

Three *Leçons* in Harmony: A View from the Nineteenth-Century Paris Conservatory

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INTRODUCTION:

Toward a Reconstruction of Harmony as a Discipline

In discussing the rule of the octave from Johann David Heinichen's 1728 *Der Generalbass in der Komposition*, Robert Gauldin remarks upon an important feature of this well-known text that is both pedagogically significant for the modern music theory teacher, as well as methodologically significant for the historian of music theory (his summary is reproduced as Example 1).

The image displays seven numbered exercises (1-7) for the rule of the octave, presented in two systems. Each exercise consists of a major and minor staff. The notation includes figured bass (numbers 1-7) and interval numbers in parentheses. Exercises 1-3 are in the first system, and exercises 4-7 are in the second system. The exercises show various harmonic progressions and intervals, such as thirds, fourths, and fifths, with some exercises including accidentals (sharps and flats) to indicate specific chromatic alterations.

Example 1. Gauldin's summary of Heinichen's rule of the octave, from *A Practical Approach to Eighteenth-Century Counterpoint*, Example 1-7, pp. 9–10

As Gauldin notes, while Heinichen's *regola* relies upon a number of familiar scale-step prescriptions, it does not address the issue of harmonic tendency.

Gauldin writes:

For the most part, this chart does not tell us the tendency of a bass note, with its supporting chord, to move to another bass note and chord. It does not establish the probability for chordal succession. Heinichen suggests eight rules for this. . . . From such lists of “expectations” may be deduced a general theory of harmonic function in this period. This was Rameau’s great contribution although he explained it in terms of a hypothetical fundamental bass.¹

Gauldin then proceeds, via this invocation of Rameau, to summarize these principles for chordal succession in terms of the three primary categories for harmonic function and tendency—those of tonic, dominant, and pre-dominant—illustrating them with the familiar figure below.

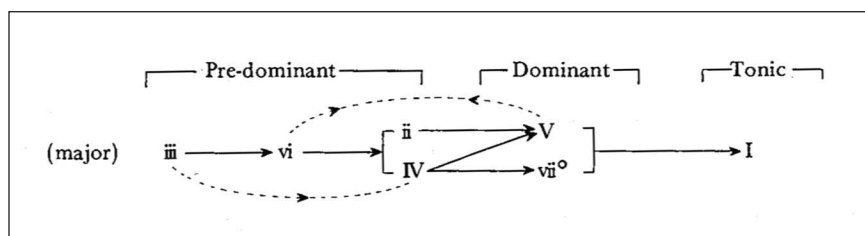


Figure 1. Harmonic functions in Gauldin’s *A Practical Approach to Eighteenth-Century Counterpoint*, Figure 1-1, p. 11

Gauldin’s presentation of Heinichen engages not only what is perhaps the central rub between our current music theory pedagogy and those of centuries past, but also rehearses a common interpretation of, as well as reaction to, these earlier traditions. That is, many of our predecessors did not rely on a notion of harmonic tendency or syntax when teaching the practical subject of harmony.² For many of us today, as well as for our students, however, writing even the simplest harmonic progression without such a concept is literally unthinkable. How would one even begin? Encountering these historical texts, and their apparent theoretical lacunae, therefore often elicits an act of translation on the part of the

¹ Robert Gauldin, *A Practical Approach to Eighteenth-Century Counterpoint* (Prospect Heights, IL: Waveland Press, 1995), 9–10.

² For the purposes of the discussion here, I shall use the three terms “tendency,” “function,” and “syntax” largely interchangeably.

modern-day music theorist and pedagogue. On this score Gauldin obliges, rendering Heinichen's rule of the octave in terms of a more familiar model of harmonic tendency and tonal syntax. Gauldin's reading of Heinichen thus reflects how thoroughly a notion of harmonic tendency is imbricated in our methods as historians, music analysts, and teachers of practical music theory: the concept of tendency or function has become one of the primary means by which we not only interpret past texts and analyze scores, but also by which we teach practical music theory subjects such as harmony.

Yet despite the recentness of this pedagogical development—as I will discuss below, notions of harmonic tendency and function remained largely foreign to practical harmony pedagogy through the nineteenth century—the broad reliance on models of harmonic function for teaching practical subjects such as harmony has transformed the content and form of music theory pedagogy in a number of important ways. Perhaps most significantly, this modern approach trades on what may be referred to as an “applied theory of harmonic function.” That is, it represents the application of a descriptive model, developed for the purposes of analyzing harmonic relationships, to the very different and practical task of teaching students to generate and compose normative harmonic progressions. For instance, when teaching students how to generate harmonic progressions, we frequently translate *analytical descriptions* of harmonic function into *practical prescriptions*. The descriptive, analytical statement that, “In tonal repertoires, pre-dominant harmonies most frequently move to dominant ones,” is translated into the practical, compositional prescription, “move ii to V!”

Yet however familiar (and unremarkable) this sort of applied theory of harmonic function may be in practical theory pedagogy today, such an approach faces certain familiar limitations—limitations that become most apparent when dealing with chromatic harmony. In particular, while descriptive models of harmonic tendency and function offer a powerful tool for analyzing chromatic harmony, such notions often prove unwieldy when adapted to compositional exercises in which we ask students to generate chromatic progressions. In other words, there is an asymmetry between the descriptive, analytical merit of the concept of harmonic function and its practical, compositional efficacy, particularly when it comes to chromaticism. To illustrate this asymmetry, take the opening of Fauré's “Donc, ce sera par un clair jour d'été” from *La Bonne Chanson* (see Example 2). A pair of measures ambiguously

bookends the passage, circling B $\flat$ and F major, as well as hinting at B $\flat$ lydian and F mixolydian. The interior of the passage consists of chains of dominant seventh chords in various inversions, analyzed here in terms of chord roots. When confronted with a passage like this—with its chromatically rich and varied progressions, and its rapidly shifting suggestions of various modes and keys—many students would likely object to any functional analysis offered as the basis for generating a similar chord progression, protesting that it has “too many rules” for what chord is to follow what other chord. How could one ever conceive of all the functional relationships necessary to compose such a passage when almost every chord contains a chromatic alteration? In other words, the syntactic analysis, despite its descriptive merit, becomes too conceptually dense and cognitively burdensome when adapted for practical, compositional purposes.³

³ To be clear, the suggestion here is *not* that Roman numerals are, *prima facie*, inadequate for the task of analyzing Fauré’s music and that relying on notions of diatonic syntax for compositional purposes is *therefore* similarly fraught. If this were the argument here, it could rightly be accused of relying on a straw man; who would use Roman numerals to analyze Fauré in the first place, critics could object. Such an objection, however, presumes a form of symmetry between the descriptive, analytical merit of a concept on the one hand, and its compositional efficacy on the other. But it is precisely this sort of presumption—one that courses unexamined throughout our practical theory pedagogy—that the example of Fauré here is meant to problematize. To the contrary, as I have shown in Example 1, I believe we can adequately analyze Fauré’s music in terms of Roman numerals and functional roots, and that such an analysis, with all of its complex symbolic renderings, does, in fact, capture something of our intuition regarding the complexity of the harmonic relationships in question when considered from such a functional point of view. Consequently, and as a logical matter, the compositional limitations of the concept of harmonic function *must lay elsewhere than in its descriptive inadequacy for analyzing this music, as the concept of harmonic syntax exhibits no such inadequacy.*

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con anima
Donc ce se-ra par un clair jour d'été;

mf *f*

B♭: I vii4/V V(aug) vi7 A min(?) ii7 iii
3
(F? : IV vii4 I (aug) ii7 iii v7 vi)
3

mf
Le grand soleil, com -

p

B♭: I B♭7 G9 V7 V9 B♭7 G7 V7
(V7/IV) (V9/ii) (V7/IV) (V7/ii)

- pli - ce de ma joi - e Fe - ra, par -

p

B♭: I(aug) ii7 V7 B♭aug7 B♭9/E♭ E♭7 C7 B♭7
(Vaug/IV) (V7/♭VII) (V7/V)

Example 2. Gabriel Fauré, “Donc, ce sera par un clair jour d’été,” mm. 2–11

This particular difficulty with an applied theory of harmonic function—namely, the asymmetry between its descriptive, analytical merit and its practical, compositional efficacy particularly when dealing with chromatic harmony—stems, I would suggest, from a crucial logical conflation embedded within this sort of applied theory as a whole. Namely, our applied theory of harmonic function mistakenly identifies a description of the *ends* of the compositional

process with a description of its *means*. Just because we may accurately describe the harmonies in a Bach chorale as moving from I to ii⁶ to V, etc., does not mean that Bach *began* by writing a tonic triad, *then* an inverted supertonic, *then* a dominant, etc. Rather, the functional analysis describes the *products* or *ends* of Bach's compositional process, once it was complete and the harmonies had been determined. In other words, while an analysis of functional relationships may accurately describe certain features of the *ends* of the compositional process (i.e., the left-to-right syntactic relationships of the harmonies that resulted from some compositional process), this can in no way be taken as a description of the particular process or method by which the composer arrived at them. Yet this is precisely what our applied theory of harmonic function does: it treats the analysis of the left-to-right functional, harmonic process as a description of the compositional process itself.

Furthermore, given this fundamental logical confusion (and as the complex analysis of Fauré suggests), a continued appeal to, or refinement of, a theory of harmonic function would not effectively redress the logical gap that extends between a description of the ends of the compositional process and a description of the process itself. Getting our students to learn how to write chromatic passages, in other words, is not simply a matter of offering them a more detailed analysis of Fauré, or making our models of harmonic function more comprehensive by incorporating notions of secondary borrowing, applied subdominants, or the like into them. Such a tack would be "more of the same"; it simply continues to describe the compositional ends using more complex language, while not addressing its precise means. What is needed, then, is a description of a compositional process that is not reduced to the description of those ends that the compositional process itself is meant to produce.

Yet what would such a description of the compositional process look like if not a description of left-to-right harmonic syntax? To answer this question, we may wish to consider historical methods for teaching harmony, since as mentioned, harmony teachers, well into the nineteenth century, did not rely on such notions when it came to teaching practical compositional subjects like harmony. An examination of historical techniques would therefore prospectively offer us insights into how composers, like Fauré, arrived at composing in such a rich chromatic idiom without possessing an explicit notion of harmonic tendency or function. Just as significantly,

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a consideration of these techniques can inform both our teaching of chromatic harmony today, as well as help our students understand and generate these sorts of complex chromatic progressions. In what follows, then, I would like to offer an initial reconstruction of some of the basic techniques and methods that, in lieu of an applied theory of harmonic function, provided the foundation for the discipline of practical harmony in late nineteenth-century France. Two pillars supported the overall pedagogical approach at that time: that of a generalizable diatonic (rather than specifically “functional” or “tonal”) voice-leading grammar for triads and seventh chords, and the subsequent application of chromaticism to this grammar. In addition, and contrary to what our current reliance on theories of harmonic tendency and function might suggest to us as music analysts, the chromatic style of the late nineteenth century did *not* evolve from the development of a more explicit and complex theory of harmonic function, but rather resulted from a simplification of practical harmony pedagogy all told. In considering some of the pedagogical techniques that underpinned chromatic practice in late nineteenth-century France, and furthermore by showing how they represent a simplification of method, despite the more complex analytical language needed to describe their compositional results, this article hopes to outline a series of basic techniques that may make chromatic harmony more practicable in today’s music theory classroom precisely by developing concrete strategies for teaching voice leading.

With these aims in mind, the discussion below summarizes some of the basic voice-leading methods for triads and seventh chords, as well as their common chromatic elaborations, found across a range of nineteenth-century French harmony texts, taking Émile Durand’s 1881 *Traité complet d’harmonie théorique et pratique* as a point of departure.⁴ Accordingly, I divide the discussion below into three *leçons*. The first lesson reconstructs a foundational grammar

⁴ Émile Durand, *Traité complet d’harmonie théorique et pratique* (Paris: Leduc, 1881). All subsequent parenthetical references will be to this edition. Professor of harmony and composition at the Paris Conservatory from 1871 to 1883, Durand taught a generation of composition students, including Pierné and Debussy. His *Traité*, notoriously conservative while situated at the cusp of the advent of modern harmony, is the work for which he is most remembered. Fitting squarely into the Conservatory mold, the *Traité* reflects and adapts the methods of the previous generation of harmony professors, including those of his own teacher François Bazin as well as Henri Reber. Bazin’s *Cours d’harmonie théorique et pratique* (1858)

of diatonic voice-leading techniques for triads as pieced together from examples in Durand's text, considering its relationship to the rule of the octave. The second lesson extends this grammar to seventh chords by means of a principle that I will refer to as the "complementarity of 5 and 6 realizations." The third lesson then considers Durand's chromatic adaptations of these voice-leading techniques for composing what he calls "passing modulations," noting in particular how his treatment of modulation represents a simplification of technique when compared to writings of theorists from the first half of the century, most notably those of Alexandre Choron. Next, I briefly return to Fauré's "Donc, ce sera," applying these three lessons to account for the pervasive chromaticism of the opening passage. Lastly, I conclude by considering what these three *leçons* learned from Durand's text may offer our practical harmony teaching today in terms of concrete pedagogical strategies, as well as how these strategies may inform our understanding of our own applied and integrated theory pedagogy.

Lesson 1: A Diatonic Voice-Leading Grammar for Triads and its Relationship to the Rule of the Octave

As a historical matter, we can say with relative certainty that Fauré did not possess our applied notion of function or harmonic tendency, and that, *a fortiori*, it could not have figured in his compositional method in any explicit way.⁵ Furthermore, while we may easily explain the absence of applied notions of harmonic tendency from early eighteenth-century texts such as Heinichen's—such notions would not be widely available to music theorists until the dissemination of Rameau's theories in the mid- to late-eighteenth century—this explanation does not account for another, even more remarkable fact in the history of pedagogical music theory: even after the widespread dissemination of Rameau's theories, the majority of nineteenth-century music theorists, and particularly those associated with the National Conservatory in France, still rejected the notion of the fundamental bass as an

and Reber's *Traité d'harmonie* (1862) are arguably the two most significant harmony texts produced in the generation following Fétis.

⁵ See notes 7–9.

adequate foundation for teaching practical harmony.⁶ In lieu of Rameau's prescriptive fundamental bass, nineteenth-century harmony teachers in France relied instead on a number of keyboard-driven techniques, the roots of which can be traced back to Italian keyboard and partimento traditions of the previous century.⁷ Along these lines, texts as late as Durand's 1881 treatise included some version or remnant of the rule of the octave. In the hands of Durand and his contemporaries, however, the rule did not function as a mnemonic, pointing to broader functional considerations. Rather, the rule acted as a tool for refining basic harmony and voice-leading techniques that a student had previously mastered. To see this, let us consider Durand's use of the *règle de l'octave* within the broader context of his treatise.

⁶ For a brief history of Rameau reception in the early years of the Paris Conservatory see, Cynthia M. Gesselle, "The Conservatoire de Musique and National Music Education in France, 1795–1801," in *Music and the French Revolution*, ed. Malcolm Boyd (New York: Cambridge University Press, 1992), 191–210. Furthermore, as I have suggested elsewhere, this rejection of fundamental bass theory would have far reaching implications for the practical music writing disciplines of harmony, counterpoint, and composition in France long after the initial debates surrounding the specifics of Rameau's own theories subsided. Significantly, it would mean that the theoretical and practical studies of harmony would remain relatively distinct in France throughout the nineteenth century, with notions of harmonic function, in the manner of Rameau's fundamental bass progressions, being reserved for largely theoretical writings or more speculative moments of practical treatises. Unlike our harmony pedagogy today, that of nineteenth-century France was consequently not predicated on the integration of the theoretical and practical studies of harmony by means of an applied theory of harmonic tendency or syntax. For further discussion see Michael Masci, "Theory as Practica: The Theoretical Study of Tonality and the Practical Study of Harmony in French *Harmonie Pratique*," *Theoria* 20 (2013): 5–37.

⁷ These techniques included a form of simplified thoroughbass, methods for realizing figured and unfigured basses, techniques for harmonizing melodies, and even techniques for realizing partimento fugues. For the transmission of Italian pedagogy into France see Rosa Cafiero, "The Early Reception of Neapolitan *Partimento* Theory in France: A Survey," *Journal of Music Theory* 51 (2007): 137–59, as well as Robert O. Gjerdingen, "Harmony without Theory: Apprenticeship at the Paris Conservatory" (paper presented at the annual meeting of the American Musicological Society and the Society for Music Theory, Milwaukee, Wisconsin, November 6–9, 2014).

Durand’s *Traité* includes a single version of the rule of the octave that he summarizes in a table, reproduced below as Table 1. As is customary in French treatises, Roman numerals designate scale degrees in the bass—rather than scale degrees of chord roots—and Durand prescribes specific sonorities depending on whether the scale degree in question proceeds to move by step or by leap. For instance, if scale degree II in the bass proceeds by leap, it takes a “5”—in terms of figured bass—and is realized as supporting a root-position triad. When moving by step, however, it takes a “6” and supports an inverted triad. We may interpret most of Durand’s prescriptions in terms of familiar patterns of harmonic tendency. This particular prescription suggests that II supports a pre-dominant when moving by leap, but supports a linear dominant when moving by step. In any case, as Gauldin points out with respect to Heinichen’s thoroughbass treatise, Durand’s rule makes very few actual prescriptions based on a notion of harmonic tendency. He does not, for instance, stipulate when II must move by leap or by step, or to what scale degrees it should move. Durand only tells the student *how* to accompany II in the case that it *does* move by step or leap. Durand’s only explicit remark regarding harmonic tendency pertains to ascending stepwise bass motion to the dominant, noting that such motion usually occurs by means of an inverted supertonic triad rather than a root-position subdominant.

Scale Degree	In the case that the scale degree needing to be harmonized proceeds to the following note by step, use:	In the case that the scale degree needing to be harmonized proceeds to the following note by leap and in particular by leap of a 4th or 5th, use:
I	5	5
II	6 or $\frac{6}{4}$	5
III	6	6
IV	5 or 6	6
V	5	5
VI	6 or 5	5 or 6
VII	6	6

Table 1. Scale-step prescriptions from Émile Durand, *Traité complet d’harmonie théorique et pratique* (1881), p. 119

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The functional implications of Durand's prescriptions, however, are not the only significant feature of his discussion of the rule of the octave. Of equal note, Durand devotes little attention to the rule, affording its illustration barely nine pages over the course of his five-hundred-page tome. This stands in marked contrast to the extensive exposition that the rule receives in treatises from the first half of the nineteenth century. Alexandre Choron's *Principes de composition des écoles d'Italie* from 1808, for instance, includes almost one hundred different versions of the rule of the octave, as compared to Durand's single version. While we may not wish to equate the brevity of its treatment with pedagogical insignificance—other important topics receive short shrift in Durand's treatise—Durand's minimal discussion of the rule reflects the mixed status that it held as a pedagogical tool by the late nineteenth century. Henri Reber, for instance, in his 1862 *Traité d'harmonie* (from which Durand borrows liberally), describes the rule as antiquated and dismisses its usefulness altogether.⁸

In addition to its light treatment, Durand's specific placement of the rule of the octave within the overall organization of his text is equally significant. Durand's treatment of the rule *concludes* his discussion of triadic harmony rather than begins it. Durand's examination of "consonant harmony"—section 1 of his treatise—addresses scales and intervals (chapter 1); triads and three-part harmony (chapter 2); four-part harmony, including doublings (chapter 3, §§ 174–81), root-position progressions (§§182–6), progressions using triads in first inversion (§§187–92), and progressions using triads in second inversion (§§193–200); arpeggiating through various inversions and positions of triads (chapter 4); rhythm (chapter 5); phrases and cadences (chapter 6); sequences (chapter 7); choice of sonority and scale-steps (chapter 8); and harmonizing a melody or *chant donné* (chapter 9).

Given this particular organization, a number of model progressions and exercises in the early chapters of Durand's treatise not only fail to exhibit what we would consider exemplary tonal syntax, but furthermore fail even to observe the scale-step prescriptions that he subsequently enumerates. Consider, for instance, the figured bass exercises from Durand's chapter on root-position triads shown in

⁸Henri Reber, *Traité d'Harmonie* (Paris: Colombier, 1862), 127–8.

Example 3.⁹ These exercises contain repeated use of the diminished triad in root position (customary in French harmony texts), the use of the root-position median triad (Example 3a, measure 3), as well as the use of the subdominant instead of an inverted supertonic ascending to a dominant (Example 3b, mm. 1–2).

The particular treatment and placement of these scale-step procedures within the overall organization of Durand's text suggest a great deal about the late nineteenth-century harmony treatise in France, as well as the subject matter these texts aimed to convey. Harmony treatises such as Durand's were not first and foremost works of "tonal theory" in any explicit sense; they were not organized in terms of principles for functional hierarchy, nor were their contents designed to reinforce such principles. Unlike many American music theory texts, for instance, they did not begin with a discussion of tonic and dominant harmony, to be followed

⁹ A note regarding figured bass symbols: I have adopted the nineteenth-century convention of placing figured-bass symbols above the bass clef—as opposed to below it—when reproducing examples from primary source materials in order to render them as accurately as possible. When using figured-bass symbols as a heuristic to analyze voice-leading patterns of original examples written for the purposes of this article, I have employed the modern convention of placing figured-bass symbols under the bass clef. In all cases, however, I have used French figured-bass symbols, including those for dominant seventh chords. These include the figures of a slash (/) to indicate diminished intervals and a cross (+) to indicate leading tones. Therefore, for dominant sevenths, the figured-bass symbols for root position and its three inversions are:



The "+" in the root-position symbol indicates the leading tone is the third above the bass, while in second inversion the "+6" indicates that the leading tone is the sixth above the bass, while in third inversion "+4" indicates that it is the fourth. In first inversion, when the leading tone is in the bass, the slash indicates the diminished fifth formed with the chordal seventh above it. In addition, these symbols are used whether or not the dominant seventh occurs naturally, given the key signature, or whether the note in the bass supports a secondary dominant. In other words, accidentals are never used to indicate dominant sevenths in French figured bass. For instance, in the key of G major, an A with a "+6" under it indicates a D7 chord in second inversion, while a C with a "+6" indicates the secondary dominant, F7, in second inversion. In the latter case, no additional accidentals are given to indicate the implied F $\sharp$ or E $\flat$.

a)

b)

Example 3. Root-position exercises in Durand's *Traité* (1881)

by a discussion of subdominant and supertonic triads, etc. Nor does Durand's approach reflect some scale step equivalent of these procedures. Durand's treatise does not begin with a discussion of scale-degree implications, ascribing a "tonic" implication to scale degrees I and III, and a "dominant" implication to V, VII, II, and IV. Rather, harmony study was largely concerned with the mastery of basic keyboard patterns, and therefore proceeded largely in terms of figured bass. It began not with the study of how to move between tonic and dominant triads, but rather, and as Durand's *Traité* does, with keyboard patterns for moving between root-position chords, or, in terms of figured bass, moving 5 to 5, and then between root-position chords and "chords of the sixth," or 5 to 6 and 6 to 6, then $\frac{6}{4}$ chords, etc. The root-position exercises in Example 3, in other words, were not meant to reinforce tonal principles, but were more simply intended to have students practice various voice-leading techniques as well as master stock keyboard patterns for accompaniments using root-position triads. The student only learned the rule of the octave once having mastered these triadic patterns—patterns needed to realize unfigured basses according to the rule.

In order to get a better idea of how this method worked, let us consider some of the stock keyboard patterns for triadic voice leading that constitute a basic harmonic grammar in Durand's text. As was customary for nineteenth-century harmony treatises, Durand begins with techniques for connecting root-position triads by means of common-tone voice leading. He offers only a single example illustrating these common-tone techniques, shown here

as Example 4a, since, as he notes, he has already treated the topic in his *Traité d'accompagnement au piano*, to which he immediately refers the reader (67, §186). Examples 4b–e summarize the voice-leading principles for these common-tone progressions: bass motion by fifth, ascending or descending, produces one common tone in the upper voices as well as two voices moving contrary to the bass by step; bass motion by fourth produces one common tone and two voices moving by step in similar motion to the bass; and bass motion by third produces two common tones and one voice moving contrary to the bass by step. Stepwise root-position motion, however, produces no common tones and three voices moving contrary to the bass (as in Example 4a, mm. 1–2), in which case it is preferable to realize the first harmony in inversion (Example 4e). To begin their study of harmony, students were expected to master these common-tone patterns at the keyboard, enabling them to realize extended root-position progressions, similar to those in Example 3, with flawless voice leading.

Durand follows this discussion of root-position triads with procedures for triads in first inversion, or *accords de sixte*. Durand's discussion of inversion occurs in two parts. He first treats inverted triads in three-part harmony (50–4, §§138–51), then in four-part harmony (68–70, §§187–200). In contrast to his discussion of root-position harmony, Durand presents inverted triads not in terms of principles for *voice leading*, but largely in terms of principles for *voicing*. He begins by showing two possible voicings for inverted triads: *position directe* with the sixth above the bass (or root) voiced in the soprano; and *position indirecte* with the third above the bass (or chordal fifth) voiced in the soprano (50, §141). Durand does not include a third position with the chordal third placed in the soprano. With regard to four-part harmony, Durand prescribes doubling the soprano at the octave in order to derive the fourth voice, and suggests that one should generally avoid doubling the bass in the soprano except in cases that contrary motion and voice exchange are desired between outer voices (68–9, §§187–91). Durand only discusses voice leading for inverted triads when discussing three-part harmony, enumerating two principles as shown in Example 5: preserve a common tone whenever possible (Examples 5a–c), and, when not, place the sixth in the soprano and use contrary motion with the bass (Examples 5d–e), though direct motion may be used in the case that the sixth is placed in the soprano (Examples 5f–g). Following these two principles, however, Durand's discussion

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of inverted triads in four-part harmony devolves into a series of prescriptions regarding when to double the bass, or chordal third, in the soprano; various doubling schemes for the diminished triad; permissible uses of hidden fifths; and ends there. Compared with the basic yet powerful and elegant principles for root-position, common-tone progressions, Durand's treatment of inverted triads seems incomplete in that it does not offer us any concrete strategies for voice-leading. If we extend Durand's voicing, doubling, and voice-leading principles to four-part harmony, however, fleshing out his three-part examples, we can begin to identify additional patterns central to a basic voice-leading grammar. Though perhaps less familiar to us today than the common-tone patterns for

a. Durand's example of common-tone progressions

b. Root-position triads, bass by fifth

c. Root-position triads, bass by fourth

d. Root-position triads, bass by third

e. Bass by step, 6-5

descending fifth or ascending fifth
1 common tone
2 voices in *contrary* motion with the bass

descending fourth or ascending fourth
1 common tone
2 voices in *similar* motion with the bass

descending third or ascending third
2 common tones
1 voice in *contrary* motion with the bass

ascending step
1 common tone
2 voices *contrary* to the bass
with passing tone in soprano

Example 4. Common-tone voice leading for triads

The musical notation for Example 5 is presented in two rows of staves. The first row contains three measures labeled a), b), and c). The second row contains four measures labeled d), e), f), and g). Each measure shows a treble and bass staff with notes and fingerings (5 and 6) indicating voice leading patterns.

Example 5. Voice leading for inverted triads in three-part harmony using common tones (a, b, c), contrary motion (d, e), and direct motion (f, g)

root-position triads, Durand's various prescriptions for inverted triads conform to a number of common "step and skip" patterns. As shown in Example 6b, when the bass moves by *step*, the lower of the two bass notes takes a 6, making for one common tone and contrary motion by *skip* in the soprano.¹⁰ By contrast, when the bass moves by *skip*, the lower note again takes a 6, resulting in a single common tone and contrary motion by *step* in the soprano. Taken together with the common-tone voice-leading patterns for root-position triads, these step and skip patterns make for a basic voice-leading grammar, outlined in Example 6, that accommodates a bass moving by any interval, whether by step, skip (third), or leap (fourth or fifth).¹¹

¹⁰ The first of these patterns in Example 6b has a long history and was used as the basis of a number of common elaborations throughout the eighteenth and nineteenth centuries, including the so-called monte figure as well as what Gjerdingen has dubbed the "Fenaroli." See Robert O. Gjerdingen, *Music in the Galant Style* (Oxford: Oxford University Press, 2007), 89–106, and 225–40.

¹¹ Bass motion by sixth or seventh was still prohibited in Durand's treatise, unless such motion entailed moving between two inversions of the same chord or outlined a dominant seventh.

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a. Accompanying a leaping bass: use 5 to 5 and common tones



Bass by fifth:
1 common tone,
2 voices by *contrary* motion

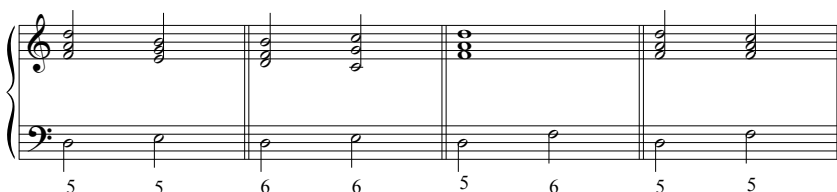
Bass by fourth:
1 common tone,
2 voices by *similar* motion

b. Step in the bass, skip in the soprano; skip in the bass, step in the soprano:



lower bass note takes a 6
1 common tone;
contrary motion between bass and soprano

c. Additional harmonizations for basses by step and skip



5 to 5 by step:
0 common tones
3 voices by *contrary* motion

6 to 6 by step:
0 common tones
parallel motion between
bass and soprano

5 to 6 bass by skip:
(change of inversion)

5 to 5 by skip:
2 common tones
1 voice by *contrary* motion

Example 6. Basic part-writing grammar for accompanying a bass with triads

The harmony student would apply these patterns to figured basses in order to solidify their knowledge of them at the keyboard. As suggested by the organization of Durand's text, the student would master this grammar prior to learning the rule of the octave. In other words, behind every rule of the octave stood a preliminary mastery of basic voice-leading patterns needed to realize triadic accompaniments for any bass line and for smoothly connecting any

two triads. This overall organization points to another fundamental difference between our approach to harmony today and that from centuries past. Namely, for Durand and his students, the study of harmony began with the mastery of a handful of patterns, learned at the keyboard, for how to connect any two triads. As a result, and unlike for our students, voice leading was demystified; the student did not renegotiate voice leading with every new exercise. They learned concrete strategies for moving between any two triads, regardless of scale degree or function, and this skill formed the basis of the discipline.

Lesson 2: Complementary Procedures for 5 and 6 Realizations, and Extending the Basic Grammar to Seventh Chords

The grammar outlined here is hardly comprehensive, particularly in regard to inverted triads. It does not indicate, for instance, how to accompany a bass leaping by fourth using two inverted harmonies, since as mentioned, Durand's discussion of inversion does not focus on voice-leading prescriptions, but rather on doubling strategies. We may, however, recuperate this treatment of inversion in a way that reveals these principles for voicing and doubling to be just as foundational for realizing accompaniments with inverted triads as voice-leading prescriptions are for realizing root-position ones. To do this requires a principle for the procedural complementarity of realizing accompaniments for 5 and 6. We may then use this principle to extend the triadic grammar outlined above to diatonic seventh chords.

In most basic terms, Durand treats root-position triads—or, those that include a fifth above the bass—by prescribing voice leading, while treating the voicing of the chord as incidental. Durand, however, treats chords of the sixth in an opposite or complementary manner, prescribing the voicing of the sixth while, by implication, treating the voice leading as largely incidental. Recall that in moving between root-position triads, the interval by which the bass moves determines the voice-leading pattern used in the upper voices. Bass motion by fifth, for instance, elicits contrary motion with the bass and one common tone in the upper voices. As one moves from one root-position chord to the next, however, the voicing of the chord tones in the upper voices continually changes. For instance, in Durand's illustration of common-tone principles

(Example 4a), the realization begins with the root in the soprano (or in “first position”), the next chord then has the chordal fifth in the soprano (“third position”), then moves to the chordal third in the soprano (“second position”).¹² This constant change in voicing is a consequence of the general prohibition on parallel fifths and octaves; the constant change in hand position between those that contain a sixth between soprano and tenor (first and second positions) and that which contains a fifth (third position) ensures, as well as results from, the avoidance of parallel fifths and octaves between upper voices. Crucially, however, one does not need to worry about the details of these changing hand positions or chord voicings. While these facts regarding voicings are descriptively accurate, they are not *practically* or *methodologically salient* when dealing with root-position harmonies; they simply follow from the use of the appropriate voice-leading pattern. In terms of the “logic” of root-position harmonizations, then, we first determine the correct voice leading given the bass motion (contrary, similar, etc.), which in turn results in the specific voicing of the chord.

When dealing with an inverted triad, however—that is, when and moving 5–6 instead of 5–5—Durand’s text suggests we take the opposite tack. His approach suggests we first determine the voicing of the chord by placing the root, or chordal fifth, in the soprano and doubling it an octave below (see Example 7a, step 1). Here voicing is methodologically salient, receiving priority. Having voiced the soprano, doubled it at the octave, and voiced the bass, we are then left to determine the best voice leading to arrive at this particular voicing. That is, we must determine whether to place the octave doubling between the soprano and alto or between the soprano and tenor, and this determination *has singularly to do* with avoiding a similar fifth or octave in the upper voices, as shown in Example 7a, steps 2 and 3. No other explicit consideration of voice leading need enter into the picture. The correct voice leading simply “comes out in the wash.”¹³

¹² In accompaniment treatises, the term *position* refers to the arrangement of the upper voices. *First position* refers to the voicing of the chordal root in the soprano, often in close position; *second position* to close position with the chordal third in the soprano; and *third position* to close position with the chordal fifth in the soprano.

¹³ These matters of voicing, rather than voice leading, receive similar methodological priority when moving 6–6, or between successive inverted triads. As shown in Example 7b, when moving between successive 6’s, especially over a bass by step, the student begins by voicing the sixth of both chords in the soprano, producing parallel

The procedural complementarity of 5 and 6, then, refers to the logic for realizing both sorts of accompaniments, and those features of the realization process that we take as methodologically salient. When realizing a root-position accompaniment, we voice lead first, from which the chord voicing follows. By contrast, when realizing an accompaniment with inverted triads, we take voicing as methodologically salient, and first voice the chord's root in the soprano, from which the voice leading follows. By extension, we may use this principle of complementarity to adapt the basic grammar above to accompaniments using seventh chords. It is especially helpful in dealing with the issue of preparing "non-essential" dissonances of the major and minor seventh, as we may, in general, treat the figure 7 as we do 5—that is, with prescribed voice leading—and those of $\frac{6}{5}$ and $\frac{6}{3}$ as we do 6—with prescribed voicing. In other words, harmonies are treated as either a "5" or a "6," as "root position" or "inverted," whether they are triads or seventh chords.

Consider that in root position, the voice leading for preparing a non-essential seventh is effectively prescribed, determined by the interval by which the bass moves. As shown in Example 8, in order to prepare the seventh when moving 5–7, the bass may descend by fifth, descend by third, or ascend by step. Each of these three results in a common-tone voice-leading pattern that resembles those for triads when moving by the corresponding interval in the bass. Moving 5–7 over a bass by fifth, for instance, resembles the pattern for moving 5–5 over a bass by fifth. The root-position pattern of one common tone and two voices moving contrary to the bass by step becomes, when moving 5–7, two common tones with one voice moving contrary to the bass by step. The second, additional common tone appears in the part that would have moved by contrary motion to the octave above the bass if a triad rather than a seventh chord had been used.

motion with the bass. After voicing the soprano, the student then turns to the question of doubling, voicing the inner parts according to another well-know principle for inverted triads. Namely, successive 6s require a change in doubling in order to avoid parallel octaves, and this is most often, and easily, achieved by doubling the bass of the lower of the two chords and the soprano in the higher of the two. In any case, the parallel voice leading, again, *results* from the primary concern for chord voicing.

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a. Voicing the sixth

1) Voice root in soprano,
doubled at the octave.

2) Fill in remaining voice,
checking for errors in voice leading.

Root voiced in soprano

alto or tenor?

as tenor, doubling results in similar octave with soprano

5 6 5 6

3) Therefore, revise voicing of
doubled root.

Therefore, the root is best doubled in the alto

5 6

b. Voicing two successive sixths: changing the doubling

1) Voice the root
of each inverted triad.

2) Double the bass
of the lower triad.

3) Use standard octave
doubling for the upper triad.

6 6 6 6

Example 7. The complementarity of 5 and 6; realizing sixths via prescriptive voicing

Conversely, when preparing an inverted seventh chord (i.e., a seventh chord that contains a sixth), we may treat the voicing as prescribed, in the manner of an inverted triad, while treating the voice leading as incidental. The procedure begins by voicing the chordal root and doubling it at the octave or unison. Although here, again, in the case of a seventh chord, the seventh replaces the octave root doubling. To prepare an inverted seventh chord we therefore begin by voicing the seventh—which substitutes for one of the doubled chord roots of the inverted triad—by keeping the soprano in place and then voicing the chord root in the alto or tenor to form a seventh below it (see Example 8a). We then voice the remaining parts to complete either a $\frac{6}{3}$ or $\frac{6}{4}$ chord. More simply, we can prepare the inverted seventh chord by voicing a second in two adjacent upper voices (Examples 8b–c). Here, the second replaces what would have otherwise been a unison doubling of an inverted triad, just as the seventh replaced what would have otherwise been an octave doubling. Having prepared the second, we are then free to voice the remaining notes of the seventh chord however we choose, forming either a $\frac{6}{3}$ or a $\frac{6}{4}$, which results in the de facto determination of correct voice leading. Approaching inverted seventh chords by means of these procedures therefore *completely eliminates any and all concerns for voice leading*, as voicing is the only salient matter.

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a. Preparing root-position seventh chords

(*incomplete 7th chord)

Bass descending by fifth Bass descending by third Bass ascending by step

b. Preparing inverted seventh chords

- 1) Voice the chordal seventh as a common tone.
- 2) Then determine and voice the root, forming a seventh (seventh replaces root doubling at the octave).
- 3) Realize remaining voices in either first or second inversion.

(root)

6 or 6
5 4
3

c. Same example as b, taking a different note as the chordal seventh

- 1) Voice the chordal seventh as a common tone.
- 2) Then determine and voice the root as a diatonic second above the seventh (replaces unison doubling).
- 3) Realize remaining voices in either first or second inversion

(root)

6 or 6
5 4
3

Example 8. Complementary procedures for voice leading root-position seventh chords and voicing inverted seventh chords

Lesson 3: The Constancy of Triadic Voice Leading Under Chromatic Alteration

In addition to forming the foundation for dissonant harmony, the basic grammar outlined in Example 6 also serves as the foundation for chromatic harmony pedagogy in Durand's 1881 treatise. In considering some of Durand's basic procedures for chromaticism, it is important to note that these techniques represent a simplification, rather than an elaboration, of chromatic techniques from earlier in the nineteenth century. Furthermore, these techniques had little to do with the development of a more explicit and complex theory of harmonic tendency or function, but rather pertained to a simplification of chromatic procedures associated with the rule of the octave. As noted earlier, Durand appeals to only one formulation of the rule, whereas his predecessors relied on numerous and more elaborate scalar patterns. This simplification, both in number and in kind, made chromatic harmony more practicable by century's end, resulting in the complex chromatic idiom reflected in works such as Fauré's *La Bonne Chanson*. To illustrate these changes, I will therefore begin not with a consideration of chromatic harmony pedagogy as it appeared fully developed in the late nineteenth century, nor with Fauré's mature manipulation of it. Rather, I will begin by examining a more familiar—i.e., “functional”—chromatic idiom, namely that of the late classical style circa 1800, by briefly considering the writings of Alexandre Choron. By comparing Choron's late classical and Italianate approach (which was thoroughly grounded in the rule of the octave and thereby easily rendered in terms of a theory of harmonic function) with those of Durand and Fauré (which were not), we may see how chromatic harmony pedagogy, while evolving out of earlier “functional” techniques, moved not toward but rather away from such an explicit and applied theory of harmonic tendency for practical purposes.

Known for his transmission of a number of Italian partimento sources to France, Choron's approach to chromaticism, such as the one he takes in his *Principes de composition des écoles d'Italie*, acts largely as an extension of techniques associated with the rule of the octave.¹⁴ Choron's approach relies on a conception of the octave species as the sum of two tetrachords. For instance, after Choron's

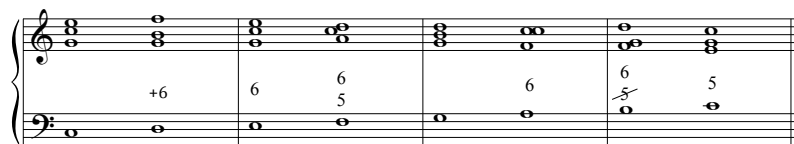
¹⁴ Alexandre-Étienne Choron, *Principes de composition des écoles d'Italie* (Paris: Le Duc, 1808). All subsequent parenthetical references will be to this edition.

exposition of basic harmonic procedures, including a number of the same voice-leading and figured-bass patterns outlined above, he then uses these patterns to harmonize a series of major and minor scales, both ascending and descending, with increasing complexity.¹⁵ Choron describes the first of these harmonizations, shown here as Example 9a, as appropriate for accompanying any generic melody or “*sujets de forme arbitraire*” (Choron 89). If we eliminate the seventh chords from this example, we see a basic pattern emerge of root-position and inverted triads—i.e., of 5s and 6s—that recalls the most basic form of the rule of the octave as conceived by a number of eighteenth-century Italian pedagogues. Compare, for instance, Choron’s realization with Durante’s basic rule of the octave given here as Example 9b.¹⁶ The underlying pattern of 5–6–6–6 repeats over the eight notes of the octave, harmonizing both a lower tonic tetrachord, and an upper dominant tetrachord. The reason for this parallel harmonization of lower and upper tetrachords is clear: many Italian schools of the day relied on a tetrachordal solfège, *re–mi–fa–sol*, with the two tetrachords conjoining on *sol–ut* as in Example 9b. In the most basic patterns of accompaniment taught to beginning students, all diatonic semitones, or instances of *mi–fa* in the vernacular *solfeggio*, were realized with *mi* providing the support for an inverted triad, and as such, scale degrees III and VII received the same basic harmonization.¹⁷

¹⁵ As Sanguinetti describes, a number of Italian masters, including Nicola Sala—from whose works Choron borrows widely in his *Principes*—taught a form of counterpoint where scales were used instead of a cantus firmus, resulting in a hybrid pedagogy that blended species approaches with the rule of the octave. See Giorgio Sanguinetti, *The Art of Partimento History, Theory and Practice* (Oxford: Oxford University Press, 2012), 43, 74–5.

¹⁶ For an accessible discussion of the basic *regole* of both Durante and Fenaroli see Robert O. Gjerdingen, “The Monuments of Partimenti,” <http://faculty-web.at.northwestern.edu/music/gjerdingen/partimenti/index.htm>.

¹⁷ Gjerdingen, *Music in the Galant Style*, 34–6. See also Durante’s “MI rule” in Gjerdingen’s *Monuments*.

a. Choron's rule of the octave for accompanying "*sujets de forme arbitraire*"

b. Durante's basic rule of the octave (triadic version)

Example 9. Two examples of the rule of the octave

Through an extensive series of realizations, Choron then proceeds to show how to embellish this basic tetrachordal pattern through the addition of sevenths and other dissonances. For instance, the addition of a seventh chord or a $\frac{6}{4}$ over a stepwise bass passing through *re* was the first and most common form of elaboration. In the *Principes*, however, these elaborations are also chromatic in nature, with this four-note pattern acting as a template for tetrachordal mutation. That is, for Choron, the 6–6–6–5 pattern serves as the basis for harmonizing the various major and minor tetrachords found in any scale, effecting modulations to closely related keys (see Example 10). The primary chromatic alterations required to mutate tetrachords include a raised sixth above *re* as well as a raised third above *sol*. For instance, in C major, the 6–6–6–5 / *re–mi–fa–sol* pattern may be applied to the G-major tetrachord, the A-minor tetrachord, and the D-minor tetrachord by changing the 6–6–6–5 pattern to $\sharp 6$ –6–6– $\sharp$. Applying these simple alterations to the various major and minor tetrachords contained in any scale meant that one could easily modulate between four different keys without chromatically altering the bass line.

We can see this technique at work in the first partimento exercises found in Choron's *Principes*, exercises that he borrows from Fenaroli (see Example 11). The first three measures outline the tonic tetrachord, while the next eight measures outline the dominant tetrachord, with the C4 on the first beat of m. 12, taking a 5 instead

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The diagram illustrates the Rule of the Octave with chromatic elaboration of major and minor tetrachords. It features four tetrachords arranged around a central staff:

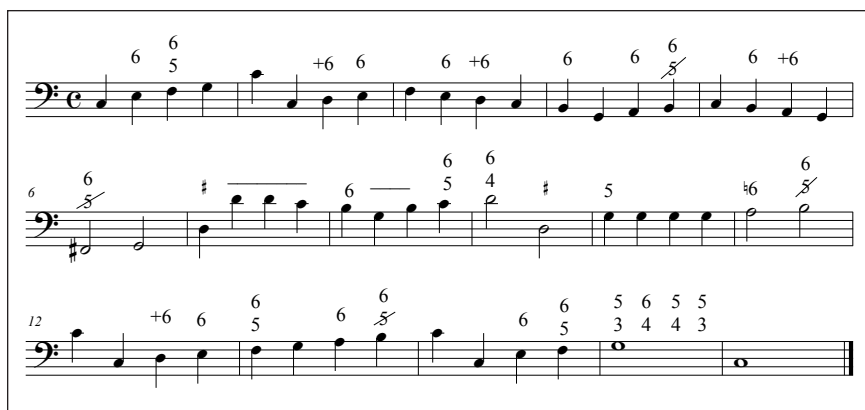
- C Major (Top Left):** Figured bass: 6 6 6. Solfège: re mi fa sol.
- G Major (Top Right):** Figured bass: #6 6 6 #. Solfège: re mi fa sol.
- D minor (Bottom Left):** Figured bass: #6 6 6 #. Solfège: re mi fa sol.
- A minor (Bottom Right):** Figured bass: #6 6 6 #. Solfège: re mi fa sol.

A central staff shows a scalar segment with brackets connecting it to the tetrachords, indicating the chromatic elaboration of the octave.

Example 10. Rule of the octave with chromatic elaboration of major and minor tetrachords.

of a 6, indicating the move back to the tonic tetrachord. The G tetrachord, however, mutates, acting both as a tonic tetrachord in G major (mm. 8–9) as indicated by the figures 6– $\frac{6}{5}$ – $\frac{4}{2}$ –# over B–C–D, as well as a dominant tetrachord in C (mm. 10–12) as indicated by the symbol for the first-inversion dominant over the B in m. 11. Similarly, if taken as an unfigured bass, we could realize the scalar segment in m. 11 as A minor, and the segment in mm. 12–13 as D minor via a similar process of tetrachordal mutation.

We can immediately observe a number of differences between this approach to chromaticism and more familiar ones based on notions of harmonic tendency and syntax.



Example 11. Partimento No. 1 from Choron's *Principes de composition*

Choron's approach does not require that we invoke concepts such as pivot chords, chord borrowing, or modal mixture, for example, at least not explicitly. Rather, by using the four-note *solfeccio*, we may devise a tetrachordal interpretation of any bass line—including an unfigured bass—and realize it accordingly. Furthermore, the realizations in which the tetrachordal interpretation results, whether diatonic or chromatic, will always be functional, as the prescribed sonorities always produce functional patterns (i.e., *re* by step will always be realized as a linear dominant, *mi* as supporting an inverted tonic triad, etc.). In other words, by taking Choron's approach, one does not have to bear in mind prescriptions for harmonic tendency at every turn, as the harmonic functions are built into the 6–6–6–5 realization pattern. Thus, and as a historical matter, this technique resulted in functional, tonal patterns, though a concept of harmonic function was not necessary to compose them.

This approach, however, relies on another basic and unspoken principle, one that relates directly to the study of the voice-leading patterns addressed above: namely, the use of chromaticism, with few notable exceptions, does not alter the underlying triadic voice-leading patterns of the basic grammar. The chromatic alteration of the basic 6–6 pattern to #6–6, or that of 5–5 over a bass by fifth to #5, does not change the voice leading of the upper voices.¹⁸ This

¹⁸ The most common exception to this principle has to do with raised notes, or when a note is turned into a leading tone. Such an alteration constrains the voice leading by requiring that the raised note subsequently move by step, not leap, and most often by ascending step. Nevertheless, such an alteration does not change any of the applicable voice-leading patterns: a bass rising by fourth will cause all the upper

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principle of the constancy of triadic voice leading under chromatic alteration, unspoken in Choron's writings, becomes particularly and explicitly important for chromatic harmony pedagogy during the second half of the century, including in the approach found in Durand's *Traité*, to which I will now turn.

Durand treats chromaticism as a topic unto itself rather than as an extension of procedures associated with the rule of the octave as seen in Choron. Following the first nine chapters of his treatise on diatonic harmony, the second section of the *Traité* includes ten chapters on "Modulatory and Non-Modulatory Chromatic Harmony." For the purposes here, I would like to focus on Durand's treatment of what he refers to as *modulations passagères*, or roughly, "tonicization." Durand begins his discussion of modulations passagères with a brief introductory chapter centered on the simple observation that many chromatic passages in music preserve their tonality despite containing a number of chromatically altered harmonies (section II, chapter 6). Durand argues that these modulations, such as those in Example 12, are more "apparent" than "real" and borrow their harmonies from chromatic scales (155, §§450-51). He further explains that, while these harmonies may appear to be borrowed from other keys, and often quite distant keys, they nevertheless do not rely on any new sorts of chords or "aggregations" (156, §455). The harmonies involved consist simply of triads and dominant seventh chords.

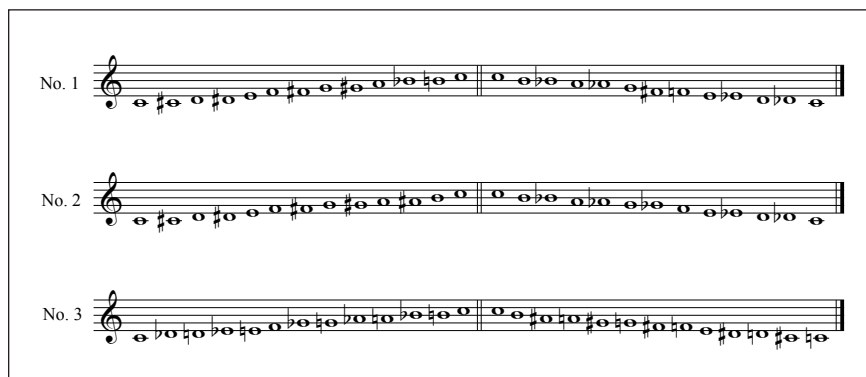
The musical notation for Example 12 is presented in a grand staff with a treble and bass clef, in common time (C). The treble staff contains a series of triads: C major (C-E-G), F major (F-A-C), B-flat major (B-flat-D-F), E major (E-G-B), D major (D-F-A), C major (C-E-G), and F major (F-A-C). The bass staff contains a series of notes with fingerings: C (5), D (6), E-flat (5), F (3), G (b), A (5), B (5), C (5), D (6), E (5), F (4), G (5), and A (5). The notes in the bass staff are chromatically altered, creating a sequence of modulations passagères.

Example 12. Modulations passagères in Durand

The following chapter (chapter 7) proceeds to discuss the composition of modulations passagères through the use of what Durand terms "simple," "double," or "triple" chromatic alterations of triads, that is, by altering one, two, or three notes of a triad respectively (151, §452). To illustrate this, Durand offers three pairs of ascending and descending chromatic scales (see Example 13).

voices to move via similar motion (and thus resolve the chromatically inflected leading tone), while, similarly, a bass descending by fifth will push the upper voices in contrary motion.

He suggests that the first of these three pairs is the most “tonal,” and can be harmonized by means of simple chromatic alterations, effecting passing modulations only to closely related keys. The second and third pairs of chromatic scales require double or triple chromatic alterations, bringing about passing modulations to more distant keys (157–8, §§459–61).



Example 13. Chromatic scale types in Durand

With regard to the first chromatic scale and the notion that it is the most tonal, requiring only simple chromatic alterations, Durand offers four sample progressions shown here as Examples 14a–d. In 14a and b, Durand harmonizes the first pair of his chromatic scale types—voiced in the soprano, both ascending and descending—through the simple alteration of the chordal thirds of the major and minor diatonic triads. In 14a, Durand raises the chordal thirds of the minor diatonic triads in order to produce major triads, resulting in the ascending chromatic scale, while in 14b, he lowers the chordal thirds of the major diatonic triads to produce minor triads and a descending chromatic scale. Durand’s next pair of examples, here as Examples 14c–d, harmonize the same ascending and descending chromatic scale type by again altering the chordal thirds of the major and minor diatonic triads. This time, however, Durand uses inverted triads so that the chromatically altered chordal thirds, and resulting chromatic scales, appear in the bass.

Following these four examples, Durand then makes the simple, but powerful, observation, “It is important to note that...one could remove all the chromatic alterations [from these examples], which would have the effect of rendering two diatonic scales...and destroy all appearance of modulation” (158, §463). Durand illustrates this,

rewriting Examples 14c and d without any chromatically altered tones. The rewritten Example 14c is given here as 14e. Durand's observation is important for a number of reasons, perhaps most significantly because it suggests the corollary that the introduction of chromaticism does not affect the basic voice-leading patterns that the student has learned with regard to triads. In Examples 14a and 14b, Durand accommodates all the root-position motion with basic common-tone progressions; if we removed the chromaticism, the progression would constitute a standard root-position sequence. Similarly the chromatically altered inverted triads in Example 14c rely on the sort of parallel voice leading characteristic of inverted diatonic triads.

Durand concludes his discussion of simple chromaticism by offering a few added prescriptions: avoid false relations, avoid doubling the chromatically altered tone, and chromatically raised notes should continue to ascend by diatonic semitone, while lowered ones should continue to descend by diatonic semitone (161, §§470-2). As these examples suggest, for Durand, this last prescription means following a chromatic alteration with a root-position, common-tone progression by descending fifth/ascending fourth in order to push a chromatically raised note upward, or by ascending fifth/ descending fourth in order to pull a chromatically lowered note downward (this will be important when returning to Fauré's "Donc, ce sera").

Durand's discussion of chromaticism provides a significant contrast to Choron's. By the late nineteenth century, the tetrachordal conception of the octave had been replaced by an understanding of the octave as a single, unbroken species, and a resulting method that thereby applied chromaticism equally to all scale degrees. For instance, Choron's approach requires that we interpret each scale degree in terms of some major or minor tetrachord, whether that tetrachord is stated in part or in whole. Each scale step is then realized as one of only four basic figures: 5, 6, #6, or #. Durand's approach, by contrast, only requires that, at a minimum, the chromatic alteration result in another diatonic triad, meaning that we may alter any scale degree or the harmony it supports, effectively removing the tetrachordal (read: "scale-step") requirements for chromaticism. Durand's text also makes explicit an important principle that was implicit in treatises from earlier in the century; namely, chromatic alterations of triads do not affect the underlying voice leading of a triadic progression.¹⁹ This is a powerful principle when applied to the basic voice-leading grammar outlined above as it may generate a number of rich chromatic progressions and furthermore do so without appealing to an explicit theory of harmonic tendency or function.

¹⁹ It is interesting to note the emergence of this principle regarding the constancy of voice leading under chromatic alteration as an explicit part of harmony study. In works such as Choron's, such a principle was never written down, owing, I would suggest, to the centrality of the rule of the octave, and moreover to the tetrachordal conception of the octave in harmony pedagogy around 1800. For his part, writing in 1862, Reber does mention the principle explicitly, although only in passing and in a note (see Reber's *Traité*, 56). Lastly, in Durand, writing a generation after Reber, we see the principle explicitly articulated and illustrated with examples. Over the course of the century, then, this principle moved from its unspoken status, to marginalia, to the body of the text.

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a) Chromatic scale “No. 1” ascending in the soprano

b) Chromatic scale “No. 1” descending in the soprano

c) Chromatic scale “No. 1” ascending in the bass

d) Chromatic scale “No. 1” descending in the bass

e) Example c with chromaticism removed

Example 14. Harmonized chromatic scale-types in Durand

Fauré's “Donc, ce sera” Reconsidered

The basic grammar outlined above, its extension to dissonant harmony, and the approaches to chromaticism taken by both Choron and Durand may inform our understanding of Fauré's “Donc, ce sera” in numerous ways. In accordance with the practical

techniques discussed here, we may begin by constructing a voice-leading reduction that, in the manner of Durand, removes all chromatic alterations and modulations passagères. A reduction of mm. 2–3 and 10–11, provided in Example 15, shows scalar segments in the bass serve as an important compositional device, structuring the overall voice leading. This suggests the continued relevance of scalar and octave-derived pedagogy late into the nineteenth century, though as we will see, one that reflects a more liberal understanding of chromaticism in the manner of Durand. With the chromaticism removed, we can also observe a number of dissonant elaborations of grammatical, triadic voice-leading patterns. For instance, m. 3 contains three root-position chords with the bass ascending by third then by step, 5–7–5, in terms of figured bass. The intervening seventh chord replaces an implied 5, such that the unprepared seventh, B^b (tenor, m. 3, beat 2), replaces what would have been the octave C in the tenor had the harmonies progressed 5–5 over a bass by ascending third. In addition, the tenor ends this measure where it otherwise would have, on A, had the middle chord of the measure been a triad instead of a seventh chord. Similarly, the D in the soprano on beat 4 of m. 2 is a “wrong note.” If we look closely, the figured bass resembles a parallel 6–6 progression, though with the second 6 replaced with a 7. The 6–6 parallel progression would have supported F–E in the soprano. Here, however, the passing E is omitted so that the melody descends directly by third to D. In other words, the implied underlying progression here is 6–6–5, with the 6–5 occurring over a sustained bass.

Looking more closely at Faure’s precise choice of diatonic, vertical sonorities (i.e., 5 or 6) also makes for a number of interesting comparisons with the techniques discussed above, and in particular where he departs from them. These comparisons get at key elements that contribute to Faure’s distinct, mature style, and its broadly “modal” sound.

For instance, Fauré relies extensively on scalar bass lines. Compared with a more classical approach like Choron’s, rather than harmonizing a passing note in the bass with the customary 5–6–6 pattern (that is, via an inverted harmony), Fauré harmonizes passing tones with root-position sonorities. In addition, these passing notes in the bass rarely connect two inversions of the same harmony, but

rather tend more frequently to pass between different harmonies.²⁰ While Fauré's technique is, therefore, still grounded in scale-based harmonization practice, he approaches the octave as a single, seven-note species similar to Durand, where each step may support either a root-position or inverted sonority.

Fauré's chromatic elaborations of these patterns exhibit a similarly interesting twist. The numerous modulations *passagères* easily graft onto the underlying voice leading, reflecting the basic notion that chromaticism does not affect underlying diatonic voice leading. If we look carefully, however, we find that Fauré's chromaticism often reverses one of Durand's principles: notably, chromatically raised tones, instead of continuing to ascend by semitone, usually descend by diatonic second. Similarly, lowered tones, instead of continuing their projected chromatic slide downward, often ascend by diatonic second. The C# in measures 3 and 10, instead of ascending to D, descends to Bb. While the chromaticism does not alter the voice leading of the original diatonic framework, it does, however, contravene our—though not necessarily Fauré's—notions of tonal harmonic function or tendency. Raised notes, rather than acting as leading tones of "secondary dominants," freely descend, while lowered tones, instead of acting as chordal sevenths of either secondary dominants or fully-diminished seventh chords, freely ascend. Furthermore, and as this example shows, Fauré uses this chromatic reversal tactic even when it creates an augmented second (C#–Bb). In other words, Fauré treats voice leading as an exclusively diatonic matter, adhering, in the extreme, to a principle of diatonic voice-leading constancy under chromatic alteration. Any C can move to any B because it is a diatonic step (i.e., in terms of letter name).

²⁰ The reliance on root-position sonorities, and furthermore the use of passing notes in the bass as support for root-position sonorities—rather than, say, inverted dominant sevenths—was characteristic of the teachings of Fauré's own teacher, Louis Niedermeyer. Following the later teachings of Choron, Niedermeyer sought to develop a method for the harmonization and accompaniment of religious music, including Gregorian chant, that he outlined in his *Traité théorique et pratique de l'accompagnement de plain-chant* (with Joseph d'Ortigue (Paris: E. Repos, 1857)). The revived interest in church modes and the harmonization of chant further slowed the development of an explicit and pedagogical tonal theory in France, while at the same time—and as we can see from the work of Fauré—provided an important foil to the Conservatory model.

a) Measures 2-3

b) Voice-leading reduction with chromaticism removed

c) Voice-leading reduction with chromaticism added

Example 15. Voice-leading analysis of Fauré, “Donc, ce sera par un clair jour d’été”

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d) measures 10-11

vo - tre chère beauté;

e) Voice-leading reduction with chromaticism removed

6 6 7 4 5 7 5

f) Voice-leading reduction with chromaticism added

6 6 7 4 5 7 5

Example 15. (continued) Voice-leading analysis of Fauré, “Donc, ce sera par un clair jour d’été”

Conclusion: Leçons Learned

The techniques and methods described here outline the broadest contours of practical harmony pedagogy in late nineteenth-century France, and suggest the numerous ways this discipline differed from our own. As I have shown throughout, the most prominent differences pertain to our reliance on an applied theory of harmonic tendency and the almost complete absence of such an approach from this particular tradition. There are numerous lessons we can take from this, both in terms of concrete techniques to use in the classroom, as well as lessons for how to understand the broad relationship between our descriptive theories of harmonic function and our practical methods, and our efforts at integrating the two. Pedagogically, three of the techniques discussed here, including some version of a voice-leading grammar, a simplified version of the rule of the octave, and a voice-leading approach to chromaticism, could greatly enhance our current approaches. To conclude I would briefly like to share some basic exercises that I have used with students that rely on these techniques.

In developing and reinforcing a basic voice-leading grammar for our students, some version of the rule of the octave—either its tetrachordal version such as that found in Choron or its presentation as an unbroken octave species such as in Durand—could greatly improve student fluency in writing basic functional progressions and simple modulations between closely related keys. I am thinking here particularly in terms of a first- or second-semester music theory class. As a mnemonic, the rule offers specific cognitive advantages in that it enables students to compose original bass lines freely and produce functional harmonizations of them without having to bear in mind explicit prescriptions for harmonic tendency or syntax at every turn. That is, by using the rule they would not have to engage in the constant guessing game of “which chord comes next” since functionality is built into the tetrachordal 6–6–6–5/*re–mi–fa–sol* realization, even when modulating. This built-in functionality is something that is not widely understood about the rule of the octave, and it makes functional translations of the rule into various functional schemes—such as Gauldin’s functional translation of Heinichin—largely unnecessary.²¹ To demonstrate the rule of the octave’s “built-in” functionality, I often use a number of simple exercise for both

²¹ When it comes to recent music theoretical interpretations of the rule, many theorists crucially omit the rule’s provisions for dealing with leaping basses, yet this is central to how the rule operates and generates what we would term “functional” progressions.

beginning and intermediate students. These exercises help students realize functional harmonizations for unfigured basses, as well as introduce them to techniques for realizing simple modulations. For beginning students, I use a number of bass lines, such as the one shown in Example 16, adapted from *partimenti* by Choron, Sala, Fenaroli, and others. Before they begin, I remind students of the basic *re-mi-fa-sol* / 6–6–6–5 pattern for tonic and dominant tetrachords, that skips usually suggest a change in inversion (particularly when ascending), and that *re* supports a root-position harmony when leaping and an inverted harmony when moving by step. Students then begin the exercise by interpreting the bass line in terms of solfège syllables and indicate which bass notes should support a root-position or inverted harmony by using a 5 or 6 (Example 16, step 1). Then, using patterns they have learned from the basic grammar, a beginning student will be expected to realize the upper voices (step 2). Intermediate and more advanced students continue by adding dominant sevenths and other dissonances as appropriate, as shown in step 3, indicating these additions in the figured bass (here, $\frac{6}{4}$ chords have been added along with ii^7 chords).

Once students have mastered this basic procedure, they can then try realizing harmonizations that modulate to closely related keys such as in steps 4a and b. To do this, students begin with a tetrachordal/solfège interpretation of the bass line as they did in Step 1, though with a crucial twist. Namely, unlike step 1, step 4 requires students to interpret the bass line in terms of the other available major or minor tetrachords, adding the corresponding, and chromatically modified, figured bass symbols (such as those from Example 10). For instance, the unfigured bass here can be interpreted in terms of fragments from a number of major or minor tetrachords, including G major, F# minor, and D major. In step 4b, for instance, each descending step in mm. 2–3 is interpreted as *fa-mi* (major) or *fa-me* (minor) and realized as a $\frac{4}{2}$ to 6 progression. Taking this approach, students are able to modulate to closely related keys without the complicated, function-driven apparatus of pivot chords, borrowed chords, and the like.

Along these lines, the simple principle of the constancy of triadic voice-leading patterns under chromatic alteration offers a vast resource for dealing with advanced chromaticism. Taking an approach in which students color and re-color simple voice-leading patterns using various chromatic alterations—similar to what has been shown with respect to Fauré—may go a long way

Step 1: Interpret bass line using the rule of the octave and indicate root-position and inverted sonorities (5 or 6).

Step 1: Interpret bass line using the rule of the octave and indicate root-position and inverted sonorities (5 or 6). The notation shows a bass line in G major with fingerings 5, 6, 5, 5, 5, 6, 5, 6, 5, 6, 6, 5, 5, 5, 5. The lyrics are: e: do mi sol sol do re/la sol fa mi sol fa mi re fa sol sol do.

Step 2: Realize upper voices according to the basic grammar.

Step 2: Realize upper voices according to the basic grammar. The notation shows the upper voices (treble and bass staves) with fingerings 5, 6, 5, 5, 6, 5, 6, 5, 6, 5, 6, 5, 5, 5, 5.

Step 3: Add dominant seventh chords and other dissonances.

Step 3: Add dominant seventh chords and other dissonances. The notation shows the upper voices (treble and bass staves) with fingerings 5, 7, 4, 6, 4+, 6, 6, 4+, 6, 7, 6, 7, 4, +.

Step 4: Interpret bass line in terms of tetrachords from other major and minor keys and realize accordingly.

Step 4: Interpret bass line in terms of tetrachords from other major and minor keys and realize accordingly. The notation shows the upper voices (treble and bass staves) with fingerings 5, 6, 5, 6, 5, 6, 5, 6, 5, 6, 5, 6, 5, 6, 5. The lyrics are: a: mi re G: mi re do. The notation also includes the following labels: a: 6 +6, G: 6 +6, e: 6 7 6 + 5, G: fa mi, f#: fa mi D: fa mi, G: 4+ 2 6, f#: 4+ 2 +6, e: 4+ 2 6, D: 4+ 2 6.

Example 16. Realizing an unfigured bass with tonicizations/modulations to closely related keys

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in taking the fear out of dealing with chromaticism, as well as encourage compositional creativity when dealing with what could otherwise be a daunting subject matter. A simple two-step exercise may accustom students to producing this sort of chromaticism in a creative way, yet still one that relies on solid voice-leading techniques.

Step 1. Analyze bass line of Clementi, Op. 24, No. 2, mvt ii.

Adagio.

(do 5 4+ 2 pedal mi 6 +6 re 5 do 6 5 sol 4 3 mi 6 re +6 fa ti do) 5

Step 2: Replace root-position sonorities with inverted sonorities, inverted sonorities with root-position sonorities (5-6 chord substitution), and then realize.

5 6 7 7 6 6 5 5— 7 5 6 5

Step 3: Add unprepared chromaticism (a); prepared chromaticism (b); and chromatic reversals (c).

5 6 (c) 7 7 (c) 6 6 4+ 3 6 4 3 5— 7 5 6 5

Example 17. Recomposing Clementi to include modulations passagère in the style of Fauré

The exercise shown in Example 17 relies on two sorts of “reversal techniques”: reversal of when to use root-position or inverted harmonies (or, a simple 5–6 chord substitution in terms of figured

bass), and reversal of chromatic voice leading (lowered tones continue to ascend by whole step while raised tones descend by whole step). The exercise begins by having students analyze a bass line from a Clementi piano sonata in terms of a standard rule of the octave (see Example 17, step 1). Then, having identified the standard, tetrachordal harmonization patterns, students replace every 5 (or 7) with a 6, and every 6 (or $\frac{6}{5}$, $\frac{6}{4}$, etc.) with a 5 or 7 (step 2). Lastly, students are asked to add chromaticism two different ways. They are first asked to raise and lower tones in individual parts where the line ascends or descends by step, respectively. They may add unprepared chromaticism (as indicated at part “a,” step 3) or may use prepared chromaticism (as indicated at part “b,” step 3). Lastly they are asked to reverse these chromatic alterations and add lowered tones to ascending lines and raised tones to descending lines (as indicated at part “c,” step 3).

Despite the simplicity of the steps involved, this sort of exercise is more difficult than it may at first appear—though still, arguably, a lot simpler than trying to conceive the sort of resulting progression by using notions of harmonic function. There are plenty of opportunities for students to go wrong and not every harmonization will “sound good.” Students must ultimately rely on their ear as well as their familiarity with the style in question in order to refine their realizations. For instance, having drafted a few different harmonizations, students will begin to hear that harmonies involving a diminished fifth or augmented sonorities constituted by a melodic passing tone sound characteristic of the style, and consequently may begin to look for opportunities to use half-diminished seventh chords and augmented triads. As such, it is important that students develop techniques for drafting in order to succeed at this sort of exercise. The key, in any case, is that students learn to *begin* by realizing a solid, diatonic voice-leading structure, and then continue by grafting chromaticism onto it. In other words, unlike our function-driven approaches, chromaticism does not figure into the exercise *from the start* nor in a left-to-right manner. Rather, chromaticism is a form of embellishment, and is only addressed once the diatonic voice-leading structure is in place.

In addition to the actual techniques outlined here, however, this discussion points to broader issues surrounding the logic of practical harmony pedagogy, particularly as it pertains to what has been referred to here as an applied theory of harmonic function.

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Our reliance on a theory of harmonic tendency has become so foundational in our pedagogy that syntax and function appear to many of us—and particularly to our students—as being the actual content and stuff of composing; writing in a classical style, for us, is *from the start* about what chord should follow some previous chord. Students learn to generate progressions in a largely left-to-right manner. As a historical matter, however, composing was never about such issues, and what we refer to as harmonic function simply resulted from certain features of the compositional methods employed by past composers. In addition, not only was a notion of harmonic function never explicitly part of the compositional process itself, but furthermore it only appears salient given our particular analytical models that value left-to-right syntax. In lieu of such an approach, the discussion here has considered numerous ways that composers of previous centuries were able to compose “functional” harmony, both diatonic and chromatic, while not explicitly possessing a theory of harmonic tendency. Along these lines the discussions considered how the logic of the process might have differed for past composers, how they may have started from a melody, then realized an accompaniment, then chromatically altered it. Temporarily bracketing the assumed methodological priority of a notion of harmonic function in generating harmonic progressions, as well as the assumed equation between its analytical salience and compositional efficacy that it entails, may not only offer us a clearer perspective on the relationship between theory and practice than our recent pedagogy perhaps affords, but it may also allow us to explore a host of largely forgotten or heretofore unconsidered features of the compositional process relevant to developing an effective, practical harmony pedagogy.

