A Compendium of Voice-Leading Patterns from the Seventeenth and Eighteenth Centuries to Play, Sing, and Transpose at the Keyboard

Goals

(1) to familiarize Anglo-American music theory pedagogues with recent German-language trends, particularly regarding scholarship regarding the theory and improvisation of baroque music[1];
(2) to rebut some of what I view as overly theoretical, overly discursive, and overly harmonic biases of Anglo-American music theory pedagogy—tendencies that are evident, for example, in some prominent baroque counterpoint texts[2];
(3) to offer foundational materials for an alternative pedagogical model for teaching seventeenth- and eighteenth-century music that is freely available, actively musical, less discursive, more contrapuntal, and historically oriented in its focus.

Intended Audience

Teachers and students of all ages, particularly in the context of:

- undergraduate and graduate music study;
- general music theory and aural skills classes;
- baroque counterpoint classes;
- class-piano settings;
- individual piano lessons for majors and non-majors;
- analysis seminars;
- lessons and classes for composition majors.

The Compendium

Over the past three years I have compiled an original Compendium of voice-leading patterns drawn from seventeenth- and eighteenth-century music.[3] The compendium, which will continue to undergo revisions, is freely online available as a PDF.[4] Appendices include a description of common modulation strategies, an alphabetical list of gallant schemata, and an extensive bibliography of relevant historical and modern publications.

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[1] See Remeš (2018b) regarding the need for the English-language theory community to become more aware of German-language trends.

[2] See Gauldin (1988), Schubert and Neidhöfer (2006), and Douglass and Jones (2016).

[3] The term "schemata," which is common in Anglo-American music theory, has been purposefully eschewed because of its cognitive implications. Instead, the more neutral "voice-leading pattern" is preferred. Appendix 2 in the Compendium nevertheless provides a list of schemata.

[4] Future updates of the Compendium can be found at <https://derekremes.com/teaching/historicalkeyboardimprovisation/>. Accessed October 7, 2019. A German-language version is also available.

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The Compendium employs several historical concepts that are largely foreign to Anglo-American music theory pedagogy. The following is a brief list of the most important of these terms. An arrow (⇒) refers to another entry in the list. See the Compendium itself for more detailed information.

agent voice: the active voice in a ⇒ *syncopatio* that moves to make a dissonance against the tied ⇒ patient voice.

clausula (plural: **clausulae**): brief melodic segments used to construct polyphonic cadences, defined here as three-note patterns of scale degrees in the major or minor mode.[5] The three structural pitches in a clausula are termed *ultima* (last), *penultima* (second-to-last), and *antepenultima* (third-to-last). There are four clausulae in total: discant, alto, tenor and bass. The discant and tenor clausula are the most significant, since they alone can be used in a two-voice setting. Clausulae (and their uniform color coating) are central to the means by which the Compendium emphasizes counterpoint over harmony.

compound cadence: a cadence containing at least one ⇒ *syncopatio* dissonance (i.e. containing a syncopated discant ⇒ clausula).

consonance: the intervals of a third, perfect fifth, sixth, and octave.

consonant chord: those chords containing purely consonant intervals above the bass. Hence, there are only two in baroque and classical music: the 5/3 chord (with perfect fifth) and the 6/3 chord.

dissonance: the intervals of a second, fourth, seventh, their compounds, and all augmented and diminished intervals. In the baroque period, there were two primary dissonance categories: ⇒ *syncopatio* and ⇒ *transitus*.

dissonant chord: those chords containing at least one dissonance above the bass (i.e., everything except the 5/3 chord with perfect fifth and the 6/3 chord).

double cadence: defined here as the combination of a ⇒ simple cadence with a ⇒ compound cadence.

patient voice: the passive voice in a ⇒ *syncopatio* that is forced to resolve downward by step by the ⇒ agent voice.

[5] Clausula of course originated in a modal context; their "flattening" into major/minor keys is a pedagogical necessity.

primary intervals: an interval involving the bass voice (i.e. those shown via thoroughbass figures). See ⇒ secondary intervals.

rule of the octave (**RO**): any one of a number of non-sequential harmonizations for stepwise bass motion. In the Compendium, a RO may be "basic" (containing almost exclusively ⇒ consonant chords) or "advanced" (containing ⇒ dissonant chords).[6]

secondary interval: an interval not involving the bass voice (i.e. between two upper voices). See ⇒ primary interval.

simple cadence: a cadence lacking a *syncopatio* dissonance.

spacing: a term designating the starting interval between the outer voices in a thoroughbass realization. Hence, there are three available spacings: octave, third, and fifth (assuming one begins with a 5/3 or 6/3 chord). Along with transposition, spacings are a key tool for internalizing voice-leading patterns and for promoting an awareness of counterpoint.

syncopatio: a historical dissonance category similar to a suspension in its requirement for consonant preparation and stepwise resolution downward to consonance. But whereas a suspension implies the delayed arrival of a chord tone, a *syncopatio* was understood in the Baroque as a dyadic (i.e. intervallic) event in a syncopated rhythmic context. After Giovanni Artusi (c.1540–163), the two voices in a *syncopatio* are termed ⇒ agent voice and ⇒ patient voice. See also ⇒ *transitus*.

transitus: a historical dissonance category subsuming the modern passing tone and neighbor tone; See also ⇒ *syncopatio.*

[6] This division is based on J. D. Heinichen's 1728 treatise. See Remeš (2019b).

The voice-leading patterns in the Compendium are organized into three categories: cadences, rules of the octave, and sequences. These in turn are divided into several subcategories (see the table of contents in the Compendium itself). Brief explanations of each pattern accompany their respective demonstrations. Pattern are given in C-major and A-minor in all available spacings. The patterns are introduced in two, three, and then four voices (where applicable). Only close-position realizations are employed (i.e. the right hand plays three notes in close position; the left hand alone plays the bass). The use of (1) thoroughbass, (2) spacings, (3) close position, and (4) transposition is based broadly on the treatises of C. P. E. Bach, J. D. Heinichen, and documents originating from J. S. Bach's circle of pupils.[7]

Conspicuously absent from the Compendium are Roman numerals or any reference to harmonic function.[8] Instead, Arabic numerals identify scale degrees (encircled for the bassline, with carets for the upper voice).[9] Thoroughbass figures, however, are retained. The historical justification for this decision is described in detail elsewhere.[10] In brief, thoroughbass practice can be productively divided into pre- and post-Rameau periods, referring to the dissemination of the theories of Jean-Philippe Rameau (1683–1764).[11] The pre-Rameau thoroughbass tradition (of which J. S. Bach was a part) neither posited the existence of chordal roots in dissonant harmonies nor assigned syntactical meaning to root progressions between chords. By excising any concern for roots or root progressions from the Compendium, and by instead relying on concepts like clausulae, thoroughbass, and bass scale degrees, the focus is kept on the *sounding* musical surface, rather than a hypothetical "fundamental" bassline reckoned via chordal inversion. In sum, the Compendium is more intervallic and contrapuntal than most modern textbooks, which are more generally more harmonic in orientation.[12]

[7] Regarding the theoretical background of J. S. Bach's circle, see Remeš (2018a, 2019a, 2019b, and 2019c).

[8] Roman numerals are only used to indicate global key relationships in the following format: C(I), G(V), a(vi), etc.

[9] The use of Arabic numerals to identify bass scale degrees in historically oriented scholarship today can be credited to Budday (2002) and Holtmeier (2011), based in part on the writings of Förster (1804; 1818).

[10] See Remeš (2019a).

[11] See Heimann (1973).

[12] The definition of *syncopatio* in the glossary helps elucidate this distinction. See also the discussion of cadences with an "active" tenor clausula in the Compendium.

Methodology: Doing is Knowing

In contrast to many modern music theory textbooks, the majority of the Compendium consists of musical examples, rather than text. The guiding pedagogical philosophy behind this is "Doing is knowing." That is, the Compendium aims to train musicians—not theorists or historians! As such, making music must be prioritized over talking or writing about music. Hence, homework and assessments must involve a practical component if busy students are to be properly motivated to practice the keyboard.

The voice-leading patterns in the Compendium are to be learned by playing, singing, and transposing them at the keyboard. Students will thus require access to a keyboard instrument. This can be arranged via the educational institution's practice rooms, purchase of electronic keyboards by the school, or a requirement that students purchase (affordable) electronic keyboards themselves. Regardless of how a solution is reached, easy and regular access to a keyboard instrument is essential to this method's success.

The color-coating of individual voices is a primary mean by which contrapuntal considerations are emphasized in the Compendium. The colors indicate linear phenomena visually and thus promote contrapuntal thinking. In a practical sense, the colors also tell the student which notes to sing. In some cases, the colors also show how three- and four-voice textures can be built up from a two-voice core. Moreover, since each voice-leading pattern is shown in its various spacings, the concept of invertible counterpoint is demonstrated visually via the colors, without the need for much additional explanation.

(1) **Playing**: Students must resist the tendency to play too fast. The rule is: Play as slow as necessary in order to remain in complete control and to avoid any mistakes. If needed, a metronome should be employed. Quarter-note = 40 would be a good starting point for most non-keyboard majors. No attempt should be made to play legato. Rather, the student should only ensure that all notes in each chord are struck and released at the same time (without pedal). Or, if this is too difficult, chords should be arpeggiated at first and then struck as a chord, so that students can focus on finding each note individually. Ties may also be omitted if they pose coordination problems. The vast majority of chords in the right hand use either fingering 1-3-5 or 1-2-5, but 1-2-4 may be also used. Each pattern should be played first in C-major and then in A-minor—that is, just as they are presented in the Compendium.

(2) **Singing**: Every music student should have the experience of singing in a choir. But unfortunately this is not always the case. Self-accompaniment at the keyboard is an ideal substitute for choral experience. It frees the student to work at his or her own speed. It also allows the student to sing all the voices in a polyphonic texture (not just their assigned choral

part). To promote the understanding of transposition, it is recommended that students sing using a relative system of solmization (e.g. moveable do or numbers).[13] As noted, students must play at a slow enough tempo that they can sing and play simultaneously without making mistakes. After simply playing a given pattern, the student might then sing the bassline while playing all voices. Then one could sing the upper voice in each of the spacings. A good exercise is to also sing the bassline without playing it. One can also practice singing inner voices if time permits. It is particularly important that women—whose voices are generally about an octave higher than men's—and players of treble instruments (violin, flute, etc.) experience singing a bassline, of course transposed as necessary to fit their vocal range. This exercise counteracts a natural tendency to fixate on upper voices, either based on women's natural voice ranges or one's primary instrument. Thus, singing basslines promotes not only bass dictation, but also tighter ensemble playing and better intonation, since many ensembles tune to the bass. Students might also sing on a neutral syllable for variety or simplicity.

(3) Transposing: After having sung the individual lines of a given pattern in C-major and A-minor, the student should begin transposing. Mastery of the concept of transposition is a critical step in a student's musical development, since transposition generalizes voice-leading phenomena, thus demonstrating their independence from specific pitch constellations and allowing students to identify phenomena in other keys. That is, the ability to transpose is a sure sign that the student is capable of generalizing a musical idea and transferring it to a new context. One should begin with keys with one accidental (G-major/E-minor and F-major/D-minor). For some students, this may suffice. For more advanced students, or where time permits, one can continue to major and minor keys with two or more accidentals. Students with proficient keyboard skills may wish to introduce arpeggios or different time signatures to stave off boredom and improve focus while transposing. One need not transpose a pattern into all major and minor keys; time rarely allows for this anyway. The ultimate goal is to be able to transpose a given pattern in a few keys without looking at the page—that is, the goal is to use transposition as a tool to help memorize the patterns.

[13] If students already have extensive experience with fixed do solfège, they should instead sing on moveable-do numbers.

Suggestions for Classroom Use

In America, many music theory classrooms have too many students to hear everyone individually in every class session. Callahan (2012) describes a solution wherein students make an audio-video recording of their keyboard assignments. Callahan has access to a room with dedicated audio-video equipment, but students can also simply record themselves with their own smartphones and send the file to the teacher. Some advantages of the recorded approach are that students can re-record a passage until they get it just right, which allows them to show their best work and avoids in-class stage fright; it also saves class time and encourages students to practice more. But video recordings also can lead to technological headaches (enormous file sizes, the teacher's overloaded inbox, incorrect Youtube rights access leading to delays). An alternate solution is to shuffle name cards at the beginning of each class, randomly selecting 2-4 students who must perform a given voice-leading pattern at the keyboard. When properly warned the previous week which patterns are to be prepared, such randomized testing can prove an effective motivator while also saving class time. Ideally, each student would have his or her own keyboard on the desk in class with headphones, yet this is rarely the case.

The voice-leading patterns in the Compendium can also be used to train aural skills. For example, the patterns (or segments thereof) make ideal excerpts for dictation. The teacher can play them at the keyboard while students sing back the soprano or bass voices on a form of moveable-do solmization. Students could also dictate the scale degrees of the outer voices, and perhaps also the thoroughbass figures between them. This sort of dictation is an ideal counterpart to students' self-accompanied practice. Groups of students could also sing the patterns polyphonically. Of course, the patterns are intended to be concatenated in a modular way: the teacher can combine the patterns to make longer passages for dictation.

More advanced uses of the Compendium include applying the patterns in thoroughbass realization, analysis, and model composition.[14] I have found the thoroughbass exercises of G. F. Händel to be particularly valuable in this regard.[15] These can be realized in two, three, or four voices (or a mixture thereof in a single exercise). Written-out realizations are easier to correct—indeed, students will only rarely practice their realizations to the point of having them memorized anyway. Händel's exercises can also be ornamented to make simple preludes, or an additional solo voice can even be added above them.[16] The voice-leading patterns in the Compendium can also be productively applied to the analysis of Corelli's trio sonata movements. See Example 1 appended to the end of this document

[14] For more detail in this regard, see Remeš (2019b).

[15] A freely available edition of Händel's exercises (with suggested solutions) are available at <https://derekremes.com/teaching/historicalkeyboardimprovisation/>. Accessed October 7, 2019.

[16] See Remeš (2017a; 2019b) for some ornamentation strategies and examples.

for a sample analysis of a Corelli movement.[17] Thoroughbass realization and analysis are ideal preparation for model composition. Like Händel's exercises, the patterns will require ornamentation in order to individuate students' compositions.

In sum, the Compendium offers a wealth of freely available, methodologically flexible, and historically informed materials for today's pedagogues. By playing, singing, and transposing such voice-leading patterns, the student takes an active role in not just describing, but actually making baroque music. This is the kind of "knowing" I believe we should foster in our classrooms.

[17] See also the last three examples in Remeš (2019b).

to be supplemented by analysis of Corelli trios sonata movements and the written-out realizations of G. F. Händel's thoroughbass exercises in class and/or as homework

Week 1: Introduction to thoroughbass[18]; simple cadences; Händel Exercises 1–3; a trio sonata movement.

Week 2: Compound Cadences; Händel Exercises 4–6; a trio sonata movement.

Week 3: Double Cadences; Händel Exercises 7–9; a trio sonata movement.

Week 4: Evaded Cadences; Händel Exercise 10; a trio sonata movement.

Week 5: Tenor or Discant Clausulae in the Bass; Händel Exercise 11; a trio sonata movement.

Week 6: Quiz on Cadences; Basic Rule of the Octave; Händel Exercise 12; a trio sonata movement.

Week 7: Basic Rule of the Octave (cont.); Händel Exercise 13; a trio sonata movement.

Week 8: Advanced Rule of the Octave; Händel Exercise 14; a trio sonata movement.

Week 9: Advanced Rule of the Octave (cont.); Händel Exercise 15; a trio sonata movement.

Week 10: Quiz on RO; Parallel 6/3 Chord Sequence 5-6 and 7-6 Sequences; Händel Exercise 16; a trio sonata movement.

Week 11: Syncopated Bass Sequences; Händel Exercise 17; a trio sonata movement.

Week 12: Falling Thirds Sequences; Händel Exercise 18; a trio sonata movement.

Week 13: Falling and Rising Fourths Sequences; Händel Exercise 19; a trio sonata movement.

Week 14: Falling and Rising Fifths Sequences; Händel Exercise 20; a trio sonata movement.

Week 15: Quiz on Sequences; Review; Händel Exercise 21; a trio sonata movement.

Week 16: Cumulative Test; Presentation of analyzed Corelli trio sonata movement with original; a trio sonata movement thoroughbass accompaniment (or Händel Exercises 22–24); performance of Corelli movements with flexible instrumentation with students' accompaniments; a trio sonata movement.

[18] See Remeš (2019c), 5–27 for introduction to thoroughbass intended for absolute beginners.

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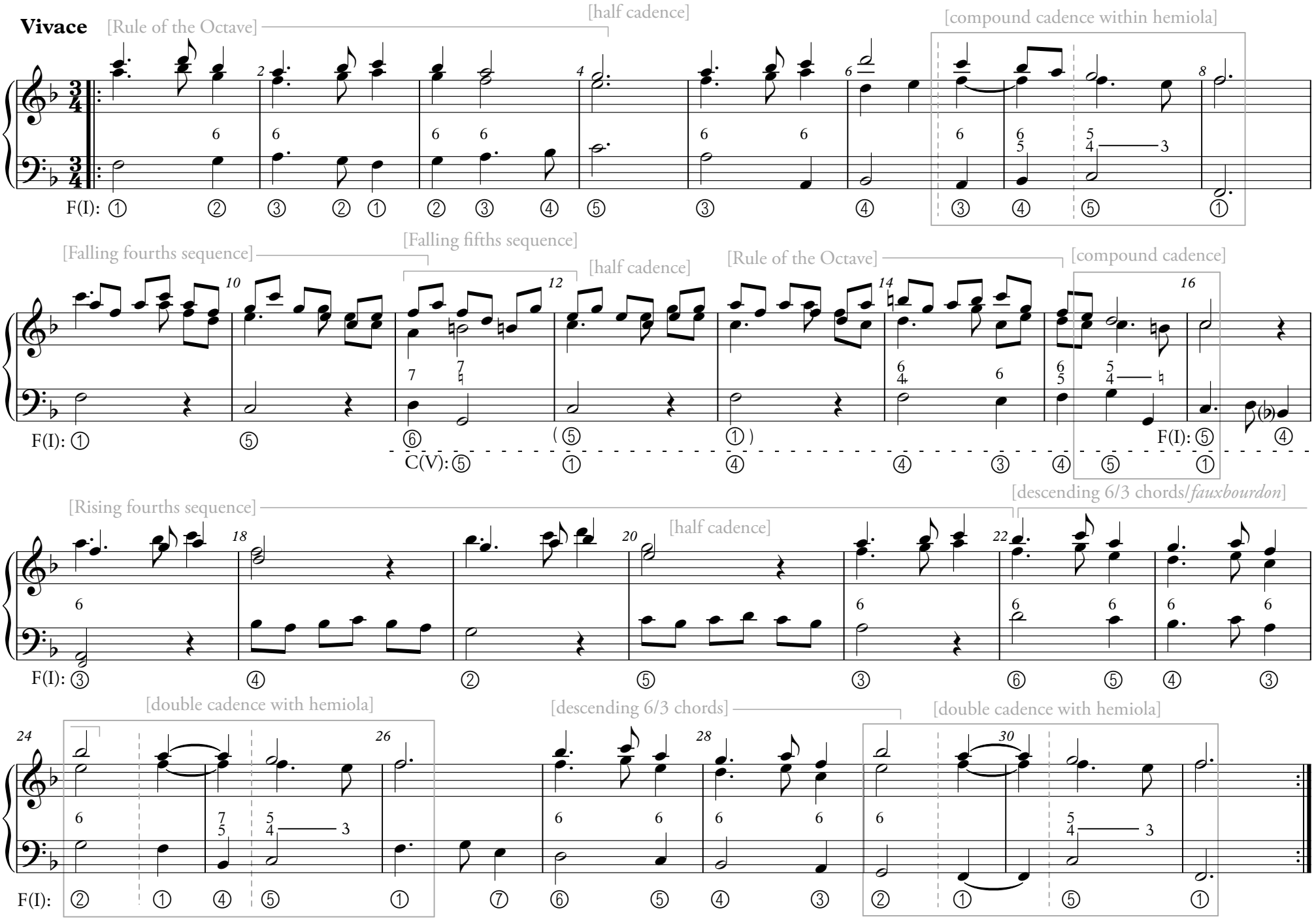
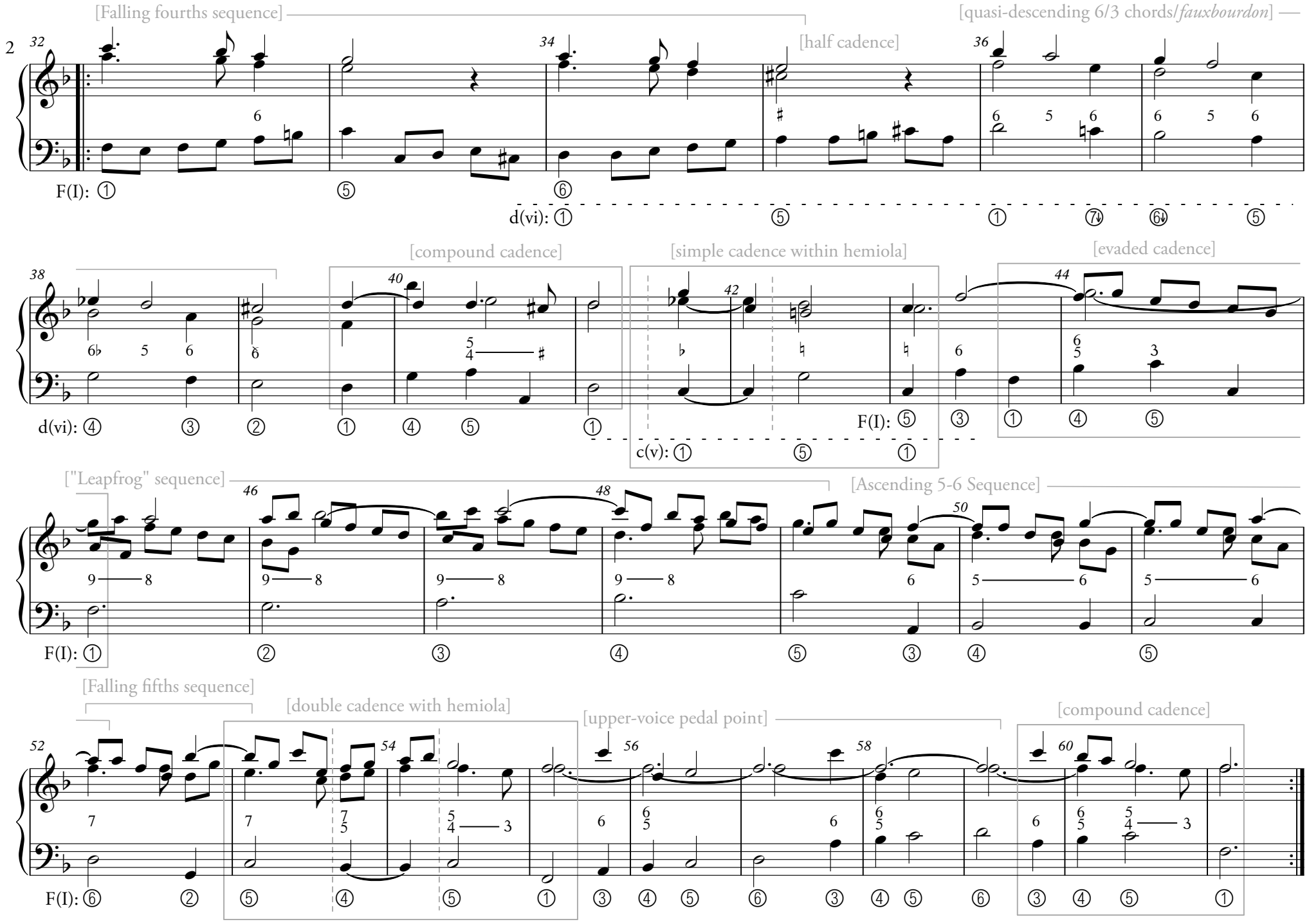


Arcangelo Corelli (1653-1713), Trio Sonata, op. 3/1/III


[Falling fourths sequence]
[quasi-descending 6/3 chords/*fauxbourdon*]
[half cadence]
32
34
36
F(I): ① ⑤ ⑥
d(vi): ① ⑤ ① ⑦ ⑥ ⑤
[compound cadence]
[simple cadence within hemiola]
[evaded cadence]
38
40
42
44
d(vi): ④ ③ ② ① ④ ⑤ ①
c(v): ① ⑤ ①
F(I): ⑤ ③ ① ④ ⑤
["Leapfrog" sequence]
[Ascending 5-6 Sequence]
46
48
50
F(I): ① ② ③ ④ ⑤ ③ ④ ⑤
[Falling fifths sequence]
[double cadence with hemiola]
[upper-voice pedal point]
[compound cadence]
52
54
56
58
60
F(I): ⑥ ② ⑤ ④ ⑤ ① ③ ④ ⑤ ⑥ ③ ④ ⑤ ⑥ ③ ④ ⑤ ①