver/Remeš 2018.

16 “In der Composition gieng er gleich an das Nützliche mit seinen Scholaren, mit Hinweglaßung aller trockenen Arten von Contrapuncten, wie sie in Fuxen u. andern stehen. Den Anfang musten seine Schüler mit der Erlernung des reinen 4stimmigen Generalbaßes machen. Hernach gieng er mit ihnen an die Choräle; setzte erstlich selbst den Baß dazu, u. den Alt u. den Tenor musten sie selbst erfinden. Alsdenn lehrte er sie selbst Bäße machen. Besonders drang er sehr starck auf das Aussetzen der Stimmen im General-Baße. Bey der Lehrart in Fugen fieng er mit ihnen die zweystimmigen an, u. s. w. Das Aussetzen des Generalbaßes u. die Anführung zu den Chorälen ist ohne Streit die beste Methode zur Erlernung der Composition, *quoad Harmoniam*” (Bach-Dok, vol. 3, 289, emphasis original, my translation).



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Example 7: Multiple-bass chorale sources in Bach's sphere of influence, expanding on McCormick 2015, 215–217 and 249

It is C. Ph. E. Bach's use of the word "basses" in the plural that is potentially suggestive of multiple-bass composition. Until recently, this was tacitly assumed to refer to multiple settings with one bassline each, as in the *Choralgesänge*. But in light of recent archival findings, it seems more likely that C. Ph. E. Bach was in fact referring to *multiple-bass* harmonization, probably in the *Choralbuch* style.<sup>17</sup> Naturally, this finding has enormous ramifications for our understanding of Bach's pedagogical method.

Broadly speaking, multiple-bass harmonization in the *Choralbuch* style humanizes "Bach as teacher" as someone concerned with immediately practical matters, like training his students to accompany congregations and thus to attain church positions. This pedagogical method also dispels the presumption that Bach's materials (the *Choralgesänge*) were always designed to reflect and build toward the complexity of his most contrapuntally advanced compositions. Of course, this was still sometimes the case, depending on the student's abilities. For instance, a letter exchange between J. S. Bach and his eldest son, Wilhelm Friedemann, first discovered in 2002, reveals that Bach taught his son advanced techniques like invertible counterpoint and canon.<sup>18</sup> But at other times, the apparent starting point of Bach's pedagogical method – the *Choralbuch* style – seems to have been much more pedestrian than scholars have previously thought. This was apparently the assumption underlying Philipp Spitta's rationale for disregarding the SCB as not possibly being Bach's work. Upon examining the manuscript around 1880, Spitta concluded that, "The volume exhibits, neither in Bach's handwriting nor in the composition of the chorales, a single trace of Bach's style or spirit."<sup>19</sup> One assumes Spitta must have had Bach's *Choralgesänge* in mind when making such a dismissive statement. Although it was C. Ph. E. Bach who first published his father's *Choralgesänge*, it was through Kirnberger's tireless advocacy that the *Choralgesang* was established as the idealized microcosm of Bach's compositional technique – what Kirnberger calls the "pure style" (*reiner Satz*).<sup>20</sup> The pedagogical tradition centered on the *Choralgesänge* (to which modern music theory pedagogy is heir) first emerged after Bach's death and gained ground with the Bach revival in early nineteenth-century Germany.<sup>21</sup> But, as it turns out, Kirnberger may have never studied with Bach at all.

## KIRNBERGER'S THEORIES: MORE RAMEAU THAN BACH?

A recent article of mine explored the writings of Kittel and Kirnberger as witnesses to Bach's multiple-bass pedagogy.<sup>22</sup> After considering the matter further, I now believe it necessary to largely exclude Kirnberger's theoretical writings from the reconstruction of Bach's teachings. The first reason is that it cannot be proved conclusively that Kirnberger ever studied with Bach. According to Friedrich Wilhelm Marpurg's (1718–1795) biographical sketch,

17 Though no multiple-bass sources from C. Ph. E. Bach survive, in Leaver/Remeš 2018 we show that C. Ph. E. Bach personally endorsed the pedagogical use of thoroughbass chorales.

18 See Wollny 2002. The sources are given in J. S. Bach 2011, 67–84.

19 "Das Büchlein zeigt aber weder Bachs Handschrift, noch auch im Satze der Choräle eine Spur Bachschen Stiles und Geistes." Spitta 1873/80, vol. 2, 589 note 2, my translation.

20 Regarding Kirnberger's role in editing Bach's chorales, see Schering 1918. For a complete listing of editions of J. S. Bach's chorales, see Wachowski 1983.

21 See Wolff 1991.

22 Remeš 2017b.

Kirnberger went to Leipzig in 1739 to study with Bach for two years.<sup>23</sup> But another document places Kirnberger in Sondershausen in 1740, and then back in Leipzig in 1741.<sup>24</sup> Naturally, isolated trips while still studying with Bach are possible. But it also raises suspicion that Kirnberger, who was apparently quite devoted to Bach, never once states directly in print that he was in fact Bach's student, nor does he ever recall a personal anecdote about a lesson, as does Kittel.<sup>25</sup> On the contrary, it seems Kirnberger would have exploited the association to his own advantage during his heated disputes with Marpurg regarding theoretical matters.<sup>26</sup> Instead, Kirnberger turned to C. Ph. E. Bach to determine whether or not J. S. Bach's theoretical views were compatible with those of Rameau. Had Kirnberger actually studied with J. S. Bach, would he not have known already?

C. Ph. E. Bach's response highlights the second and ultimately more significant reason for excluding Kirnberger's theoretical writings from this reconstruction of J. S. Bach's pedagogy. C. Ph. E. Bach's reply was unequivocal (and devastating for Marpurg): "You can loudly proclaim that my and my late father's principles are anti-Rameauian."<sup>27</sup> Of course, Rameau apologists will be quick to point out that neither Marpurg, Kirnberger, nor C. Ph. E. Bach possessed an accurate understanding of Rameau's theories.<sup>28</sup> Setting aside the tangled issue of eighteenth-century German Rameau reception and its often nationalistic overtones, the decisive fact is that, even while claiming to champion Bach (the German) against Rameau (the Frenchman), Kirnberger nonetheless accepted the two basic premises of Rameau's multifarious theory: (1) *son fondamentale*, or the notion that all chords, even dissonant ones, have roots; and (2) *basse fondamentale*, or the idea that root motion between harmonies is syntactically meaningful. Whether Kirnberger truly understood Rameau's theories in all their subtlety is irrelevant to the present discussion. What matters is the conclusion that Walter Heimann came to already in 1973:

Excluding the occasional out-of-place borrowing from older compositional theory, Kirnberger finds himself grounded in the new French music theory. His theoretical perspective should therefore not be equated with Bach's manner of compositional organization [...].<sup>29</sup>

23 See Marpurg 1754–78, vol. 1, 85. See Serwer 2001.

24 See Seiffert 1889, 366; Serwer 2001.

25 Kittel writes that, "Wenn Seb. Bach eine Kirchenmusik aufführte, so mußte allemal einer von seinen fähigsten Schülern auf dem Flügel accompagniren. Man kann wohl vermuthen, daß man sich da mit einer mageren Generalbaßbegleitung ohnehin nicht vor wagen durfte. Demohnerachtet mußte man sich immer darauf gefaßt halten, daß sich oft plötzlich Bachs Hände und Finger unter die Hände und Finger des Spielers mischten und, ohne diesen weiter zu geniren, das Accompagnement mit Massen von Harmonien ausstaffirten, die noch mehr imponirten, als die unvermuthete nahe Gegenwart des strengen Lehrers" (1801–08, vol. 3, 33). "Whenever Seb. Bach performed a piece of church music, one of his capable pupils had to accompany on the harpsichord. One can easily presume that no one dared to put forward a meager thoroughbass accompaniment. Nevertheless, one always had to be prepared to have Bach's hands and fingers quickly intervene among the hands and fingers of the player and, without getting in the way of the latter, furnish the accompaniment with masses of harmonies that made an even greater impression than the unsuspected close proximity of the strict teacher." Translation based on Wolff 1998, 323.

26 Regarding these disputes, see Lester 1992, 231–257 and Holtmeier 2017.

27 "Daß meine und meines seel. Vaters Grundsätze antirameauisch sind, können Sie laut sagen." (Kirnberger 1771–79, vol. 2.3, 188, my translation)

28 See Christensen 1998, 30–31.

29 "Denn Kirnberger befindet sich, von einzelnen systemfremden Anleihen aus älterer Satzlehre abgesehen, auf dem Boden der neuen französischen Musiktheorie. Seine Satzperspektive ist daher mit Bachs

Heimann continues that, in reducing all harmony to two chords and their inversions (the triad and dominant seventh) – as Rameau does – Kirnberger has left behind the seventeenth-century thoroughbass tradition, to which J. S. Bach was heir. And while Holtmeier argues that Kirnberger was only superficially influenced by Rameau, Christensen has referred to Kirnberger’s magnum opus, *Die Kunst des reinen Satzes* (1771–79), as “the most thorough and sophisticated appropriation of Rameau’s fundamental bass published in German during the eighteenth century.”<sup>30</sup> It is not my intent to arbitrate this complex dispute here. Rather, I merely wish to emphasize that, following Heimann, the only credibly Bachian aspects of Kirnberger’s writings are that, like Bach, Kirnberger places four-part chorales before fugue and Kirnberger frames his entire theory in terms of thoroughbass practice. In light of this evidence, Kirnberger’s claim to represent Bach’s pedagogy should be viewed with skepticism.<sup>31</sup> The reason has to do with the influence of Rameau’s theories on German-speaking theorists.

As Heimann proposes, the history of thoroughbass is productively divided into pre- and post-Rameau categories, such was the irresistible allure of Rameau’s “rationalist” theories of the *son* and *basse fondamentale*(e). This conceptual fault line first appears with the publication of Rameau’s *Traité de l’harmonie* (Paris 1722) and snakes its way toward Germany after Marpurg’s 1757 German translation of Jean le Rond d’Alembert’s (admittedly problematic) summary of Rameau’s theories, the *Éléments de musique* (Paris 1752). Regardless of Kirnberger’s precise source – and leaving aside the problem that most Germans had never read Rameau in the original French and therefore received a skewed version of Rameau’s ideas via Marpurg<sup>32</sup> – by 1770 Kirnberger was aware of some basic Rameauian principles, for he subscribed to his own unique reading of *basse fondamentale* theory in his *Kunst des reinen Satzes*. This hybridization of ideas between Rameau and Kirnberger has led to confusion regarding whether Kirnberger’s views truly represent those of Bach.

Ever since David Beach’s 1982 translation of Kirnberger’s *Kunst des reinen Satzes*, it seems Anglo-American theory has been disproportionately fixated on Kirnberger. On the one hand this is because elements of Kirnberger’s theories can conveniently be read as precursors of Schenker’s theories. On the other hand, certain Anglo-Americans tend to elevate Kirnberger because of the mistaken belief that his theories are “rooted in the discipline of strict counterpoint of his teacher, Johann Sebastian Bach.”<sup>33</sup> Even though C. Ph. E. Bach does use the word *rein* (“pure”) in the above description of his father’s

Ordnungsweise nicht gleichzusetzen: die spezifische Ordnungsweise und der Eigencharakter der älteren Generalbaßlehre scheinen, soviel kann an dieser Stelle gesagt werden, mit der Lehre von den beiden Grundakkorden bereits vergessen und ersetzt worden zu sein.” (Heimann 1973, 19, my translation)

30 Christensen 2016, 106. Holtmeier writes that “Anstatt im Kirnbergerschen ‘Grundbass’ jene Spuren der Rameauschen Musiktheorie zu suchen, die dort gar nicht gefunden werden können, sollte man Kirnbergers ‘Grundbass’ lieber als das eigenständige Konzept eines Fundamentbasses begreifen, das seine Entstehung zwar durchaus der äußerlichen Anregung durch die Rameausche Musiktheorie verdankt, das aber in inhaltlicher und technischer Hinsicht deutlich von der *basse fondamentale* unterschieden ist und eine ganz eigene und von der Rameauschen Musiktheorie unabhängige Rezeptionsgeschichte hat” (2017, 231, emphasis added).

31 Kirnberger wrote that, “Ich habe die Methode des sel. Joh. Seb. Bach auf Grundsätze zurück zu führen und seine Lehren nach dem Maaße meiner Kräfte der Welt, in meiner Kunst des reinen Satzes, vor Augen zu legen gesucht.” (1782, 5)

32 See Lester 1992, 239.

33 Palisca 1982, vii.

method (the same word used in Kirnberger's *Die Kunst der reinen Satzes*), the adjective remains an unqualified and relative term implying merely a high degree of technical accountability. As C. Ph. E. Bach's account states, this strictness was apparently ensured by requiring students to write out their thoroughbass realizations in four independent voices. Indeed, C. Ph. E. Bach's phrase – "pure four-part thoroughbass" – makes no claim as to the theoretical foundation for such settings. Thus, rather than basing the following reconstruction of a theoretical paratext on Kirnberger's theories, I wish to endorse and expand upon Heimann's thesis that J. S. Bach's music – and by extension his pedagogy too – is most lucid when viewed through the theoretical lens that begot it: the pre-Rameau thoroughbass tradition, specifically the version of this theory formulated by Heinichen in his monumental treatise, *Der General-Bass in der Composition* (1728).

There are at least three reasons for relying on Heinichen as a window into Bach's theoretical views. The first is that Bach acted as agent for Heinichen's treatise, selling it out of his home in Leipzig.<sup>34</sup> This suggests a willingness to be publicly associated with Heinichen's work, if not an outright endorsement of it. At the very least, it means that by 1729 there were copies of *Der General-Bass* in the Bach household; one assumes Bach at least cracked it open once. A second reason for associating Bach's views with Heinichen's is that both men believed the principles of composition to be derived from thoroughbass. This can be seen directly in Heinichen's introduction.<sup>35</sup> And in a little-known testimonial Bach wrote in 1727 for his student, Friedrich Gottlieb Wild (1700–1762), Bach attested that Wild "has taken special instruction from me in the clavier, thoroughbass, and the fundamental principles of composition that are derived from them."<sup>36</sup> The significance of this can hardly be overstated. It provides definitive evidence that, at one point in his life, Bach was convinced that compositional principles were derived from thoroughbass at the keyboard, which has potential implications for his teaching.<sup>37</sup>

We find the same view expressed in Friedrich Erhard Niedt's *Musicalische Handleitung* (1700–17), where Niedt describes how his teacher, *Herr Prudentio*, holds thoroughbass to be "the entire foundation of *Musica practica* and composition."<sup>38</sup> *Herr Prudentio*

34 Bach's role as agent for Heinichen's 1728 treatise was first announced in the *Leipziger Post-Zeitung* on April 4, 1729 (see Bach-Dok, vol. 2, 191).

35 "Dass der *Bassus Continuus*, oder so genannte *General-Basse* nechst der *Composition* eine der wichtigsten und *fundamentalesten* *Musicalischen* Wissenschaften sey / dessen wird kein *Music-Verständiger* in Abrede seyn. Denn woher entspringet derselbe anders / als aus der *Composition* selbst? und was heisset endlich *General-Bass* spielen anders / als zu der einzigen vorgelegten *Bass-Stimme* die übrigen Stimmen einer völligen *Harmonie ex tempore* erdencken / oder darzu *componiren*?" (Heinichen 1728, 1, emphasis original)

36 "Als habe solches wegen christlicher Schuldigkeit nicht abschlagen, sondern vielmehr mit Bestand der Wahrheit attestiren können, daß wohlgedachter Mons: Wild in die Vier Jahre so er auf hiesiger Vniversität gelebet sich allezeit fleißig und emsig erwiesen, solchergestalt, daß er nicht allein Unsere Kirchen Music durch seine wohlerlernte Flaute-traversiere und Clavecin zieren helffen, sondern auch sich bey mir gar speciell in Clavier, General-Bass und denen daraus fließenden Fundamental-Regeln der Composition informiren laßen [...]." (Bach-Dok, vol. 1, 127, my translation)

37 A recent article of mine explores Heinichen's compositional and improvisational pedagogy (Remeš 2019a).

38 "Ich verdiengte mich noch selbigen Tages bey einem Becker auf ein Jahr lang in die Kost / und kam des andern Tages / und folgendts täglich um bestimmte Zeit zum Herrn *Prudentio*, welcher mich stracks Anfangs im *General-Bass* informirte / sagende / darinnen bestehet das ganze *Fundament* der *Musicae practicae* und *Composition*, und davon mache ich mit allen meinen Schülern den Anfang / davon haben sie diesen Nutzen / daß sie sich nicht mit der verdrießlichen *Tabulatur* plagen dürffen / und doch / wenn

is very likely an allegorical reference to Johann Nicolaus Bach (1669–1753), J. S. Bach's cousin, with whom Niedt studied in Jena. Large portions of Niedt's treatise were copied into the *Vorschriften und Grundsätze* (c. 1738), an anonymous manuscript that seems to originate from Bach's teaching activities in Leipzig. This suggests that J. N. Bach, Niedt, Heinichen, and J. S. Bach (among others) may have formed a cohort of like-minded musicians, at least regarding the importance of thoroughbass in composition and pedagogy.

A third reason for privileging Heinichen has to do with David Kellner's enormously popular treatise, *Treulicher Unterricht im General-Bass* (1732), which is essentially a digest of Heinichen's *Der General-Bass*. Robin Leaver and I recently discovered that C. Ph. E. Bach endorsed the combined publication of the thoroughbass chorales in his *Neue Melodien zu einigen Liedern des Neuen Hamburgischen Gesangbuchs* (1787) with a reprint of Kellner's treatise in 1788.<sup>39</sup> This strongly implies that C. Ph. E. Bach both assigned a pedagogical function to the thoroughbass chorales in his *Neue Melodien* and associated chorale harmonization with Kellner's treatise. In this, C. Ph. E. Bach may have been passing on aspects of his father's teachings, since C. Ph. E. Bach once wrote that, "In composition and clavier playing I never had any other teacher except my father."<sup>40</sup> Did C. Ph. E. Bach thus learn of Kellner through his father? Or did J. S. Bach even use Kellner's treatise at times in his own teaching as a convenient digest of Heinichen's *Der General-Bass*? Indeed, J. S. Bach's associate, Lorenz Mizler (1711–1778), suggests precisely this in his review of Kellner's treatise – that pupils should begin with Kellner before proceeding to Heinichen.<sup>41</sup> Whatever the case, the new evidence associating C. Ph. E. Bach with Kellner forms an indirect link between Heinichen's theoretical views and thoroughbass chorales in J. S. Bach's circle. For this reason and the two already enumerated, Heinichen's treatise will form the foundation of the following reconstruction of a music-theoretical paratext in Bach's time.

## RECONSTRUCTING PARATEXT: HOW TO COMPOSE MULTIPLE BASSES TO A CHORALE

In order to help us contextualize the following theoretical principles, we will frame them in the context of a hypothetical lesson. Let us imagine that we are a student in Bach's circle tasked with composing or improvising multiple figured basslines to the chorale "Jesu meine Freude" (Ex. 8). How would we begin? What theoretical presuppositions and methodologies might Bach or his pupils have brought to bear on this task? What follows is an attempt to answer this question, with the implication that these principles may have played a role in Bach's teaching. The melody "Jesu meine Freude" will act as a recurring theme throughout the remainder of this article, finally culminating with an analysis of Kittel's multiple-bass setting to this melody.

sie schon viele Jahre gelernt / Pappierne Organisten bleiben / sondern daß sie in kurzer Zeit gute *Fundamental-Musici* werden." (Niedt 1700–17, vol. 1, § 20; emphasis original, my translation)

39 Leaver/Remeš 2018. A modern edition of C. Ph. E. Bach's *Neue Melodien* and the first English translation of Kellner's *Treulicher Unterricht* can both be found in volume 1 of Remeš 2019c.

40 "In der Komposition und im Clavierspielen habe ich nie einen andern Lehrmeister gehabt, als meinen Vater." (C. Ph. E. Bach 1773, 199, my translation)

41 "Welche alle noch ziemlich abgefasset sind, so daß es [Kellners *Treulicher Unterricht*] vor einen Anfänger wohl zu gebrauchen ist. Nach diesen, können Herrn Matthesons Organisten-Probe, dessen General-Bass-Schule, und Heinichens General-Bass mit vielen Nutzen gebraucht werden." (Mizler 1739–54, vol. 1, 27)



Example 8: The chorale “Jesu meine Freude” (cf. Zahn 1889–93, vol. 4, 651, Nr. 8032)

## Bass Degrees, Not Chordal Roots

Our reconstruction of theoretical paratext in Bach’s circle begins by establishing the importance of the bass degree in contemporaneous analytical and compositional thinking. At the same time, we must acknowledge the dearth of evidence implying that identification of chordal roots and root progressions in the Rameauian model played anything more than a marginal role in German theory before c. 1750, especially in Bach’s circle.<sup>42</sup> A manuscript source from Bach’s pupil, Bernhard Christian Kayser (1705–1758) confirms the presence of bass-degree analysis in Bach’s pedagogical method.<sup>43</sup> The source, D-B Mus.ms. Bach P 401, dates from 1722–23 and is shown in modern transcription in Example 9.

Kayser studied organ with Bach in Köthen from 1717 to 1720. In 1723, Kayser followed Bach to Leipzig, where he also studied law at the University beginning in 1724. Christoph Wolff and Markus Zepf write that, “For a number of years Kayser was apparently one of Bach’s closest associates, perhaps even serving for a time as Bach’s private secretary.”<sup>44</sup> Kayser made several copies of Bach’s works, and his handwriting often closely resembles Bach’s. Given Kayser’s proximity to Bach, it seems likely that the analytical markings in P 401 must stem from Bach’s influence. The lowest line of markings in Example 9 indicates the bass degrees, where “f.” stands for *finalis* or possibly *fundamentum*, meaning the first scale degree.<sup>45</sup> The markings above the staff indicate the intervals above the bass (i.e. thoroughbass figures). Dashes between notes indicate stepwise motion to degrees  $\hat{1}$ ,  $\hat{3}$ , or  $\hat{5}$ , thus emphasizing melodic arrival on the tonic triad. Thus, we can reasonably assume that Bach’s method of teaching chorale harmonization relied on the concept of bass degree. Bach’s apparent analytical attention given to bass degrees was by no means anomalous for his day. Like P 401, many eighteenth-century thoroughbass treatises emphasize their importance, the most important being Heinichen’s *Der General-Bass*.

42 Christensen has argued that the oral transmission of Rameau’s *Traité de l’harmonie* (1722) permeated German-speaking lands before mid-century, but his evidence is, on the whole, unconvincing. According to Christensen, Kellner’s *Treulicher Unterricht* (1732) suggests “that some of Rameau’s practical ideas were already percolating through Germany by the 1730’s” (2016, 111). But the table of seventh-chord inversions in Kellner (ibid.) is by no means an indication of Rameau’s influence; an awareness of inversions can be found everywhere in Heinichen (1728). Indeed, Heinichen was in fact Kellner’s primary influence, as described in the introduction to Remeš 2019c. Whether J. N. Bach truly subscribed to Rameau’s theories (Christensen 2016, 112) will require further investigation – by Schröter’s account (1772, x), J. N. Bach had not even read it.

43 See Dürr 1986, Deppert 1987, Lester 1992, 82–87 regarding P 401. The scribe of P 401 was first identified as Bernhard Christian Kayser in Talle 2003, 155–172. See also Bach-Dok, vol. 5, no. B240a. Byros 2015 gives facsimiles of the relevant pieces in P 401 in his Examples 10 and 11.

44 Wolff/Zepf 2012, 41.

45 Lester (1992, 82) believes “f.” means *finalis*. In the remaining examples I adopt the notational convention of indicating bass degrees with encircled Arabic numerals.

[Figured Bass:] 6. ̄. f. 6. 3. 3. 2. 4. 6. [8.]

[Bass Degrees:] [c:] 8. 7. 8. 5. 6. 8. 7. 8. 2. 5. f. 7. 8. 2. 4. 5. 6. 5. 4. 3. f. 7. [g:] 2. f. 7. 6. 5. 4. 6. 5. 4.

3. 7. ̄. 6. 6. 5<sup>b</sup> 6. 6. 5<sup>b</sup> 6. 5<sup>b</sup> 3. 6. 5. 3. 4. 3. 6. 5. 6. 4<sup>♯</sup> 3. 6. 5. 6. 4<sup>♯</sup> 3. 4. 6. 8. 3. 4. 5<sup>b</sup>

[g:] 3. 2. 3. 4. 7. f. 2. 7. f. [c:] f. 2. 3. 4. 5. 6. - 2. [B<sup>b</sup>:] 4. 5. 6. 7. f. - 4. [c:] 4. 5. 6. 5. 4. 3. 2. f. 7.

[8.] 4. 3. 3. f. 7. 9. 8. 6. 6. 7. 5. 3. 6. 2. 3. 3. 4<sup>♯</sup> 3. 3. 4. 3. 4<sup>♯</sup> 6. 6. ̄. f. 7. 3. 5<sup>♯</sup>

f. [8.] 7. 4. 5. 3. 8. 6. 5. 3. 2. 6. 5. 6. 5. 3. 5. 6. 7. 5<sup>♯</sup> 8. 6. 6<sup>♯</sup> 8. 7.

[c:] f. 7. f. 5. 6. f. 7. f. 2. 5. f. 7. f. 2. 4. 5. 6. 5. 4. 3. f. 7. [c:] 4. 3. 2. f. 2. 3. 2. f. [g:] 2. f. [E:] 4. 3. 2.

[remainder not shown]

Example 9: J. S. Bach, Fugue in c-minor in P 401 (c. 1720–39), m. 1–10, with bass-degree and figured-bass analysis by Bach’s student, Bernhard C. Kayser (1705–1758). Editorial annotations added in brackets. The key signature has two flats in the original; “f.” means “finalis,” or degree one.

### *Figurae fundamentales: Syncopatio and Transitus* (A Dyadic Model of Dissonance)

Heinichen’s treatise is best understood as the culmination of music-theoretical trends that had been in development for over a century. Like all Italian fashions, the practice of thoroughbass, which first emerged in the late sixteenth century in Italy, quickly spread to German-speaking lands in the early seventeenth century. With few exceptions, seventeenth-century thoroughbass is characterized by its status as mere accompaniment, subsidiary to the inherited tradition of Renaissance vocal composition.<sup>46</sup> It was only at the turn of the eighteenth century that German theorists began to recognize the potential of thoroughbass as a compositional tool.<sup>47</sup> This can be seen in a cohort of musicians including Andreas Werckmeister, Georg Muffat, Niedt, Johann Baptist Samber, and Heinichen.<sup>48</sup> Yet the inheritance of Renaissance teachings, particularly the notion that dissonance is a dyadic event, remained present for a time. This is particularly evident in Heinichen’s 1728 treatise, as in Johann Valentin Eckelt’s manuscript treatise *Kurtzer Unterricht*,

46 For a list of seventeenth-century authors who view thoroughbass as accompaniment, see Remeš 2019b, 97 note 10.

47 Adriano Banchieri (1568–1634) was one of the first to recognize thoroughbass as counterpoint, not just accompaniment. See Bellotti 2017.

48 See Werckmeister 1698 and 1702; Muffat 1699 and c. 1710; Niedt 1700–17; Samber 1704; Heinichen 1711 and 1728.



which is presented in the translations accompanying the present article.<sup>49</sup> It is with the emergence of more vertical models of chordal dissonance after the mid-eighteenth century, in part due to Rameau's influence, that the traditional dyadic view began to wane.

In Heinichen's treatise, there are only two types of dissonance: *syncopatio* and *transitus* (Ex. 10).

Example 10: Johann D. Heinichen, *Der General-Bass in der Composition* (1728, 160), illustration of the 2-*syncopatio* and 2-*transitus* in terms of a two-voice structural “core”

The implied texture in Example 10 is four voices, the two inner voices being implied by the figures. What is crucial to take away from Example 10 is that, even though Heinichen viewed a four-voice texture as the standard (as did Bach), he still held nearly all dissonances to be two-voice events.<sup>50</sup> Therefore, most dissonant chords involve a two-voice “core” supplemented by two auxiliary *Hülfs-Stimmen*, or “helping voices.”<sup>51</sup> Such a view is implied in Example 10 and made explicit throughout Heinichen's treatise.

The first type of dissonance, or *syncopatio*, is akin to a suspension. However, it should not be understood in the Rameauian and Kirnbergian manner as a delayed arrival of a missing chord tone. Rather, *syncopatio* should be understood purely in terms of intervals in a syncopated rhythmic context. This makes the *syncopatio* more flexible than a suspension because its resolution only need concern the two-voice dyadic “core.” What the auxiliary voices do remains undetermined, which is to say, free. As is well known, the two voices in a *syncopatio* are traditionally divided into the active “agent” voice and the passive (i.e. tied) “patient” voice after the writings of Giovanni Maria Artusi (c. 1540–1613).<sup>52</sup> For instance, in Example 10, all three instances of *syncopatio* have an upper-voice agent and lower-voice patient, the latter of which is obligated to resolve down by step. The subcategories of *subsyncopatio* and *supersyncopatio* were sometimes used in the eighteenth century to refer to the location of the tied patient voice – either below or above, respectively.<sup>53</sup> Almost all dissonant intervals may appear either as a *sub-* or *super-syncopatio*; only the diminished fifth exists exclusively as a *supersyncopatio* in Heinichen's conception.

Heinichen's second dissonance category is that of *transitus*. As defined by Christoph Bernhard (1628–1692), a student of Heinrich Schütz (1585–1672), *transitus* incorporates both passing and neighbor tones.<sup>54</sup> The term's literal meaning, “to pass through,” suggests

49 Remes 2019b. See especially pages [8]–[16] of Eckelt's *Kurter unterricht*. Eckelt was a pupil of Johann Pachelbel, who taught Johann Christoph Bach, J. S. Bach's brother and first teacher.

50 On four-voice texture being the standard, see Heinichen 1728, 130–132. Regarding Bach's use of four-voice textures, see above C. Ph. E. Bach's description of his father's teaching (note 16).

51 The double or triple *syncopatio* are exceptions in which the “core” has three or four voices, respectively.

52 See Artusi 1598, 40.

53 See, for instance, Heinichen 1728, 171, footnote (m).

54 “*Transitus* was invented in order to ornament the unison [neighbor] or leap of a third [passing] in a voice.” (“*Transitus* ist erfunden worden, den *unisonum* oder Sprung der *Tertie* einer Stimme zu zieren”; Müller-Blattau 1963, 64, emphasis original, my translation).

correctly that passing tones are the more typical figure of the two, however. It is significant that Bernhard designates *syncopatio* and *transitus* as *Figuras fundamentales*.<sup>55</sup> That Heinichen bases his entire theory of dissonance on the traditional categories of *syncopatio* and *transitus* is indicative of his intimate connection to seventeenth-century teachings. And given the above-mentioned links between Heinichen and Bach, it is conceivable that Bach too understood dissonance in terms of *syncopatio* and *transitus*. One problem with the dyadic model of dissonance in a polyphonic context, however, is the question of where to measure intervals from. In thoroughbass theory, one tends to measure from the bass. Intervals involving the bass are termed “primary.” But intervals not involving the bass (between two upper voices) – “secondary intervals” – still play an important role in Heinichen’s theories. A disregard for secondary intervals has led some modern writers to misrepresent pre-Rameau thoroughbass as primitive.

Indeed, it seems that in many histories of the Baroque era, thoroughbass suffers from an image problem. Thoroughbass is often perceived as being dull, pedantic, and overly prescriptive.<sup>56</sup> In truth, thoroughbass is an empty vessel, able to accommodate a variety of theoretical perspectives. The reason is that thoroughbass alone asserts no theoretical position – it is merely a neutral system of notation. It must be augmented by more context-sensitive factors. In the absence of such factors, thoroughbass is sometimes disparaged as lacking analytical nuance.<sup>57</sup> To be clear, I do not wish to devalue “modern” theories that label roots and track their movements. My intent is instead, with respect to Bach’s practice, to empty our thoroughbass-vessel of root-oriented assumptions and instead to fill it with concepts drawn from seventeenth-century contrapuntal theory as codified in Heinichen. Carl Dahlhaus gives an excellent example that both illustrates my point (Ex. 11).<sup>58</sup> Here we see how the figure “4/2” may refer variously to (1) a double *supersyncopatio*, (2) a *subsynchronatio*, (3) a double upper-voice *transitus*, or (4) a bass *transitus*. Heinichen’s understanding of thoroughbass is highly sensitive to this sort of contrapuntal context.

The image shows a musical score for a single voice in C major, 4/2 time. It consists of four measures, each illustrating a different interpretation of the '4/2' figure. Above each measure is an editorial annotation, and below each measure is a number in brackets: [1], [2], [3], and [4].

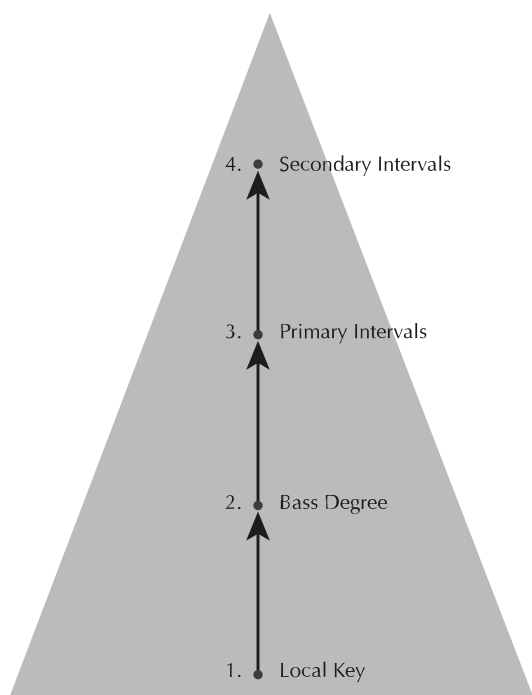
- Measure 1: [double supersyncopatio] [1]. The bass line has a half note G, and the treble line has a half note G. A '4/2' is written below the bass line.
- Measure 2: [subsynchronatio] [2]. The bass line has a half note G, and the treble line has a half note G. A '4/2' is written below the bass line.
- Measure 3: [upper-voice double transitus] [3]. The bass line has a half note G, and the treble line has a half note G. A '4/2' is written below the bass line.
- Measure 4: [lower-voice transitus] [4]. The bass line has a half note G, and the treble line has a half note G. A '4/2' is written below the bass line.

Example 11: Carl Dahlhaus, *Untersuchungen über die Entstehung der harmonischen Tonalität* (1967), example illustrating the analytical neutrality of thoroughbass figures (Dahlhaus 2001, 134). Annotations are editorial.

- 55 Bernhard writes that, “I divide them [dissonances] into *Figuras fundamentales* and *superficiales*. I term *Figuras fundamentales* those that occur in the *fundamental Composition*, or old style, no less often than in other styles. Such *figurae fundamentales* are two: namely, *Ligatura* [i.e., *syncopatio*] and *transitus*.” (“Ich theile sie aber di[e]ßmal in *Figuras fundamentales* and *superficiales*. *Figuras fundamentales* nenne ich diejenigen, welche in der *fundamental Composition* oder im alten *stylo* nicht weniger als in den üblichen Arthen befindlich. Solche *Figurarum Fundamentalium* sind zwey; Nämlich *Ligatura* und *Transitus*”; Müller-Blattau 1963, 144, emphasis original, my translation).
- 56 See Diergarten 2017 regarding the effect of the recent “partimento renaissance” on our understanding of thoroughbass.
- 57 For instance, see Lester 1992, 88. David Damschroder (2008, 32) defends Kirnberger’s “modern” view of harmony by stating that Kirnberger “opposed the tendency, endemic to thoroughbass practice, to deal with all chord components together and in the same manner.”
- 58 Dahlhaus 2001, 134.

## Seeing Secondary Intervals

I propose Example 12 as a visual representation of Heinichen's thoroughbass concept.



Example 12: A visual representation of Johann D. Heinichen's thoroughbass concept

This conceptual pyramid proceeds through the following hierarchical stages: (1) the local key,<sup>59</sup> (2) the bass scale degree, (3) primary intervals, and (4) secondary intervals. In some ways, it is easy to see why modern accounts of thoroughbass often exclude secondary intervals, for secondary intervals are not directly indicated in an analysis like that made by Kayser in Example 9. That is why the peak of this conceptual pyramid is so important, because secondary intervals do indeed exert a great deal of influence on Heinichen's understanding of harmony. Like all theories of tonal music, Heinichen's theory depends on a clear division between consonance and dissonance.

Heinichen defines intervals as follows: thirds, perfect fifths, sixths, and octaves are consonances, whereas seconds, fourths, sevenths, ninths, and all augmented and diminished intervals are dissonances. Heinichen is well aware of those who would assign consonant status to the fourth and diminished fifth. His reply is unambiguous: it is not the ability to enter unprepared, but the necessity of resolution that determines dissonance:

The necessity of resolution is certainly the surest indicator of a true dissonance. Thus arises the common accusation (which one usually makes about the innocent fourth), that namely the perfect fifth next to the sixth [in a 6/5 chord] behaves just as a dissonance, and yet it is a consonance – nothing can disprove this. For who forces the perfect fifth to proceed freely into slavery next to the sixth? The perfect fifth can appear at any time alone without chains as a consonance against the bass, requiring no resolution. The diminished fifth, however, may no less be used without a subsequent resolution than any of the other indisputable dissonances of the second, seventh, ninth, etc. It is true that the diminished fifth must not always be prepared, or lie before-

59 A high degree of sensitivity to local key areas can be seen in Kayser's analysis in Example 9.

hand, but that alone does not make it into a consonance, because this [optional preparation] is true of the fourth and seventh as well.<sup>60</sup>

Thus, for Heinichen, the fourth, diminished fifth, and seventh may be used in an unprepared *syncopatio* (i.e. *appoggiatura*) in modern styles, but these intervals are still dissonances because one of the notes in the dyad must resolve. Modern theory pedagogues are prone to making statements like, “The seventh is dissonant and must therefore resolve.” But such a-contextual comments are of little use, since they do not tell us which of the voices is the agent and which is the patient. In other words, it does not tell us *which note* involved in the interval of a seventh must resolve – the upper or the lower one. We cannot even determine whether the dissonance is a *syncopatio*, *supersyncopatio*, or *transitus*, since the context is lacking.

The importance of context is illustrated by Heinichen’s above discussion of the 6/5 chord with perfect fifth. This chord shows why secondary intervals are critical in the assignment of agent/patient status. Any primary consonance (here the perfect fifth) may “proceed freely into slavery” next to a secondary dissonance of a second or seventh.<sup>61</sup> Thus, a primary third may be syncopated by a fourth, a perfect fifth by a sixth, and a sixth by a seventh above the bass. In some cases, a primary octave can even be syncopated by a ninth if the bass is understood to be a pedal point. Example 13 shows three of Heinichen’s illustrations of such cases. Editorial arrows indicate the pitch that, despite being a primary consonance, is treated as a *syncopatio* because of the secondary dissonance.

a) primary 3 against 4      b) primary perfect 5 against 6      c) primary 6 against 7

Example 13: A selection of Johann D. Heinichen’s examples of primary consonances that are also secondary dissonances (1728, 163, 179, 190)

The reverse is also true – primary dissonances may also take on consonant properties because of the “alleviating” presence of a secondary consonance. Example 14 illustrates this.

60 “Diese *resolutio indispensabilis* aber ist wohl das allersicherste Kennzeichen einer wahren *Dissonanz*: dahero der gemeine Einwurff, welchen man sonst auch der unschuldigen 4te zu machen pfelegt: daß nemlich die 5ta *perfecta* bey der 6te sich gleichfals als eine *Dissonanz* aufführe, und doch eine *Consonanz* sey; gar nichts darwider beweiset. Denn wer zwinget doch die 5t. *perfect* dazu, wenn sie sich freywillig in die *Slaverey* neben der 6te begiebet? sie kan ja vor sich alleine gegen den *Bass-Clavem*. iederzeit ohne Fessel, als eine *Consonanz* erscheinen, und brauchet sodenn keiner *resolution*: Die 5ta *min.* hingegen darff sich so wenig ohne darauf folgende *resolution* gebrauchen lassen, als andere unstreitige *Dissonantien* der 2de, 7me, 9ne &c. Wahr ist es, daß sie nicht iederzeit muß *præpariret* werden, oder vorhero liegen; allein das machet sie zu keiner *Consonanz*, weil solches auch der 4te und 7me gemein ist, welche wir doch vor unstreitige *Dissonantien* halten.” (Heinichen 1728, 107, emphasis original, my translation)

61 A secondary fourth cannot “syncopate” a primary consonance since the secondary fourth is considered a consonance.

a) 4 must be prepared in a 5/4-chord due to secondary dissonance against 5



b) 4 need not be prepared in a 6/4-chord due to secondary consonance against 6



Example 14: A comparison of Johann D. Heinichen's treatment of the primary fourth (1728, 171 and 173)

In the case of a 5/4 chord in Example 14a, the fourth at the arrow is both a primary and secondary dissonance and is therefore always prepared. But, according to Heinichen, when a primary fourth appears with a sixth instead of a fifth as its auxiliary voice in a 6/4 chord, the fourth may enter unprepared, as at Example 14b.<sup>62</sup> Though he does not state this fact directly, it is readily apparent that the secondary consonance between the thoroughbass figures 4 and 6 is the reason why the fourth may enter unprepared. But make no mistake – according to Heinichen, the fourth in Example 14b remains a dissonance because it is still obligated to resolve down by step. In sum, the importance of secondary intervals is illustrated by two converse situations: on the one hand, a secondary dissonance may cause a primary consonance to be treated like dissonance (Ex. 13). On the other hand, a secondary consonance may “soften” a primary dissonance such that it may occur unprepared (Ex. 14b).

Thus far, our reconstruction of music-theoretical paratext in Bach's day has established the following points: (1) the bass scale degree, not the chordal root, is a central harmonic determinant in pre-Rameau thoroughbass theory in eighteenth-century Germany; (2) the 5/3 chord and 6/3 chord are the only two consonant harmonies; (3) all other chords are dissonant, containing dyadic *syncopatio* or *transitus* figures with auxiliary voices; and (4) secondary intervals are necessary in judging contrapuntal context of thoroughbass figures. We now turn to the pedagogy of one of Bach's favored students, Kittel, and his use of *clausulae* in chorale harmonization.

### Chorale Melodies as Modular Linked *Clausulae*

In his three-volume treatise *Der angehende praktische Organist* (1801–08), Kittel writes that his aim is to reproduce the method he learned fifty years earlier while studying with Bach in Leipzig from 1748–50.<sup>63</sup> While one cannot rule out a bit of self-promotion on Kittel's part, there is also no compelling reason to doubt him, as noted already with Kirnberger. And though Kittel's treatise dates from the early nineteenth century, it must still be viewed as “pre-Rameau.” A survey of all three volumes reveals that Kittel's approach is almost entirely example-based in its organization with very little theoretical apparatus, and no trace whatsoever of *basse fondamentale* or inversional thinking in the modern

62 “Die 4te hat statt der 5te auch die 6te zu ihrer Neben-Stimme, und solchenfalls pfliget sie nicht allezeit vorher zu liegen, wohl aber *resolviret* sie gewöhnlich.” (Heinichen 1728, 173)

63 Kittel writes that “die Methode, welcher ich mich beim Unterrichte zu bedienen pflige, ganz nach Bachischen Grundsätzen geformt ist und daß ich ihre Güte durch eine mehr als funfzigjährige Erfahrung im Unterrichte erprobt habe.” (Kittel 1801–08, vol. 1, unpaginated preface)

sense. The bit of music theory that Kittel does employ is decidedly retrospective in its outlook: *clausulae*.<sup>64</sup>

*Clausulae* are stereotypical melodic formulae traditionally used to construct polyphonic cadences. For centuries, they have been salient components of Western compositional practice. The melodic patterns associated with *clausulae* began to emerge in thirteenth-century polyphony.<sup>65</sup> Chief among these patterns were the intervallic progressions “major sixth–perfect octave,” “minor third–unison,” and “minor third–perfect fifth.” In the fifteenth and sixteenth centuries, these patterns formed tenor–discant frameworks often supplemented by additional voices, creating thicker polyphonic textures. Drawing from traditional Italian terminology, seventeenth-century German theorists developed native systems of cadential classification based on *clausulae*. At the beginning of the eighteenth century, the growing dominance of thoroughbass in Germany and increasingly verticalized concepts of “chord” that followed as a result gradually began to replace traditional *clausulae*-centered notions of cadential closure. Yet, as evident from statements by theorists like Werckmeister and Heinichen, the need to improvise preludes for and accompany modal chorales acted as a conservative impulse in organists’ circles.<sup>66</sup> It seems that the tradition of chorale harmonization therefore contributed to the preservation of aspects of older *clausulae* theory in German-speaking lands in the early eighteenth century, and thus potentially in the music-theoretical paratext of Bach’s pedagogy.<sup>67</sup>

That Kittel used *clausulae* in his own teaching is confirmed by his nephew, Johann Wilhelm Häßler (1747–1822), who described his lessons with Kittel thus:

My first piece was a minuet in the form of a canon. After this followed a dozen similar ones and then Emanuel Bach’s Sonatas. My good uncle wrote in fingering for everything.

Thoroughbass was begun after a half year. How useful it was to already have knowledge of intervals. I did not have to laboriously count out the thirds, sevenths, and so forth – I simply grabbed them. However, the avoidance of [parallel] octaves and fifths, together with the strict requirement of my *Lehrmeister* that the top voice should always form a melody gave me plenty to do.

After about three months I had to play [i.e. improvise] chorales. Here I had opportunity enough to employ all the previous thoroughbass exercises. *I also had to write out [harmonize] chorales in four voices, wherein the clausulae belonging to each voice gave me more than enough to do.* Eventually I had to invert certain chorales so that the *cantus firmus* lay in the alto, the tenor, or the bass [emphasis added].<sup>68</sup>

64 Lang 2013 provides a brief overview of Kittel’s method of chorale harmonization.

65 The following outline is based in part on Polth/Schwind 1996.

66 See Werckmeister 1698, 56; Heinichen 1728, 913–914.

67 In contrast, by the nineteenth century, the tradition of improvised chorale accompaniment became increasingly obsolete with easier access to published *Choralbücher* containing full harmonizations, rather than just outer voices with figured bass.

68 “Mein erstes Handstück war eine Menuet, in Form eines Kanons. Diesem folgten etwa noch ein Duzent ähnliche, und dann Emanuel Bachs Sonaten. Ueber alles schrieb mein guter Onkel die Applikatur. Nach einem halben Jahre wurde der Generalbaß angefangen. Wie sehr kam mir hier die bereits erlangte Kentnis der Intervallen zu statten. Ich brauchte die Terzen, Septimen, u. s. w. nicht erst mühsam von ihren Grundtönen abzuzählen: ich grif sie gleich. Indessen machte mir doch anfänglich die Vermeidung der Oktaven und Quinten, – und mehr noch: die strenge Foderung meines Lehrmeisters, mit der Hauptstimme jedesmal eine Art von Melodie zu führen – genug zu schaffen.

In his treatise, Kittel defines *clausulae* as shown in Example 15.

Example 15: Johann Ch. Kittel, illustration of *clausulae* (1803, vol. 2, 2). Degrees are editorial.

From the typical cadence at (a) Kittel extrapolates the individual voice lines of (b).<sup>69</sup> These are the same traditional *clausulae* that Johann Andreas Herbst (1588–1666), Werckmeister, and Johann Gottfried Walther (1684–1748) give.<sup>70</sup> The difference is that Kittel detaches *clausulae* from specific scale degrees and instead abstracts them to their type of intervallic motion:

From the detailed analysis of these *clausulae* [Example 15] it is apparent that the essence of the tenor *clausula* is whole-step motion, the essence of the discant *clausula* is half-step motion, the essence of the alto *clausula* is a falling third, and the essence of the bass *clausula* is a falling fifth or rising fourth.<sup>71</sup>

Next, Kittel analyzes a chorale melody according to its *clausulae* (Ex. 16). Kittel divides the melody into short sections according to the type of motion and assigns it a *clausula*, even when it does not exactly correspond to the standard versions given in Example 15b. The word “segment” (*Abschnitt*) in his analysis is never defined. It seems to refer to bass motion by fourth or fifth (either ascending or descending) with a 5/3 chord on both notes (outer-voice intervals 8-10/10-8, or 10-12/12-10). The qualifier “complete” appears to indicate the presence of all *clausulae* occurring simultaneously at the end of a phrase, although the bass and alto in these instances do not match the model in Example 13b exactly. Nevertheless, the strategy is fairly clear. When the melody has intervallic motion corresponding to a given *clausula*, one may add the other *clausulae* in the other voices. Immediately following this demonstration, Kittel highlights the importance of determining the scale degree of the chorale melody, implying that the *clausulae* might also be associated with specific degrees, despite his emphasis on melodic contour.<sup>72</sup>

Nach ungefähr drei Monaten musste ich Koral spielen. Hier bekam ich Gelegenheit genug, alle vorige Generalbaßexempel in Anwendung zu bringen. Weiter hin musste ich Koräle in vier Stimmen aussetzen, wo mir anfänglich die, einer jeden Stimme eigentümlichen, Schlußfälle, nicht wenig zu schaffen machten. Zulezt musste ich gewisse schikliche Koräle so umkehren, daß der *Cantus firmus* bald im Alt, bald im Tenor, bald im Basse lag.” (Häßler 1787, II; see Kahl 1948, 54; emphasis original, my translation)

69 Kittel uses the traditional four *clausulae*, but swaps their names. I have retained the traditional terminology to avoid confusion.

70 See Herbst 1643, 59; Werckmeister 1698, 36–37; Walther 1955 [1708], 161–162.

71 “Aus der aufmerksamen Betrachtung dieser Schlüsse ergibt sich, daß das Eigentümliche des Diskantgesangs [Tenorklausel] stufenweise Fortschreitung, das Eigentümliche des Altgesangs [Diskantklausel] halbtönweise Fortschreitung, das Eigentümliche des Tenorgesangs [Altklausel] Terzfälle, und das Eigentümliche des Baßgesangs, Quintfälle oder Quartensprünge sind.” (Kittel 1801–08, vol. 2, 2, my translation). As already mentioned, Kittel swaps the names of the traditional *clausulae*.

72 See Kittel 1801–09, vol. 2, 6–7. Regarding scale-degree reinterpretation in chorale harmonization, see Gauldin 2009, 104, and Clercq 2015.

Example 16: Johann Ch. Kittel, *clausulae*-based analysis of the chorale “Jesu meine Freude” (1801–08, vol. 2, 3)

Another fascinating account of Kittel’s teachings comes from Johann Christian Heinrich Rinck (1770–1846). Rinck studied with Kittel in Erfurt for three years beginning in 1786 and describes his lessons in his autobiography. Of crucial importance is that Rinck explicitly mentions composing multiple basses to a chorale melody. That Kittel incorporated multiple-bass chorale harmonization into his teaching suggests that this technique may indeed have been part of Bach’s instruction. Rinck writes that:

The first exercises in four-part writing consisted in writing out [harmonizing] chorales and thoroughbass examples. Next I had to learn to invent multiple basses to a given chorale melody. After I had gained considerable skill in this, we proceeded to two-voice textures. A chorale melody was likewise taken as a starting point, which I set note-against-note, then in eighths, sixteenths, dotted notes, and triplets. Often I had to change the melody to a compound meter or set the melody itself in the bass [emphasis added].<sup>73</sup>

The Yale Music Library acquired the bulk of Rinck’s estate in 1873 as part of the Lowell Mason Collection. Therein lies a document that corroborates the above description of Kittel’s teaching method (US-NH, LM 4014).<sup>74</sup> Though this document does not contain multiple basses, many other pedagogical manuscripts stemming from Rinck’s time with Kittel do, as listed in the bibliography under Kittel’s name. Excerpts from LM 4014 are found in Examples 17 to 20. The chorale melody is the same one with which Kittel models the *clausulae* analysis in Example 16: “Jesu meine Freude.” The pedagogical progression involves the inverse of reductive analysis: progressively faster rhythmic diminution of a two-voice, three-voice, and four-voice textures, culminating in the quasi-imitative set-

73 “Die ersten Übungen im vierstimmigen Satze bestanden im Aussetzen von Chorälen und Generalbass-Exempeln. Hierauf musste ich mehrere Bässe zu einer gegebenen Chormelodie erfinden lernen. Nachdem ich hierinnen eine ziemliche Fertigkeit erlangt hatte, wurde zum zweistimmigen Satze geschritten. Ebenfalls wurde dabei eine Chormelodie zum Grunde gelegt, welche ich zuerst Note gegen Note, dann in Achteln, Sechzehnteilen, punktierten Noten, Triolen bearbeiten, auch öfters die Melodie in ungerade Takte bringen oder die Melodie selbst zum Basse machen musste.” (Rinck 1833 [2003], 24, my translation)

74 Fall 1958, Appendix A (unpaginated) gives a catalogue of sources in the Lowell Mason collection.



ting of Example 20. The two-voice setting in Example 17 uses the tenor and discant *clausulae* wherever possible, as these are the only two *clausulae* that can appear in a two-voice cadence. Rinck’s three-voice setting in Example 18 then adds the bass *clausula*, which can be understood as a filler voice. Next, Example 19 adds the least distinctive of the four *clausulae*: the alto. This pedagogical progression bears some similarity to the underlying principle of Heinichen’s thoroughbass theory – the addition of two auxiliary voices to a dissonant two-voice core. Very often, this core is either the discant-tenor *clausulae* pair (at a cadence) or a secondary second or seventh, as shown in Example 13.<sup>75</sup> All this may betray the influence of Kittel’s *clausulae*-centered approach.

It was mentioned earlier that seventeenth-century German theorists developed their own classifications of *clausulae*. The classic types are given by Walther in a manuscript treatise, *Praecepta der Musicalischen Composition* (1708). These are shown in Example 21. The definitions depend on which *clausula* happens to be in the bass.

Example 17: Johann Christian H. Rinck, harmonizations of the chorale “Jesu meine Freude” (US-NH, LM 4014, 2r–2v)

Example 18: Johann Christian H. Rinck, harmonizations of the chorale “Jesu meine Freude” (US-NH, LM 4014, 3r–4r)

75 See Menke 2017, 124–125, for examples of sequential chains of secondary seconds/sevenths.

Example 19: Johann Christian H. Rinck, harmonizations of the chorale “Jesu meine Freude” (US-NH, LM 4014, 4v–5v)

Example 20: Johann Christian H. Rinck, harmonizations of the chorale “Jesu meine Freude” (US-NH, LM 4014, 6r)

Clearly this tradition suffers from an abundance of terminology. Marpurg, who considered himself a progressive, pokes fun at this in his *Abhandlung von der Fuge*:

Yet more, one used to speak of all kinds of *clausulis ordinatis* and *saltius*; *ordinatis ascendentibus* and *descendentibus*; *ordinatis ascendentibus perfectioribus* and *imperfectioribus*, of *saltius perfectioribus* and *imperfectioribus*, of *clausulis formalibus perfectis dissectis* and indeed, 1) of *clausulis formalibus perfectis dissectis*, 2) of *clausulis – formalibus – perfectis – dissectis – acquiescentibus*; (I am short of breath); of *cadentiis compositis*, and of *cadentiis compositis maioribus* and *minoribus*, and so on of *cadentiis compositis maioribus diminutis* and *cadentiis compositis minoribus diminutis*, etc. All these useless divisions and further divisions of divisions, whereby things are multiplied without reason are caused by nothing other than either something coincidental regarding the preparation and use of a cadence or the diversity of meter signatures. One has no need of them in the modern, more convenient, and secure manner of instruction.<sup>76</sup>

76 “Man sprach über dieses noch bey den Alten von allerhand *clausulis ordinatis* und *saltius*; *ordinatis ascendentibus* und *descendentibus*; *ordinatis ascendentibus perfectioribus* und *imperfectioribus*, von *saltius perfectioribus* und *imperfectioribus*, von *clausulis formalibus perfectis dissectis* und zwar 1) von *clausulis formalibus perfectis dissectis desiderantibus*, 2) von *clausulis – formalibus – perfectis – dissectis – acquiescentibus*; (der Athem entgehet mir); von *cadentiis compositis*, und zwar von *cadentiis compositis maioribus* und *minoribus*, und weiter von *cadentiis compositis maioribus diminutis* und *cadentiis compositis minoribus diminutis*, etc. Alle diese unnütze Eintheilungen und Wiedereintheilungen der Untereintheilungen, wodurch die Dinge ohne Noth vervielfältigt werden, und die weiter nichts, als entweder etwas zufälliges in Ansehung der Vorbereitung und Wendung einer Schlußclausel oder die Verschiedenheit der Tactarten zum Grunde haben, brauchet man bey der heutigen bequemern und gewissen Lehrart nicht.” (Marpurg 1753/54, vol. 1, 109, my translation)

Marpurg also discusses *clausulae*, but his definitions deviate from those of received tradition, as given in Walther. Instead, Marpurg collapses all the traditional categories into just two: complete and incomplete cadences. His desire is of course to simplify the terminology. But I believe there is another reason, though I have yet to find a source that states this directly. I will describe this issue by focusing on Kirnberger's theory of essential vs. nonessential dissonance.

*Clausula formalis perfectissima* [bass *clausula* in bass]

c: ⑥ ⑤ ⑤ ① ④ ⑤ ①

*Clausula formalis perfecta* (or *dissecta*)

c: ① ⑤ [d:] ① ⑤  
la mi

*Clausula formalis minus perfecta* / *Clausula altizans*

c: ⑤ ⑥ ⑤ ③

*Clausula cantizans* [discant *clausula* in bass]

c: ⑦ ① ⑦ ①

*Clausula tenorizans* [tenor *clausula* in bass]

c: ③ ② ①

Example 21: Johann G. Walther, *Praecepta der Musicalischen Composition*, classification of *clausulae* (1955 [1708], 161–162). Arabic numerals are editorial.

Example 22 summarizes Kirnberger's oft-cited theory of essential vs. nonessential dissonance.

(a) Agent holds                      (b) Agent moves

discant *clausula* (patient)              *zufällig* (non-essential)              *wesentlich* (essential)

c: ② ①                      ② ⑤ ①

tenor *clausula* (agent)              tenor or bass *clausula*?

Example 22: Johann Ph. Kirnberger (1771–79), concept of dissonance

Indeed, if one subscribes to a belief in chordal roots, then Kirnberger demonstrates himself an able thinker who sensitively described a problem inherent in Rameau's theory of *basse fondamentale* – how to determine the root of a dissonant harmony. The issue also highlights a factor that I believe contributed to the downfall of *clausulae*-based cadential understanding as shown in Example 21. In Example 22a, the tenor *clausula* in the bass holds through the resolution of the *syncopatio*. In Example 22b, however, it leaps up to scale degree  $\hat{5}$  at the moment of resolution. In Kirnberger's view, (a) contains a non-essential dissonance, while (b) has an essential dissonance; the determining factor is whether the chordal root remains the same or not. But the supposition that chordal roots exist in dissonant harmonies is itself problematic, I argue, because – and this is a point of central importance – the search for chordal roots in dissonant harmonies distracts from the underlying contrapuntal similarity between Example 22a and 22b – the *syncopatio* figure. Because modern harmonic theories like Roman numeral analysis (*Stufentheorie*) and functional theory (*Funktionstheorie*) depend on root identification and the privileging of certain root progressions, these theories also represent a dramatic departure from the theoretical paratext that likely informed Bach's teaching.

Example 22 raises another problem – one that relates to changing categories of cadential closure. At 22a it is clear that the bass voice is a tenor *clausula*. But when the agent voice moves at 22b, it becomes impossible to determine if the lowest voice is a tenor or bass *clausula*. Thus, one of the most common cadential bass progressions (scale degrees  $\hat{2}$ - $\hat{5}$ - $\hat{1}$ ) remains excluded from traditional *clausulae*-based categorization given by Walther in Example 21. With the spread of more harmonically-oriented theories in the second half of the eighteenth century, the prevalence of this bass pattern may have contributed to the eventual disintegration of the seventeenth-century *clausulae* teachings.

## Chordal Inversion with and without Roots

In my critique of Kirnberger's theory of essential vs. non-essential dissonance, I argued that the search for roots in *dissonant* chords distracts from underlying contrapuntal processes. The reason for the qualification "dissonant" is that, since the early seventeenth century, the German speculative tradition was dominated by *trias harmonica* theory, which does involve a sort of root identification, but only of triads. Unlike Rameau's *basse fondamentale*, the intervallic motion between the roots of consecutive chords (i.e. chord progression) is of no significance to *trias harmonica* theory. The *trias harmonica* tradition persisted into the eighteenth century, where it exerted an influence on Heinichen, among others. The *trias harmonica* also appears in a previously uninvestigated (and as yet undated) manuscript by Friedrich Emanuel Praetorius (1623–1695) called *Kurtzer doch gründlicher Unterricht vom General-Baß*. This source appears for the first time in a modern edition and translation in the article intended to supplement the present one.<sup>77</sup> Praetorius is relevant to Bach because he was cantor of the Lüneburg *Michaeliskloster* from 1655 until his death in 1695. The fifteen-year-old Bach attended this school from 1700 to 1702 or 1703. Despite the lack of direct overlap, Praetorius's treatise is nonetheless useful in defining the genres of music theory (paratext) that were taught just before Bach ar-

77 See Remeš 2019b.

rived. One can only speculate whether any of Praetorius's materials were still taught during Bach's time.<sup>78</sup>

Praetorius's *Kurtzer doch gründlicher Unterricht* opens with the following statement:

The foundation of the bass, or thoroughbass, is the *trias harmonica*, which predominates everywhere therein. But this *trias* consists of three pitches, which are together a fifth and the third contained within it [*c* = *infima*; *e* = *media*; *g* = *suprema*]. [...] Of these, the *infima* belongs in the bass. Occasionally the *media* is also found in the bass, resulting in a sixth. The *suprema* is seldom found in the bass [...].

Significantly, Praetorius begins his treatise with *trias harmonica* theory, which integrates the concept of inversional equivalence between what could be called 5/3, 6/3, and 6/4 chords. These chords merely involve a cycling of the *infima*, *media*, and *suprema* pitches. That Praetorius should designate the *trias harmonica* as the “foundation of the bass” represents the blending of the speculative *trias harmonica* with a more practical thoroughbass tradition. Bach's cousin, Johann G. Walther, also discusses the *trias harmonica* in his *Praecepta* (Ex. 23).

§ 9. Was die Veränderung derer in Triade befindl. *sonorum* anbelanget, so ist zu merken, daß ordentlich der unterste *Sonus* in die Grundstimme gehöre; jedoch wird zu weilen der unterste *Sonus* in die Oberstimme, und hergegen der mittlere *Sonus* in die Grundstimme gesetzt, auf diese Art:



§ 9. Regarding the rearrangement of the tones contained in the *Trias* [*harmonica*], it should be noted that normally the lowest tone [*infima*] belongs in the bass. But occasionally the lowest tone may be placed in an upper voice with the middle tone [*medius*] set in the bass in this way:

§ 10. Der oberste *Sonus* aber kann *ob interventionem Quartae non fundatae* niemahls im *Fundament* stehen, es sey denn, daß man *syncopire*, und die *Quarta* durch eine darauf folgende *Tertiam*, behöriger masen *resolviret* werde, als:

§ 10. The highest tone [*suprema*], however, may never be placed in the bass because of the resulting fourth, except when one makes a *syncopatio* such that the fourth is resolved by the following third, as follows:



Example 23: Johann G. Walther, *Praecepta der Musicalischen Composition* (1955 [1708]), 100–101

Walther's explanation is more sophisticated than Praetorius's, since he explicitly defines the situation in which the *suprema* may be placed in the bass – only when the resulting fourth resolves to a third as part of a *syncopatio*. The categories of “harmonic vs. non-harmonic tone” play no role in Walther's explanation. In fact, § 10 in Example 23 implies

78 *Kurtzer doch gründlicher Unterricht* is bound with two treatises by Herbst, two other manuscripts by Praetorius (thoroughbass examples in German tablature and an explanation of the monochord), and a treatise by Esaias Compenius about organ maintenance. For more detail on the other treatises and a modern edition of the tablature treatise, see Birke 1961, 370–372. Regarding Compenius's treatise, see Panetta 1990.

that he views a 6/4 chord as a prohibited type of *trias harmonica*, not as a chord containing nonharmonic tones.

As mentioned already, Heinichen was influenced by some aspects of *trias harmonica* theory. He uses it merely to justify his preferred doubling of the sixth of a 6/3 chord. More importantly for our purposes, Heinichen also introduces his own brand of inversive theory: what he calls *Verwechselung*. This idea is illustrated in Example 24a.

a) *Der Haupt-Accord Die 3. Verwechselungen desselben*

The notation shows a grand staff with two systems. The first system is labeled 'Der Haupt-Accord' and shows a 6/4 chord with notes G4, B4, and D5 in the treble clef and G2, B1, and D2 in the bass clef. The second system is labeled 'Die 3. Verwechselungen desselben' and shows three inversions of the chord. In the first inversion, the bass note is B1 and the treble notes are G4, D5, and B4. In the second inversion, the bass note is D2 and the treble notes are G4, B4, and D5. In the third inversion, the bass note is G2 and the treble notes are B4, D5, and G4. Small note heads and arrows are editorialial.

b)

The notation shows a grand staff with two systems. The first system is labeled 'Der Haupt-Accord' and shows a 6/4 chord with notes G4, B4, and D5 in the treble clef and G2, B1, and D2 in the bass clef. The second system is labeled 'Die 3. Verwechselungen desselben' and shows three inversions of the chord. In the first inversion, the bass note is B1 and the treble notes are G4, D5, and B4. In the second inversion, the bass note is D2 and the treble notes are G4, B4, and D5. In the third inversion, the bass note is G2 and the treble notes are B4, D5, and G4. Small note heads and arrows are editorialial.

Example 24: Comparison of Johann D. Heinichen's (1728, 625) and C. Ph. E. Bach's (1753/62, vol. 2, 28) examples of *Verwechselung der Harmonie* before the resolution. Small note heads and arrows are editorial.

Simply put, *Verwechselung* is a practical theory of inversion absent the concept of chordal root (unlike Rameau's *renversement*, the forerunner to modern harmonic theories). Heinichen cycles through all inversions of the starting *Haupt-Accord* ("main chord") via *Verwechselung*. It does not matter that the starting point for his inversive cycling is a dissonant harmony, in this case a 6/4/2 chord. No pitch in the *Haupt-Accord* is asserted to be the root or *son fondamentale*. Unlike Rameau's *renversement*, the goal of Heinichen's *Verwechselung* is not to establish a rational-empirical basis for the origin of harmony, but rather to justify the advanced dissonance usages of the modern Italian recitative style. Example 24b illustrates how C. Ph. E. Bach presents exactly the same concept in the same manner. C. Ph. E. Bach even uses the same words: "Verwechselung der Harmonie"<sup>79</sup>. This and many other such correspondence suggests that Heinichen's theory exerted some influence on C. Ph. E. Bach.<sup>80</sup> It seems either J. S. Bach played a mediating role, or C. Ph. E. Bach learned of Heinichen's theories directly through his 1728 treatise. Regardless, that Heinichen and C. Ph. E. Bach define *Verwechselung* the same way is yet another piece of evidence suggesting that Heinichen's treatise can be relied upon in our reconstruction of theoretical paratext in J. S. Bach's milieu.

## Cadential Classification without *clausulae*

In Example 21 we saw how Walther's 1708 *Praecepta* classifies various types of cadential motion according to which *clausula* is in the bass. A few decades later, in his *Musicalisches Lexicon* (Leipzig 1732), Walther includes a more modern classification of cadence

79 "§. 66. Wenn man vor der Resolution den Ton der Grundstimme mit einem andern in der rechten Hand verwechselt: so gehet eine Verwechselung der Harmonie vor" (C. Ph. E. Bach 1753/62, vol. 2, 28).

80 I investigate the relationship between C. Ph. E. Bach's treatise and Heinichen's 1728 treatise in greater depth in my dissertation (in progress).

types not based on *clausulae*. This is worth considering because the notice announcing the availability of Heinichen's treatise from Bach in Leipzig also states that Bach sold Walther's *Lexicon*.<sup>81</sup> Example 25 illustrates the three principal categories in the newer cadence typology: (1) the *Cadenza semplice* ("simple") contains no primary dissonances; (2) the *Cadenza composta minore* ("small compound") adds a *syncopatio* to the *Cadenza semplice*, thus splitting, or "compounding," the rhythm over the penultimate bass note; and (3) the *Cadenza composta maggiore* ("large compound") consists of four metric events before the final chord, in essence fusing the *semplice* and *composta minore* cadences together (though Walther does not state this). One could view the *syncopatio* in the *composta minore* as a discant *clausula*, though Walther apparently does not. Nevertheless, it is tempting to speculate that the *composta minore* is in fact merely another way of describing the cadential dissonance typical of the discant *clausula* – that is, that the terminology evolved, but the basic contrapuntal phenomenon remained the same.

The image shows three musical examples in G major, 3/4 time. The first, 'Cadenza semplice', consists of a treble staff with a half note G4 and a bass staff with a half note G3. The second, 'Cadenza composta minore', has a treble staff with a half note G4 and a bass staff with a half note G3, but the bass note is tied to the next measure. The third, 'Cadenza composta maggiore', has a treble staff with a half note G4 and a bass staff with a half note G3, but the bass note is tied to the next measure. The first two are added together to equal the third. The Cadenza composta maggiore is annotated with '[composta minore]' and '[semplice]'.

Example 25: Johann G. Walther, *Musicalisches Lexicon* (1732, 124–125), illustrations of cadence types. Annotations are editorial.

According to Walther, the three cadence types in Example 25 can be varied in two ways. First, the bass (and presumably the upper voices) may be diminished with smaller note values, as shown in Example 26.

The image shows two musical examples in G major, 3/4 time. The first, 'Cadenza composta minore diminuita', has a treble staff with a half note G4 and a bass staff with a half note G3, but the bass note is tied to the next measure. The second, 'Cadenza composta maggiore diminuita', has a treble staff with a half note G4 and a bass staff with a half note G3, but the bass note is tied to the next measure. Both are annotated with 'an statt [instead of]'.

Example 26: Johann G. Walther, *Musicalisches Lexicon* (1732, 124–125), illustrations of embellished cadences

It is somewhat surprising that Walther considers the octave leap in the bass to be worthy of a new qualifier; Marpurg would likely not approve! Second, and more importantly, the three cadence types may be evaded in various ways, resulting in a *cadence évitée*, as shown in Example 27.

81 See Bach-Dok, vol. 2, 191. A preprint of letter "A" of Walther's *Lexicon* was released in Weimar in 1728. Presumably this is what was available at the time of the notice in 1729 (Walther's full *Lexicon* not being published until 1732).

Example 27 consists of two musical examples, a) and b), each showing a cadence in G major with editorial annotations and bass degree analysis. Example a) is labeled with four instances of "[évitée / altisierende]" and "[évitée]". The bass line shows degrees 5, 4, 3, 6, 5, 4, #, 7, 6, 5, 4, 3, 6, 5, 4, #, 7, 6, 5, 4, 3, 6, 5, 4, 3. Example b) is labeled with three instances of "[évitée]". The bass line shows degrees 5, 4, 3, 6, 5, 4, #, 6, 7, 6, 7, 6, 5, 4, 3, 7, 6, 5, 4, 3, 7, 6, 5, #, 6, 5, 4, 3, 6, 5, 4, 3.

Example 27: Johann G. Walther, *Musicalisches Lexicon* (1732, 125), illustrations of the *cadence évitée* (evaded/deceptive cadence) with hypothetical realization and editorial annotations and bass degree analysis

The editorial bass-degree analysis highlights how Example 27a uses two types of evasion: the bass falling from  $\hat{5}$  to  $\hat{3}$ , or rising from  $\hat{5}$  to  $\hat{6}$  (see arrows). Example 27b uses another common evasion technique: the chromatic lowering of the resolution of the *syncopatio*, the so-called *motivo di cadenza*.<sup>82</sup>

The anonymous *Vorschriften und Grundsätze* (Precepts and Principles) mentioned earlier, which likely originates from Bach's circle, contains a listing of cadences that resembles Walther's later, non-*clausula*-centered classification from his *Lexicon*. These are shown in Example 28 with editorial annotations identifying each according to Walther's categories.<sup>83</sup>

There are three takeaways from Example 28. First, cadential classification was a topic included in a contemporaneous thoroughbass primer associated with Bach's teaching. This suggests the topic was readily available to be applied to chorale harmonization (i.e. it was within the "horizon of possibilities"), though chorales are not treated in the *Vorschriften*. Second, the section's header, *Clausulas finales*, suggests a connection with traditional *clausula* theory. Yet the connection is clearly not to the older bass-centered one in Example 21. One reason for this may be that basses like Nos. 11 and 13 in Example 28 are ambiguous because the leaping agent voice is in the bass, as discussed in connection with Kirnberger's theories in Example 21, since their *clausula* analysis is uncertain according to the older classification tradition. This illustrates how the traditional seventeenth-century categories involving the more linearly-oriented layering of *clausulae* were gradually replaced by more a verticalized, bass-centered concept of cadence focused on the presence or absence of dissonance. Only the discant *clausula syncopatio* was apparently preserved in the *composta minore* (though not by name). Third and finally, the progression between all seventeen cadences in Example 28 reveals that the underlying con-

82 Regarding cadential evasion, see Neuwirth 2017.

83 Channeling Marpurg's preference for simplicity, I have decided that an octave leap in the bass does not warrant the additional label of *diminuita*.



ceptual framework is modular.<sup>84</sup> That is, the later cadences are amalgams of earlier ones, as my annotations attempt to show. This correspondence suggests that Bach’s teachings may have been the origin for Kittel’s technique of “modular” analysis of chorale melodies as interlocking *clausulae*. Seen this way, the task of composing a bassline to a chorale can be understood as the linkage of short cadential units whose closure is deferred until the end of the phrase. This brings us back to our hypothetical lesson.

1 *semplice*      2  $4\text{-}\hat{1}$  *semplice?*      3 *comp. minore*      4 *comp. minore*

5 *comp. minore dim.*      6 *comp. minore dim.*      7 *extended semplice*      8 *extended  $4\text{-}\hat{1}$  semplice?*

9 *extended composta maggiore*      10 *comp. maggiore*      11 *comp. minore dim.*      12 *tenorisierende*

13 *comp. minore dim.*      14 *extended composta maggiore*      15 *extended composta maggiore*

16 *composta minore + composta maggiore*      17 *extended composta minore + composta maggiore*

The image displays 17 numbered musical examples of cadential units in bass clef. Each example includes a melodic line with a fermata and a corresponding fingering diagram below it. The diagrams use numbers 1-5 and letters [g], [b] to indicate fingerings. Labels above the notes describe the cadence type, such as 'semplice', 'comp. minore', 'extended', 'composta maggiore', etc. Some examples have sub-labels like 'semplice', 'extension', 'simple', 'tonic pedal', 'minore', 'maggiora'.

Example 28: Anonymous, *Vorschriften und Grundsätze* (1738, last folio), “The most common final clausulae” (“Die gebräuchlichsten Clausulas finales”). Figures are original. Numbering and cadential analysis are editorial.

## Applying Paratext: How to Compose Multiple Bases to a Chorale

At the beginning of this article, we saw how Bach’s compositional pedagogy very likely involved the composition of multiple basses to a given chorale in the simpler *Choralbuch* style rather than the ornamented *Choralgesang* style (Ex. 1–7). Example 8 posed the question of how students in Bach’s circle would have approached the harmonization of the chorale “Jesu meine Freude.” The remainder of this article attempted to reconstruct a historically grounded music-theoretical paratext for this task. To summarize, we have seen that:

84 Peter Wollny (2008, 226–227) has suggested that modularity plays a key role in Bach’s creative process. See also Remeš (Forthcoming [b]) regarding the principle of modularity in a newly discovered organ improvisation treatise by Jacob Adlung dating from c. 1726–27.

- Like Heinichen, Bach held the principles of composition to be derived from thoroughbass (testimonial for Wild; see note 36).
- Bach’s understanding of harmony likely involved identifying the scale degree of the bass voice (Ex. 9).
- There is a paucity of evidence to suggest that Bach or his German contemporaries thought in terms of chordal roots or root progressions, as claimed by Kirnberger and as is common today.
- Heinichen’s treatise, which may represent some of Bach’s views, holds *syncopatio* and *transitus* to be the two fundamental types of dissonance (Ex. 10).
- A nuanced understanding of thoroughbass requires the consideration of secondary intervals (Ex. 11–14).
- Bach’s pupil, Kittel, viewed chorale harmonization in terms of modular, linked *clausulae* (Ex. 15–20).
- Seventeenth-century cadential theory identified which *clausula* was placed in the bass (Ex. 21).
- Some cadential patterns, like a leaping tenor *clausula* in the bass, cannot be accounted for in traditional cadential theory (Ex. 22).
- By assuming that even dissonant chords have roots, Kirnberger’s theory of essential and non-essential dissonance disregards the traditional dyadic view of dissonance and obscures underlying contrapuntal phenomena (Ex. 23).
- *Trias harmonica* theory, which was coterminous to Bach, recognizes chordal roots in consonant harmonies, but neither asserts that dissonant harmonies have roots nor tracks the progressions of chordal roots between harmonies (Ex. 23).
- Heinichen’s theory of *Verwechselung*, which also appears in C. Ph. E. Bach’s treatise, recognizes inversional equivalence without asserting the primacy of a chordal root, as Rameau and Kirnberger do (Ex. 24).
- Newer notions of cadential closure in the early eighteenth century discarded traditional *clausulae* theory, instead tracking bass motion, dissonance, diminution, and cadential evasion (Ex. 25–28).
- A source from Bach’s circle (the anonymous *Vorschriften und Grundsätze*) suggests that Bach’s teaching used the newer, non-*clausulae*-based manner of cadential classification and viewed cadences as modular units (Ex. 28).

The argument set forth in the introduction was that multiple-bass chorale harmonization can be best understood by drawing from music-theoretical concepts that existed contemporaneously with Bach. In closing, we will attempt to implement the paratext reconstructed in the above points to the hypothetical task of harmonizing the chorale “Jesu meine Freude.”

Example 29 shows eight figured basslines by Kittel, published around 1811 in an edition edited by Kittel’s student, Rinck. In a previous article, I analyzed multiple-bass chorales by Kittel and Kirnberger using Kirnberger’s harmonic theories.<sup>85</sup> Example 29 represents a deliberate attempt on my part to exclude Kirnberger’s Rameau-influenced theories in order to better approximate the theoretical paratext of Bach’s circle.

85 See Remeš 2017b, 48–50, Examples 18 and 19.

The image displays a musical score for the chorale "Jesu meine Freude" by Johann C. Kittel, spanning measures 1 to 88. The score is presented in two columns, with the left column containing the original manuscript and the right column containing an edited version. The bass line is the primary focus, with various harmonic degrees and scale degrees indicated by circled letters (e.g., F, C, G, D, A) and numbers (e.g., 1, 2, 3, 4, 5, 6, 7). Annotations such as "new clausula", "disjunct clausula", "bass clausula / composita minime dim.", and "segment" are used to describe specific harmonic features and structural divisions. The original manuscript shows a more complex and sometimes less regular bass line, while the edited version provides a clearer harmonic structure and smoother transitions between measures. The key signature is one flat (B-flat), and the time signature is common time (C).

Example 29: Johann C. Kittel (c. 1811, 28–29), multiple-bass harmonization of the chorale “Jesu meine Freude.” Figures are original. *Clausulae* analysis of the chorale is by Kittel (see Ex. 16). Bass scale degree and bass-voice *clausulae*/cadential analyses are editorial.

The *Clausulae* analysis of the chorale in Example 29 is Kittel's, borrowed from Example 16 (though notice that phrases two and five differ slightly). I omit Kittel's category of "segment" (*Abschnitt*) in regard to the melody, since, as noted already, this seems to denote outer-voice motion with the intervals 8-10/10-8 or 10-12/12-10. Instead, I apply the term "segment" to the analyses of the basslines wherever this intervallic pattern occurs. I focused my analytical attention primarily on the ends of each phrase, applying both traditional *clausula* terminology and Walther's cadential terminology from the *Lexicon*. As one might expect, a majority of cadences conclude with a bass *clausula* in the bass voice (an "authentic" cadence in modern terminology). More significantly, there is not a single *cadenza semplice*. In part due to the melodic shape of the chorale, the *cadenza composta maggiore* also never occurs. Instead, the most common cadence type is the *composta minore diminuita*. In fact, diminution is the primary means by which Kittel creates variety while repeating the *composta minore* cadence several times. As I hypothesized in another article, many multiple-bass sources seem to exhibit a progression of increasing rhythmic complexity and chromaticism from the first to the last bass.<sup>86</sup> This is plainly evident in Example 29. Indeed, bass eight is especially remarkable, particularly in the manner in which Kittel evades cadential closure in phrase five via 4/2 chords in E minor and then D minor. Phrase four of bass six also deserves mention for its clever use of compound melody: D-C#-C#-B#-A-G-F. Certainly more could be said of Example 29, but this will suffice for now.

In light of Leaver's reattribution of the SCB to Bach's circle of pupils, we need to re-evaluate what constitutes Bach's "style and spirit" (to quote Spitta). Does Bach's likely use of the *Choralbuch* style mean he was a less demanding pedagogue than previously assumed? Probably not. But it may mean he was simply more realistic. In training future musicians, it was not enough for his pupils to passively analyze models, as students today are often made to do with the *Choralgesänge*. Instead, Bach's pupils entered the "contrapuntal laboratory" of multiple-bass harmonization in order to actively explore the limits of their own musical imaginations. Here the chorale is like a gemstone that reflects light differently when observed from various angles. The pupil's task was to see how many of these facets he could discern. Thus, in teaching his pupils to compose multiple basses, Bach was not only providing practical instruction for future organists, but also training his pupils to perceive compositional potential in a more general sense. As shown in Example 29, the technique of multiple-bass chorale harmonization can, in fact, lead to extremely sophisticated settings, full of contrapuntal nuance. In composing multiple basses to a single phrase, the pupil was forced to probe the boundaries of his own musical inventive powers to determine just how many basses he could make. In this regard, the image of Bach's pedagogy suggested in this article remains largely compatible with the received view of Bach's "style and spirit." For instance, in his seminal biography, Christoph Wolff writes that Bach's sought "to reach what was possible in art."<sup>87</sup> Ironically, the precepts set forth in this article, which attempt to restrict our analytical purview to the music-theoretical paratext coterminous with Bach, simultaneously enable us to better understand the parameters within which the pre-Rameau musical imagination flourished in Germany in the early eighteenth century. Indeed, it is a well-known paradox that firm boundaries are a precondition to any creative act. The work of this article has been to

86 See *ibid.*, 31.

87 Wolff 2000, 339.

define some of the music-theoretical parameters within which Bach both labored and taught. If we too are willing to adopt these conditions (if only imperfectly), then “Bach the teacher” may yet find a new generation of pupils.

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