

Boris's Bells, By Way of Schubert and Others

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We define “bell chords” as different dominant-seventh chords whose roots are separated by multiples of interval 3, the minor third. The sobriquet derives from the most famous such pair of harmonies, the alternating D^7 and A^b7 that constitute the entire harmonic substance of the first thirty-eight measures of scene 2 of the Prologue in Musorgsky’s opera *Boris Godunov* (1874) (example 1).

Example 1: Paradigm of the *Boris Godunov* bell succession: A^b7 – D^7 .



The *Boris* bell chords are an early milestone in the history of nonfunctional harmony; yet the two harmonies, considered individually, are of course absolutely functional in classical contexts. This essay traces some of the historical antecedents of the bell chords as well as their developing descendants.

Dominant Harmony

The dominant-seventh chord is rightly recognized as the most unambiguous of the essential tonal resources in classical harmonic progression, and the V^7 – I progression is the strongest means of moving harmony forward in immediate musical time. To put it another way, the expectation of tonic harmony to follow a dominant-seventh sonority is a principal component of forehearing; we assume, in our ordinary and long-tested experience of tonal music, that the tonic function will follow the dominant-seventh function and be fortified by it. So familiar is this everyday phenomenon that it hardly needs to be stated; we need mention it here only to assert the contrary case, namely, that the dominant-seventh function followed by something else introduces the element of the unexpected. That too is a resource of forward motion in time; the misdirected V^7 can signal the temporary postponement of a tonic closure, or it can indicate a new tonal departure whose progress demands further attention and elucidation, which we call development.

The ordinary deceptive cadence is in the first category: the expected tonic can be delayed by so slight an interruption as a single harmony, or by

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Example 2: Schumann, 12 Poems of Justinus Kerner, op. 35, no. 11, “Wer machte dich so krank?”¹¹

sie las-sen mich nicht ruh-n.

A⁶: V⁵/V V⁷ IV⁶ V⁵ I

Example 3: John B. Dykes, *Melita* (Sailors' Hymn).

hear us when we cry to thee for those in per-il on the sea.

C: V⁷/IV IV V⁷/V V (5) I V⁵/V I₄ V⁷ I

Example 4: Schubert, String Quintet in C Major, op. 163, D. 956, Third movement.

C: I V⁷/IV V/ii ii⁶ V/ii ii I⁶ V

something more substantial, even an entire phrase, and yet the ear recognizes that the true closure is within reach (example 2). The strength of the dominant function resides in the energy with which its resolution is either confirmed or evaded. Harmony textbooks identify a category of *irregular resolutions*, of which such deceptive cadences such as V⁷-vi or V⁷-IV are the simplest and most familiar types.

These are diatonic successions. With the use of secondary dominants, a chromatic element is introduced. A typical irregular resolution involving a secondary dominant is V⁷/V-I, a useful ingredient of a strong cadential formula (example 3). An additional chromatic element exists in the progression of one secondary dominant to another secondary dominant

Example 5: Schubert, Symphony No. 6 in C Major, D. 589, Second movement.

25 *Andante*

Ab: IV⁶ iii⁶ ii⁶ I⁶

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Ab: V⁷ V^{oz} (E_b = F_b) F: V⁹ (maj)
(or V⁹/vi?)

(example 4). The roots of these two dominants are a minor third apart, but what is more noteworthy here is the smooth stepwise connection, coordinated with maintenance of common tones. The bass motion is strong, the uppermost voice stays fixed—the open strings helping to accentuate this. The progression occurs at the midpoint of a rapidly changing phrase. The element of surprise is less important, perhaps, than the tonicization of the supertonic that occupies nearly half the phrase.

The next example shows a different situation: two dominant sevenths enabling a modulation (example 5). Here again the roots are separated by a minor third, but the surprise is particularly amiable because it is carefully prepared and then misdirected. The dominant seventh in A_b Major is followed by a diminished-seventh chord that is very likely the same dominant function (E_b = F_b), but the D_b changes to D_♮, the major ninth of the dominant in F Major that forms the cadential harmony. The two examples by Schubert illustrate paired dominant sevenths with roots a minor third apart, but with two different common tones between them. Musorgsky's bell chords have roots differing by two minor thirds, that is, they are a tritone apart; but they likewise have two different factors as common tones.

We will come back several times to Schubert, who is probably not widely singled out as a master of unexpected harmony, but that is certainly what he is.

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Example 6: Bach, Fantasia in G Minor for organ, BWV 542.

ab: i iv V^o_5 V^o_3
 e: V^o_5/V i^6_4 V^9 i^6_4

Example 7: Mozart, *Don Giovanni*, act I, no. 2, duet (voices and orchestra reduced).

149 Allegro

d: V^o_9/V (= $+II^7/N$) N^6_4 V^7/N (= Ger.) i^6_4 V^7

Complex Dominants in Diatonic Harmony

The present essay approaches its main focus via two different kinds of harmony, both of them forms of complex dominants that are functionally different but contrapuntally related: the diminished-seventh chord, and the family of augmented sixths.

There are many examples of remote modulations brought about through shortcuts, such as by enharmonic reinterpretations of diminished sevenths and augmented-sixth chords. Some of the finest examples of the former are found in Bach, as in the abrupt modulation from $A\flat$ Minor to E Minor in the G Minor Fantasia for organ (example 6). (One wonders how Bach managed it on organs that had not yet submitted to tempered tuning.)

As a linear artifact under the control of a chromatic scale, the diminished-seventh chord (in classical practice at least from Bach's time) is a parliamentary motion to suspend the tonal rules of order for a single purpose: to get from one place to another. Chromatically consecutive diminished sevenths, abounding in music from 1700 to the present, allow the ear to retain the memory of a prior stable tonal center until a new point of stability can be defined. (For a spectacular example, see Chopin's Etude in E Major, op. 10, no. 3.)

Example 8: Schubert, *Mirjams Siegesgesang*, op. posth. 136, D. 942 (piano accompaniment only; choral parts omitted).

131

f: V (7) i_4^6 v^{o9} IV IV It. V (VI) V i N (-II)
 (dominant pedal) (passing)

137

decresc. p

f: (N: -II) (Ger. 6th of B \flat)

142

f: v_3^{o6} (7) I (V/IV) (IV) V I

With the augmented-sixth chord the situation is somewhat different. The use of the German sixth as a connector depends on its enharmonic re-interpretation as a dominant-seventh chord, most typically as the dominant of a key a semitone higher. Bach wrote the augmented-sixth chord on rare occasions, but he did not use it as a pivot chord in modulation. That felicity was a discovery of later periods. There are many examples of dominant-of-Neapolitan relationships, both in the short and long term, from Haydn and Mozart (example 7) through 1940s popular song, when the third verse shifts up a half step.

So this discussion will really begin with an atypical example of the augmented-sixth relationship, one that involves enough harmonic disguise to evoke a fine knowing smile. It is from Schubert's late choral cantata *Mirjams Siegesgesang* (example 8). Here the tonic is F Minor, followed by an emphatic G \flat Major triad (the Neapolitan in root position) to which is then added a minor seventh F \flat , as though it were the dominant seventh of C \flat . This F \flat is then re-spelled E \sharp , which would indicate a German sixth chord leading to an F Major triad, like the dominant of B \flat —the semitonal relationship being

Example 11: Grieg, Piano Concerto in A Minor, First movement.

The image shows a musical score for Example 11, Grieg's Piano Concerto in A Minor, First movement. It consists of two staves: a treble clef staff (piano) and a bass clef staff (bass). The piano part begins with a piano (*p*) dynamic. The bass part features several chords with accidentals. Below the staves, a series of Roman numerals and chord symbols are provided for harmonic analysis: e: V^{o9} iv⁷ i⁶ V⁹/V f: V⁷ iv V^{o9} VI⁶ N i⁶ V i

then B \flat Major and C \flat Major. Neither of these probabilities comes to pass; Schubert causes the G \flat to rise to G \natural , forming an ordinary diminished-seventh chord; the D \flat then falls to C, an internal resolution of the dominant minor ninth to form the much more stable dominant seventh of F.

Consider the two dominant sevenths in this equation: the dominant seventh on G \flat , and the dominant seventh on C. Remove the diminished seventh that connects them, and what remains is the *Boris* bell relationship.

From Schubert to Boris

To see how the *Boris* chords are related tonally, we will go back to the diminished-seventh chord for a moment. We will need to rely on the analytical designation of V^{o9} endorsed by Piston's *Harmony* rather than the more common, but less aurally logical, designation of vii⁷.² The V^{o9} paradigm is best given as four enharmonically equivalent dominants over four different roots that aren't there. Example 9 shows them with their theoretical roots, as complete dominant ninths.

Beethoven's G Major Piano Concerto illustrates this paradigm perfectly (example 10); the chords involved are dominants in root position, with their minor ninths prominent only as neighbor notes and through arpeggiation. This passage loses none of its modulatory magic through being very familiar. It stands at the beginning of a development section, where ongoing modulation is often to be expected. (One wonders if Beethoven was aware that the succession of dominants is from V of F Minor to V of D Minor to V of B Minor, a root motion of two minor thirds summing to a tritone, which is melodically adumbrated in the piano's rising tritone melody before the succession begins.)

A modulating passage in the development section of another well-known piano concerto, the one by Grieg, uses common-tone enharmony within a complete dominant ninth of B Minor (with F \sharp root) and a dominant seventh of F Minor, to effect a modulation between E Minor and F Minor (example 11).

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Example 12: Musorgsky, *Boris Godunov*, Prologue, scene 2. Paradigm and “Slava” chorus.

Musical notation for Example 12. The top staff shows a sequence of chords: $A^{\flat}7$, $D7$, and a series of chords in the key of C major. Below the staff, the lyrics are: "Uzh kak na nye bye sojn - tsu kras - no - mu sla - va".

Example 13: Paradigm of diminished chords and octatonic set.

Musical notation for Example 13. The top staff shows four dominant-seventh chords: $C7$, $E^{\flat}7$, $F^{\sharp}7$, and $A7$. The bottom staff shows an octatonic set: two diminished-seventh chords.

Example 14: Chart of dominant-seventh chords with roots separated by minor thirds.

Musical notation for Example 14. The chart shows a sequence of dominant-seventh chords with roots separated by minor thirds. The chords are: $C7$, $E^{\flat}7$, $F^{\sharp}7$, and $A7$. The chart is labeled "enharmonic" and "chord". The roots are labeled: Same, diminished, seventh, chord.

In harmony books, and even in music appreciation texts, the bell chords in *Boris Godunov* have been repeatedly cited as an early paradigm of nonfunctional harmony—or, perhaps better said, of alternating dominant-seventh functions that, in thirty-eight measures, are never ratified by their respective tonics. That this very famous passage is one of the most convincing proclamations of a new kind of tonality in the nineteenth century should now be accepted by everybody; yet these bells are within a domain that is still identifiable as C Major, whether we consider Musorgsky’s original version or Rimsky-Korsakov’s popular version. Whatever the foreshadowing—and it is a strong one, because the C is right there—of a C centrality in the bell-chord prelude, the tonal strength of C Major in the Coronation Scene depends on the plain triads of the “Slava!” chorus, harmonizing the

same Russian folksong that Beethoven used in his second “Razumovsky” quartet (example 12).

Cycling Dominant Sevenths

Successive transposition by minor thirds of a dominant seventh results in a restricted cyclicity. A complete cycle of such dominant sevenths, such as $C^7-Eb^7-F\sharp^7-A^7$, with roots spelling out a diminished-seventh chord, rotates the other chord factors to yield two diminished-seventh chords, thereby constituting an octatonic set (example 13). Between any two chords in the cycle, there will always be two common factors, and these common factors will always be either a minor third apart or two minor thirds apart, that is, a tritone apart—or, to put it another way, if the root of the dominant seventh is chromatically raised it forms a diminished-seventh chord which has *three* common factors with the other three dominant sevenths in the octatonic set (example 14). Harmonic successions incorporating these different chords are typically identified with Russian harmony of the second half of the nineteenth century, but we shall see that they are also of wider occurrence. We are traversing much well-tilled ground here, and it is easiest to cite Richard Taruskin’s several earlier and splendid milestones of Russian analysis, especially chapter 4, subtitled “Harmonic Sorcery,” in volume 1 of his *Stravinsky and the Russian Traditions* (1996). To quote briefly:

Thanks to the Coronation scene from Musorgsky’s *Boris Godunov*, all the world knows that two dominant-seventh chords with roots a tritone apart have a tritone in common. And thanks to the reinforcement the lesson has received in some equally famous pieces like *Scheherazade*, the progression is often thought of as being peculiarly Russian. (Taruskin 1996:283)

Through the Omnibus to the Bells

We may now go back to a more limited harmonic context, the very familiar harmonic formula known as the “omnibus progression” that has been elucidated in great detail in a book by Victor Yellin (1998). Yellin identifies five steps in the classic omnibus, numbered 1 through 5 in example 15. The root analysis is as given in the fifth edition of Piston’s *Harmony*, a stern reminder that the analysis still cries out for a better explanation. The progression from step 2 to step 3 is entirely characteristic of augmented-sixth voice leading; step 4 is enharmonically equivalent to an inversion of step 2 but involves notational indigestion if we insist on uniform chromatic scales in the outer parts. Composers, as always, have more sense than this ungainly theoretical model demands. One can put roman numerals under any of these chromatic

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Example 15: Paradigm of the five-step omnibus.

Five-step omnibus

1 2 3 4 5

C: V^6_5 Ger. of ii ii^6_4 ii^6_4 (5th raised and lowered) V^7

Example 16: Musorgsky, *Boris Godunov*, act III, scene 1, Mazurka (Rimsky-Korsakov version; voice and orchestra reduced).

p

A: Ger. of ii ii^6_4 ii^6_4 (5th raised and lowered) V^7 F#: Ger. of ii

F#: ii^6_4 ii^6_4 (5th raised and lowered) E: V^7/ii VI^7 Fr.

Example 17: Tchaikovsky, *Symphony No. 6* ("Pathétique"), op. 74, First movement.

34 *pp* *cresc. molto*

ff

Example 18: Schubert, *Winterreise*, op. 89, D. 911, no. 20, *Der Wegweiser*.

The image shows a musical score for Schubert's "Der Wegweiser" (Example 18). It consists of two systems of music. The first system shows the vocal line and piano accompaniment. The vocal line has the lyrics: "Ei-nen Wei-ser sch ich ste-hen un-ver-rückt vor mei-nem Blick: ei-ne Stras-se muss ich". The piano accompaniment is marked *pp* and *cresc.*. The second system shows the vocal line and piano accompaniment. The vocal line has the lyrics: "geh-en, eine Stras-se muss ich ge-hen, die noch Kei- - -ner_ging zu- rick". The piano accompaniment is marked *f* and *p*. Below the piano accompaniment, there are chord analyses for both systems.

Chord analysis for the first system:

g: V^{o9}/V i_4^6 Ger. V^{o6}/V i_4^6
 b \flat : V^{o9}/V i_4^6

Chord analysis for the second system:

b \flat : V^{o6}/V i_4^6 g: V^7/V Ger.
 c \sharp : V^{o9}/V i_4^6 V_3^6 i V_3^4 i N^6 i_4^6 V i

chords, but their functional interpretation is bound to be contortionist because of the altered factors and the transparent melodic significance of the voice leading. The three-step modulating omnibus allows us to approximate the cyclicity of the bell-chord cycle by means of chromatic passing tones, which Musorgsky did effectively in the act III mazurka in *Boris*, with descending bass (example 16). Tchaikovsky did it similarly, but with ascending bass, in the first movement of the “Pathétique” Symphony, following the well-known model of Schubert’s “Wegweiser,” which substitutes diminished-seventh chords for some of the augmented-sixth chords. It is worth while to compare examples 17 and 18.

A familiar omnibus example from Schubert’s A Minor Piano Sonata of 1825 (op. 42, D. 845) might suggest a shortcut to the bell chords (example 19). The remainder of the omnibus in the example is not so interesting as the alternation of dominant and augmented sixth, as though Schubert were reluctant to decide where to go next. The alternating chords are, enharmonically considered, two dominant sevenths, G^7 and $B\flat^7$, a minor third apart; there are two common tones, and the other factors move by semitone step in opposite directions. From the standpoint of this essay, these relationships summarize the essence of bellness; one chord is *ding* and the other is *dong*, so

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Example 19: Schubert, Piano Sonata in A Minor, op. 42, D. 845.

C: V_5^6 Ger. V_5^6 Ger. V_5^6 Ger. ii ii_4^6 V $+ii_6^6$ I_4^6 $\frac{V^{\circ 9}V}{V}$
of ii of ii of ii (5th raised and lowered)

Example 20: Glinka, Overture to *Ruslan and Lyudmila*.

Presto $\text{♩} = 135$
Horns pp Strs. pizz. mf w.w. pp

to speak, like a bell swinging on its headstock, facing us at one moment, and facing away from us at the next. (Let's consider these as English or French bells for the moment, or those in the fifth movement of Mahler's Third Symphony; other German-speaking bells, which are normally threefold, won't do for our purposes.)

Russian Predecessors

Among the ancestors of "harmonic sorcery" we will cite first of all an example of actual sorcery on stage. Glinka's opera *Ruslan and Lyudmila* is identified as a seminal work of music in the nineteenth century by the composer's biographer David Brown (1974), who ranks it in seminality, though hardly in intrinsic value, with Beethoven's Ninth Symphony and Wagner's *Tristan*. Stravinsky's appraisal of Glinka is perhaps more realistic: "His music is minor, of course, but he is not; all music in Russia stems from him" (Stravinsky and Craft 1959:48). *Ruslan*, with no actual bells in the score, gives us the earliest Russian example of bell chords thus far identified, and these are, naturally enough, at a dramatic high point in the poorly conceived libretto of a long and sprawling stage spectacle: the magic moment where Lyudmila, in the midst of a wedding revelry, is abruptly spirited away by the evil magician Chernomor. Glinka attached sufficient importance to this music to include it in the middle of the overture, where it certainly sounds mysterious, surrounded by a Rossini-like texture (example 20).

Example 21: Tchaikovsky, *Romeo and Juliet*.

Andante non tanto quasi moderato Allegro giusto

5 117

poco più f *f*

119 191 272 284 Vn. I, II

Strs. *pp* *sfz pp* *pp*

Trp., 3 Trb.

285

w.w. *pp* *p*

289

p

The *Ruslan* premiere was in 1842. Twenty-six years later came one of the first undoubted masterpieces by the then twenty-eight-year-old Tchaikovsky. *Romeo and Juliet*, which he called an “Overture-Fantasy,” has for too long been imprisoned in the popularity of its $D\flat$ Major cello theme, which still strikes many as a lapse of good taste worthy of the most saccharine Rachmaninoff; yet on its own terms, *Romeo and Juliet* is a triumph of formal and harmonic originality, and a significant milestone in the history of concert music in Russia. Formally as well as tonally, *Romeo and Juliet* foreshadows Tchaikovsky’s even greater achievement in the first movement of the “Pathétique” Symphony. We will look at the motivic oscillating chords that are first suggested in the opening theme, are pushed further forward in the Allegro giusto, and come to full flower in the $D\flat$ Major accompaniment. When the Allegro resumes, with a chromatic development, Tchaikovsky takes

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Example 22: Brahms, *Symphony No. 3*, op. 90, Second movement.

Andante

Vn. Cl. Ob., Horn Fl., Cl., Bn.

Vla. (p) dolce

Vla., Vc. b Vc.

C⁷ A⁷

Example 23: Tchaikovsky, *Nutcracker*, op. 71, Dance of the Sugar Plum Fairy.

Andante non troppo

32 Celesta

34

up the bell chords where Glinka left off, and develops them into Musorgsky's *Boris* chords (example 21). Note how both Glinka and Tchaikovsky isolated their bell chords over a common-tone pedal point, specifically to emphasize them. What is equally emphasized is the neighbor-note quality of the non-common tones. Certainly Musorgsky knew the Glinka score; it is likely that he also knew Tchaikovsky's.

It is especially interesting to compare these with an example from Brahms (example 22), but not because one might imagine a very unlikely connection between Brahms of 1883 and any of his Russian contemporaries or predecessors.³ The appoggiaturas are what make all the difference, and yet it is interesting that Brahms isolates his remote dominant sevenths texturally as well as coloristically, as did both Glinka and Tchaikovsky.

From Boris to Stravinsky

At the end of his career in 1892, Tchaikovsky, following a visit to Mustel's store in Paris, composed for his *Nutcracker* the most famous music ever

Example 24: Skryabin, *The Poem of Ecstasy*, op. 54.

Molto languido

Fl., Ob. *ma dolce*
f dim.
 Cl., Vn. trem. *f dim.*
 Horns, Vn. trem. *f dim.*
 Vc., Cb.

Example 25: Lyadov, *The Enchanted Lake*.

Andante ♩ = 58

Cl. *pp*
 Horns *mf*
 Vla. sord.
 Vc. div.

written for the recently invented celesta. We give here an excerpt worthy of a second look (example 23). The first progression, from D^7 to B^7 , is of the type identified by Piston as a supertonic six-four with raised and lowered fifth, the $D\sharp$ written enharmonically for $C\sharp$ —though one may scratch one’s head at that analysis (Piston and DeVoto 1987:443). The second progression is like N^7 to V^7 ; the same progression in the same key occurs at a climactic moment (mm. 276–84) in the first movement of Beethoven’s “Eroica”, though with somewhat more conventional voice leading.

After Tchaikovsky, the bell relationship persisted in Russian music, but with expansions, especially with the dominant seventh expanded to the complete dominant ninth. Skryabin’s *The Poem of Ecstasy* (1905) offers perhaps the most convenient illustration of tritone-related dominant ninths carried to extremes. Example 24 shows a relatively uncluttered instance. The later *Prometheus* allows the relationship to survive even within the most attenuated tonality. A prettier example is from Lyadov’s *The Enchanted Lake* of 1909 (example 25).

Both of these examples lead directly to Stravinsky. He was twenty-seven years younger than Lyadov, whom he liked personally, but only ten years

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Example 26: Stravinsky, *The Firebird*, Introduction.

Example 27: Borodin, *Symphony No. 2*, Second movement.

Example 28: Debussy, *La Damoiselle élue*.

younger than Skryabin, whose self-centered personality and music he found repellent. Stravinsky referred to *Ecstasy* and *Prometheus* as “those severe cases of musical emphysema” (Stravinsky and Craft 1962:86), and stated emphatically that he was never more than superficially influenced by Skryabin’s music. Yet on the evidence of tritone-related ninth chords alone, *Firebird* contradicts his denial. A pellucid example occurs as early as m. 15 (example 26). The Neapolitan-to-dominant relationship is easy to show on paper, but the voice leading is so different from the classical Neapolitan convention that one hears it only with difficulty.

Backtrack a bit historically to the scherzo of Borodin’s Second Symphony, which begins with a V^9 of B Minor (the dominant of the just-ended first movement) resolving to C^7 , the dominant of F Major, the new key (example

27). This is a remote-key overlap situation between movements, such as Dvořák in the “New World” Symphony, Rachmaninoff in his second and third piano concertos, and even Debussy in his string quartet, were to exploit in some of their best-known works. (This V⁹ of B Minor was added by Borodin at the suggestion of Balakirev, supposedly to make clearer the junction from B \flat to C \flat between the movements.) Take the G \flat ninth out of Borodin’s almost complete V⁹, and include the C \sharp fifth, and you have the *Boris* chords in F \sharp and C; take the sevenths out of those and you have the *Petrushka* relationship.

Other writers have remarked on the relationship of the *Boris* chords to *Petrushka*. Stravinsky of course always esteemed the original *Boris Godunov* highly, but he deplored what he called Rimsky-Korsakov’s “Meyerbeerization” of the opera, an epithet that applies particularly to the Coronation Scene.

One early enthusiast of Musorgsky’s music outside of Russia was Claude Debussy. As we know, while he was a student at the Conservatoire, Debussy had a personal connection with Russia as early as his nineteenth year, when he spent two summers there in 1880 and 1881 as household pianist for Nadyezhda von Meck, Tchaikovsky’s “beloved friend” and protector. In later years Debussy told Stravinsky that he had first become familiar with Musorgsky’s songs when he found the scores on von Meck’s piano (Stravinsky and Craft 1962:158). It is not certain when, or how, Debussy came to see the score of *Boris*, but the progression turns up in his music as early as his unfinished *Triomphe de Bacchus* of 1882, and there is no mistaking the bell-chord relationship of a well-highlighted passage in one of the finest works of Debussy’s early maturity, the cantata *La Damaoiseille élue* of 1889 (example 28). This is only one of several comparable passages in that work. There are others like it in the *Fantaisie* for piano and orchestra, composed at about the same time and even more seldom heard today.

Not long before this, probably in 1888, Debussy had composed the song “L’ombre des arbres” as one of his *Ariettes oubliées*. Pianists and singers confronting this song for the first time may be nettled by the unusual key signature of seven sharps, which was very seldom used by any composer until Debussy and Ravel. The song begins with a C \sharp ⁷, immediately followed by a G⁷ (example 29). There is a subtle but quite direct connection of this beginning with a passage in Ravel’s *Daphnis et Chloé* of 1912 (example 30). The common tones are B and E \sharp (= F \flat). Between Debussy’s song and Ravel’s ballet scene, the melodic elements are entirely different, with Ravel’s melody a well-highlighted flourish for a pair of clarinets. But the effect of key change is the more magical in Ravel’s example, because the C \sharp Major tonality has been well established for a longer stretch, and the change is graphically illustrated by the removal of the key signature, with seven naturals one bar before the

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Example 29: Debussy, *L'ombre des arbres*.

Lent et triste

pp L'om-bre des ar-bres dans la ri-vière en-bru-mé-e

Example 30: Ravel, *Daphnis et Chloé*, mm. 370–71.

2 Cl. *f*

Strings *p* *pp*

Example 31: Stravinsky, *Octet for wind instruments*, First movement.

Lento $\text{♩} = 76$

33 *pp* *pp*

change to ♩ meter. The B in the first violins—the seventh of the C# chord and the third of the G chord—is subtly but definitely prominent.

Third-related dominant sevenths are abundant in *Daphnis et Chloé*, possibly as much as in Skryabin's *Ecstasy*, but this proves nothing, for the two composers are about as different as could be. Another good example is found in the finale of Roger Sessions's *The Black Maskers* of 1923, eleven

Example 32: Stravinsky, *Symphony in Three Movements*, First movement.

years later. By then it is possible to think of the phenomenon as well established and familiar. Perhaps Sessions had a Russian aural image in mind; *The Black Maskers* was originally composed as incidental music to Leonid Andreyev's play.

What was Stravinsky doing at that time? In 1922 he composed one of his most lovable works, the Octet for wind instruments. The Introduction includes a tritone bell that is one of the nicest surprises in the whole piece (example 31). Twenty-three years later, with World War II and two changes of citizenship intervening, Stravinsky had not forgotten his roots in Glinka when he wrote the familiar chords in his *Symphony in Three Movements* (example 32). Another example, not at all Russian or bell-like but certainly a happy example of surprise, using major ninth chords a tritone apart, is found in the final "Neptune, the Mystic" movement in Holst's *The Planets*, at the moment of the first harmonic change after the entrance of the wordless female chorus.

Bach to Schubert

To wind up this necessarily limited tour of bell chords, we may begin with two examples of simple irregular resolution, by one of the most romantic and visionary harmonists of all. It may be doubted that Johann Sebastian Bach was looking ahead to his admirers in tsarist Russia a century later, let alone to the Russia two centuries later that would occupy his native Saxony; but there is no doubt that he recognized the value of minor-third-related dominant sevenths as a source of expressive chromatic voice leading as well as expressive harmonic misdirection (examples 33 and 34). Nor should we be surprised to find exactly the same relationship of dominant sevenths in the no. 4 recitative of Bach's Cantata 198 ("Trauer-Ode") near the words

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Example 33: Bach, Magnificat, BWV 243, Et misericordia.

e: V^o V²/iv V⁷/ii
b: V⁷/V V⁷ (9)

Example 34: Bach, Concerto for two violins, BWV 1043, Second movement.

Largo ma non tanto
29

F: I V²/IV V⁷/ii (passing 7th) ii V⁷/iii (pt)

Example 35: Vienne, Carillon de Westminster.

poco rit.

Tempo

fff

Example 36: Schumann, 12 Poems of Justinus Kerner, op. 35, no. 6, “Auf das Trinkglas eines verstorbenen Freundes.”

Still geht der Mond das Tal entlang Ernst tönt die
 Mit-ternächte Stunde, Leer steht das Glas!

“Der Glocken bebendes Getön,” but this is an example of lesser force, if only because Bach’s bells here, though very colorful, are more like sleigh bells.

Next we can consider two bells from different worlds. Organists, but few other musicians, are well acquainted with the expertly crafted and imaginative music of Louis Vierne, the blind pupil of Widor who carried the French symphonic organ into the world of post-impressionism. As a dedicated student also of César Franck, Vierne would likely have noted the succession of tritone-related dominant sevenths in Franck’s last work, the *Choral No. 3 in A Minor*.⁴ The best known of Vierne’s *24 Pièces de fantaisie*, completed in 1927 ten years before his death, is the *Carillon de Westminster*, which precedes its dramatic climax with a prominent bell progression (example 35). Some eight decades earlier, in 1840, Robert Schumann had commemorated his marriage to Clara Wieck with an *annus mirabilis* of over 120 songs, including the relatively little-known *Twelve Poems of Justinus Kerner*, op. 35. One of these is the poignant but not unseemly sentimental “Auf das Trinkglas eines verstorbenen Freundes” (example 36). Note the text: “Quietly the moon rises along the valley / Solemnly the midnight hour sounds. / The glass remains empty.”

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Example 37: Schubert, Symphony in C Major ("Great"), D. 944, Second movement.

148 2 Horns

Vn., Vla.

Vc., Cb.

But the patriarch of Schumann's bell chords surely is the ding-dong passage that everybody knows, from Schubert's C Major Symphony of 1825, our final example (example 37). The G in the unison horns is the descriptive bell, but the chords are what identify it. This whole formally connective passage of superb subtlety certainly transcends campanology. One may fancifully imagine Schubert gazing into his own unimaginable future and legacy; his bells toll for the tonal world to come. Though neither of them knew it, Schubert made it easier for Musorgsky.

Notes

1. I will apologize in advance for choosing several examples in this paper that have already been used in my revised fifth edition (1987) of Walter Piston's *Harmony*, when I might (though I might well not) have found another equally appropriate and telling illustration. For the use of *l'exemple juste* I hope the alert reader will forgive me. I also thank W. W. Norton & Co., Inc., for granting permission for the use of these examples.
2. The other kind of familiar diminished sevenths will not be discussed here, namely the raised supertonic and submediant sevenths, but these are treated in Piston and DeVoto (1987), chapter 25.
3. Brahms and Tchaikovsky did meet in person in Leipzig in 1888 and enjoyed each other's company, but all evidence indicates that each detested the other's music.
4. Franck himself had written a nice pair of non-Boris church bells, on A_m^7 and D^7 , in *Le chasseur maudit*, composed 1882.

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