



MTO 23.3 Examples: Blättler, A Voicing-Based Model for Additive Harmony

(Note: audio, video, and other interactive examples are only available online)

<http://www.mtosmt.org/issues/mto.17.23.3/mto.17.23.3.blattler.php>

Example 1. Reduction of the final cadence of Ravel, *L'enfant et les sortilèges*, R154–end

The Child

Ma - man!

Chorus

p

Il est si doux.

Orchestra

oboes

pp
strings

Example 2. Comparison of the impact of chord inversion upon an additive chord and upon a triad

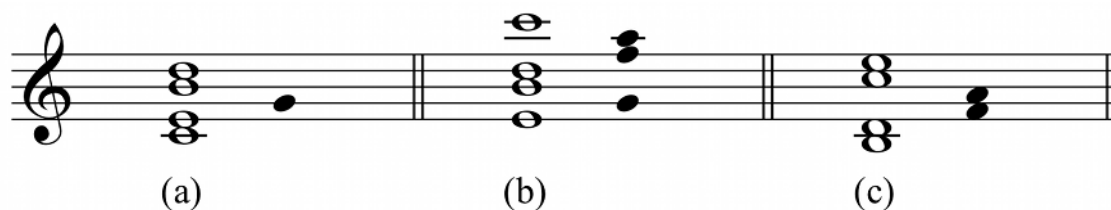
(a) inversion of the penultimate chord of Example 1

(b) replacement of penultimate chord of Example 1 with a dominant triad

(c) inversion of the penultimate chord of Example 2b

[illegible]

Example 3. Potential alternate readings of the penultimate chord of *L'enfant et les sortilèges*; the pitch classes B, C, D, and E are shown with open noteheads, and omitted tones in the extended triad with filled-in noteheads



Example 4. The relationship between a tonally plausible additive chord and a common-practice chord. In 4c, anchor-structure tones are shown as open noteheads and adorning tones as filled-in noteheads

Theoretical Generation

A common-practice cadence . . .

. . . has its dominant chord stripped down to its anchor structure (D3-C4) . . .

. . . which is then accompanied by adorning tones to produce an additive chord.

(a) (b) (c)

anchor-structure tones are empty noteheads, adorning tones are filled-in noteheads

When hearing an additive-harmonic progression . . .

. . . the listener can latch onto the anchor structure . . .

. . . and relate the novel chord with that anchor structure to a common-practice progenitor.

Listening Process

Example 5. Two-note anchor structures (t and e stand for ten and eleven)

Example 5 illustrates two-note anchor structures. The notation is presented in a grand staff with treble and bass clefs. The first section, labeled "ro-interval 7", shows a pair of notes (a whole note in the treble and a half note in the bass) with a bracket above them. Below this, the text "also , , , etc." is written. The second section, labeled "ro-interval t", shows a pair of notes (a whole note in the treble and a half note in the bass). The third section, labeled "ro-interval e", shows a pair of notes (a whole note in the treble and a half note in the bass).

Example 6. Ravel, *Ma mère l'Oye*, "Laideronette, impératrice des pagodes," mm. 16–24; additive supertonic anchored by ro-interval 10

Example 6 shows a musical excerpt from Ravel's *Ma mère l'Oye*, "Laideronette, impératrice des pagodes," measures 16–24. The notation is in 2/4 time and features a key signature of three sharps (F#, C#, G#). The music is written in a grand staff with treble and bass clefs. The first system (measures 16–19) shows a melodic line in the treble and a bass line in the bass. The second system (measures 20–24) shows a melodic line in the treble and a bass line in the bass. The music is marked *mf* (mezzo-forte) and *f* (forte). The notation includes various musical symbols such as notes, rests, and dynamic markings. Below the notation, the text "F# ii" and "V" are present.

Example 7. Three-note anchor structures.

* – chords are voiced to avoid *ro*-interval 1 between the upper pitches.

** – chords have *ro*-interval 1 between the bass note and an upper pitch

System 1: [38] [59] [49] [58]

System 2: [68] [35] [26] [29]

System 3: [46] [25] [28]

System 4: [87]* [54]* [15]** [18]**

System 5: [36] [39] [69]

Example 8. Examples of second-order anchor structures

The pitches of the anchor structure are set off in bold font and connected with brackets; this makes visually prominent how anchor structures serve as equivalence classes, partitioning the vast set of voicings into analytically productive categories of tonal plausibility.

(a) Ravel, *Le tombeau de Couperin*, “Rigaudon” mm. 1–8

Assez vif

ff **mp**

C: IV ii V I

5

mp **ff**

vi ii

G: ii V I V I

257|t| 7|t|25 |59|2

(b) Milhaud, *Saudades Do Brasil*, “Tijuca,” mm. 5–9

5

mp **mf**

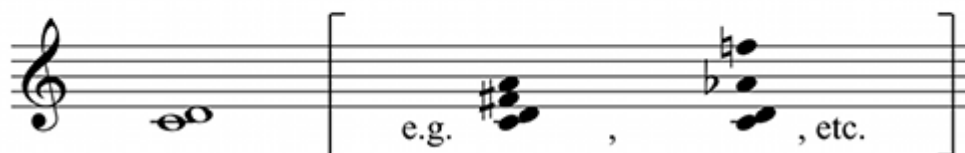
A: I V C: V I

5|9|3|6|8|2

Example 9. Inability of *ro*-interval 2 to support additive adornments

(a)

ro-interval 2 as chord interval implies
a seventh chord in second inversion



(b)

additive adornments of *ro*-interval 2, however,
undermine that tonal plausibility:



adding *ro*-intervals 5, 6, 8, or 9 produces common-practice chords



adding *ro*-intervals 7, t, or e projects the bass as chord root



adding *ro*-interval 1 creates a cluster

adding *ro*-intervals 3 or 4 projects the bass as chord root

Example 10. Relative strength of anchor structures closer to the bass

(a) (b) (c)

|68|392 2|6|93|8| |26|938

(less likely hearing/usage)

Example 11. Poulenc, *Trois Pièces pour piano*, “Pastorale,” mm. 3–6; tonal plausibility changed by re-voicing of inner parts

3

|t|36 |6|t|4|8 |6|93|8| |t|36 4|t|68 |53|827

root progression: C A B \flat C E \flat A \flat

Example 12. Interaction between two-note and three-note anchor structures in a similar register

(a) (b)

|25| 257|t|

three-note anchor structure potentially overridden by two-note anchor structure

Example 13. Ravel, *Miroirs*, “Alborada del gracioso,” mm. 126–40

126 *ff* très expressif *8va* di - - - mi

simile

128 *p* *a tempo* nuen - - - do

131 *pp* *rall.* Gardez la Ped. jusqu'à *

012 tone-cluster

135 *mf* expressif *

Example 14. Ravel, *Ma mere l'Oye*, “Pavane de la Belle au bois dormant,” mm. 5–8; two-note anchor-structure chord supporting *ro*-interval 1 as a minor ninth above the bass

5

pp

1|t| (3|t|5) / / 1|7|3

a: V ----- i

Example 15a. Marked use of *ro*-interval 1 in Auric, *Prélude* from *L'Album des Six*; instances of *ro*-interval 1 are marked by boxes

The musical score is for a piece titled "f et net." in 2/4 time. It consists of two staves: a treble staff and a bass staff. The key signature is two sharps (F# and C#). The treble staff begins with a forte dynamic marking (*f*) and a slur over the first two measures. The bass staff features a series of eighth notes with accents, followed by a series of quarter notes with accents. The piece concludes with a final cadence in the bass staff.

Example 15b. Marked use of *ro*-interval 1 in Auric, *Prélude* from *L'Album des Six*; instances of *ro*-interval 1 are marked by boxes or lines

37 *8va*
f *et net.*
ro-interval 1 as cross-relation/
dissonance against implied Bbm7 chord

43 *pp*
sec et sans pédale *2 Ped.*

48 *sec et sans pédale*

53 *sec et sans pédale*

57 *pp* *8va*
sec. *8va*

ro-interval 1
in dominant,
not tonic

Example 16. Text and translation for Chabrier's "Les Cigales"

<p style="text-align: center;">Les Cigales Rosemonde Gérard (w/ edits by Chabrier)</p>	<p style="text-align: center;">The Cicadas translation by Graham Johnson & Richard Stokes</p>
<p>Le soleil est droit sur la sente, l'ombre bleuit sous les figuiers, ces cris au loin multipliés, c'est midi, c'est midi qui chante!</p>	<p>The sun's overhead the path, The shadow turns blue beneath the figs, These distant chirpings multiply, It is noon, it is noon that sings!</p>
<p>Sous l'astre qui conduit le chœur, les chanteuses dissimulées jettent leurs rauques ululées de quel infatigable cœur!</p>	<p>Beneath the sun that conducts the choir, The hidden songsters Utter their raucous cries From what unflagging hearts!</p>
<p style="padding-left: 40px;">Les cigales, ces bestioles, ont plus d'âme que les violes, les cigales, les cigalons, chantent mieux que les violons!</p>	<p style="padding-left: 40px;">The cicadas, these tiny beasts, Have more soul than viols, Cicadas, tiny cicadas, Sing better than violins!</p>
<p>S'en donnent elles, les cigales, sur les tas de poussière gris, sous les oliviers rabougris étoilés de fleurettes pâles.</p>	<p>They revel in it, the cicadas, On the heaps of grey dust, Beneath the stunted olive-trees Studded with little pale flowers.</p>
<p>Et grises de chanter ainsi, Elles font leur musique folle; Et toujours leur chanson s'envole Des touffes du gazon roussi!</p>	<p>And drunk from such singing, They make their mad music And their song soars unceasingly From the tufts of russet grass!</p>
<p style="padding-left: 40px;">Les cigales, ces bestioles, ont plus d'âme que les violes, les cigales, les cigalons, chantent mieux que les violons!</p>	<p style="padding-left: 40px;">The cicadas, these tiny beasts, Have more soul than viols, Cicadas, tiny cicadas, Sing better than violins!</p>
<p>Aux rustres épars dans le chaume, le grand astre torrentiel, a larges flots, du haut du ciel, verse le sommeil et son baume.</p>	<p>On the rustics across the stubble, The great torrential sun From high in heaven Pours its sleep and balm.</p>
<p>Tout est mort, rien ne bruit plus qu'elles toujours, les forcenées, entre les notes égrénées de quelque lointain <i>Angélus</i>!</p>	<p>All is dead, no sound but theirs Frenzied and insistent, Among the far-flung notes From some distant angelus!</p>
<p style="padding-left: 40px;">Les cigales, ces bestioles, ont plus d'âme que les violes, les cigales, les cigalons, chantent mieux que les violons!</p>	<p style="padding-left: 40px;">The cicadas, these tiny beasts, Have more soul than viols, Cicadas, tiny cicadas, Sing better than violins!</p>

Example 17. Chabrier's "Les Cigales," mm. 1–35; the beginnings of chains of repeated *ro*-interval-1 chords are marked with arrows

Très animé

Soprano

Piano

pp

Le so-

5

S.

leil est droit sur la sen - - te, L'om - bre bleu-it sous

Pno.

simile

8

S.

les fi-guiers, Ces cris au loin mul-ti-pli-és, C'est Mi - di, c'est Mi-di qui

Pno.

f

Example 17 (continued)

2

12 *mf*

S. chant - te! Sous l'as - tre qui con - duit le chœur, Les chan - teu - ses dis - si-mu

Pno.

16

S. lé - es. Jet - tent leurs rau-ques u-lu - lé - es De quel in-fa-ti - ga - ble

Pno.

20

S. couer! Les ci - ga - les, ces best-i - o - les, Ont plus d'à - me que les vi

Pno.

24

S. o - les, Les ci - ga - les, les ci-ga-lons, Chan-tent mieux que les vi - o -

Pno.

Example 17 (continued)

3

28

S.

lons!

Pno.

p

31

S.

Ro-interval 2 in place of the opening's *ro*-interval 1

Pno.

33

S.

Pno.

Example 18. Scarcity of adornment options for three-note anchor structures

- pitches that could produce competing plausibilities: D, F, F \sharp
- pitches that would produce *ro*-interval 1: G \sharp , B, C \sharp
- pitches that would merely complete a common-practice chord: E, E \flat



Example 19. Satie, *Préludes Flasques*, iv, mm. 1–8; three-note anchor structures

Example 19 shows two systems of musical notation for Satie's *Préludes Flasques*, iv, mm. 1–8. The notation includes treble and bass staves with various notes and rests. Below the staves, the anchor structures and Roman numerals are indicated for each measure.

System 1 (Measures 1-4):

- Measure 1: $|t|48$ I
- Measure 2: $7|t|49$ IV
- Measure 3: $|38|5$ V
- Measure 4: $|5|9|2|$ i
- Measure 5: $|38|t5$ IV

System 2 (Measures 5-8):

- Measure 6: $|26|4$ V/ \flat VII
- Measure 7: $|38|5$ \flat VII
- Measure 8: $4|t|6$ dom. +6
- Measure 9: $5e2|t|$ subdom. +6
- Measure 10: v

Example 20. Whole-step adjacencies in final tonic chords in the Parisian modernist repertoire
(a) reduction of Debussy, *La mer*, ii, R40–41

The image shows a musical score for Debussy's *La mer*, second movement, measures 40 and 41. The score is written for piano and features a complex texture with overlapping lines and chords. The key signature is three sharps (F#, C#, G#). Measure 40 begins with a piano (*pp*) dynamic. The right hand plays a series of eighth notes, while the left hand plays a series of chords. Measure 41 continues the texture, with the right hand playing a series of eighth notes and the left hand playing a series of chords. The score is annotated with measure numbers 40 and 41 in boxes. The final tonic chords are highlighted with whole-step adjacencies.

Example 20. Whole-step adjacencies in final tonic chords in the Parisian modernist repertoire
(b) Debussy, *Estampes*, “Pagodes,” mm. 93–98

The image displays a musical score for Debussy's "Pagodes" from the suite "Estampes". The score is written for piano and consists of three systems of staves, measures 93 through 98. The key signature is three sharps (F#, C#, G#) and the time signature is 4/4. The right hand (treble clef) features a continuous, flowing melody composed of eighth notes, with groups of three notes beamed together and marked with a "3" (triplets). The left hand (bass clef) provides a harmonic accompaniment with chords and single notes. The final measure (98) is marked "Retenu" and includes the instruction "aussi *pp* que possible" (also as soft as possible). The score concludes with a double bar line and the instruction "(laissez vibrer)" (let it vibrate), indicating a sustained final chord.

Example 20. Whole-step adjacencies in final tonic chords in the Parisian modernist repertoire
(c) Chabrier, “Les Cigales,” mm. 93–98

93

p

dim.

pp

95

sf

ppp

sf

ppp

ppp

sf

ppp

8va

Example 21. Debussy, “Les collines d’Anacapri,” mm. 1–8

Très modéré

pp

pp léger et lointain

quitter; en
laissant vibrer

Example 22. The potential for chords to fulfill the same tonal function despite divergent pitch-class and scale-degree content
(a) reduction of Stravinsky, Firebird, R206–208

206 Doppio valore (♩ = 104) maestoso ↓ 207 ↓

208 poco a poco allargando

209 fff

Example 22. The potential for chords to fulfill the same tonal function despite divergent pitch-class and scale-degree content
 (d) transposition of the highlighted chords from (a)–(c) into the same key, so as to compare anchor structures and pitch content

(a) diatonic	(b) whole-tone	(c) octatonic
$\frac{ t 257}{\hat{5}}$	$\frac{6 t 4}{\hat{5}}$	$\frac{7 t 149}{\hat{5}}$

Example 23. Different tonal plausibilities arising from distinct voicings of a single pitch-class/scale-degree collection

(a)	(b)

4|7|92 most plausible
as a stand in for IV/E

7|t|25 most plausible
as a stand in for V7/E

Example 24. Ravel, *Valses nobles et sentimentales*, i; pitch-class set {G, A, B, D, E} voiced so as to have different tonal functions

(a) mm. 1–2; set voiced as tonic in G major

Modéré - très franc ♩ = 176

48|e|1 |7|249

G:

V

I

pitch-class set [G, A, B, D, E]

(b) mm. 11–20; set voiced as dominant in D major

D: V/V

|t|27

V

7|t|259

57|t|2

I

pitch-class set [G, A, B, D, E]

Example 25. Dissonant passage tonally grounded by anchor structures
 (a) Ravel, *Le tombeau de Couperin*, “Forlane,” mm. 1–9

à la mémoire du lieutenant Gabriel Deluc.

Allegretto ♩ = 96

PIANO (★)

p

Example 25. Dissonant passage tonally grounded by anchor structures
 (b) reduction of mm. 1–5 from (a); anchor structures shown in open noteheads

ant.

NT

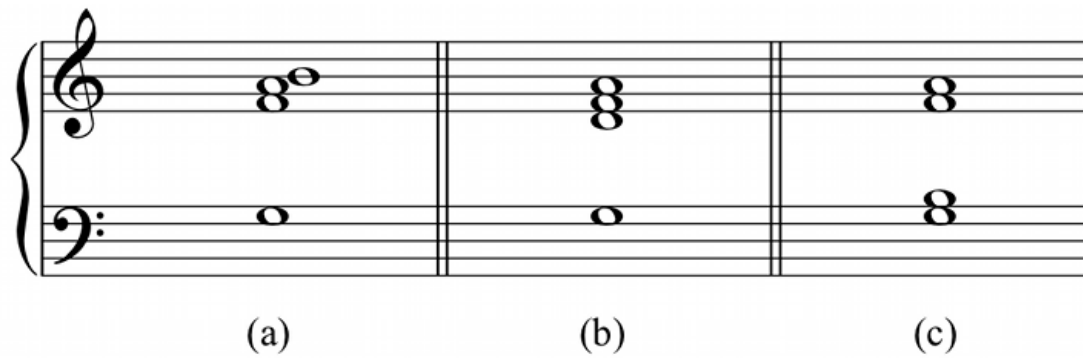
PT

apps.

7|436 7|e|25 6|t|2 8|e|27 7|t|13

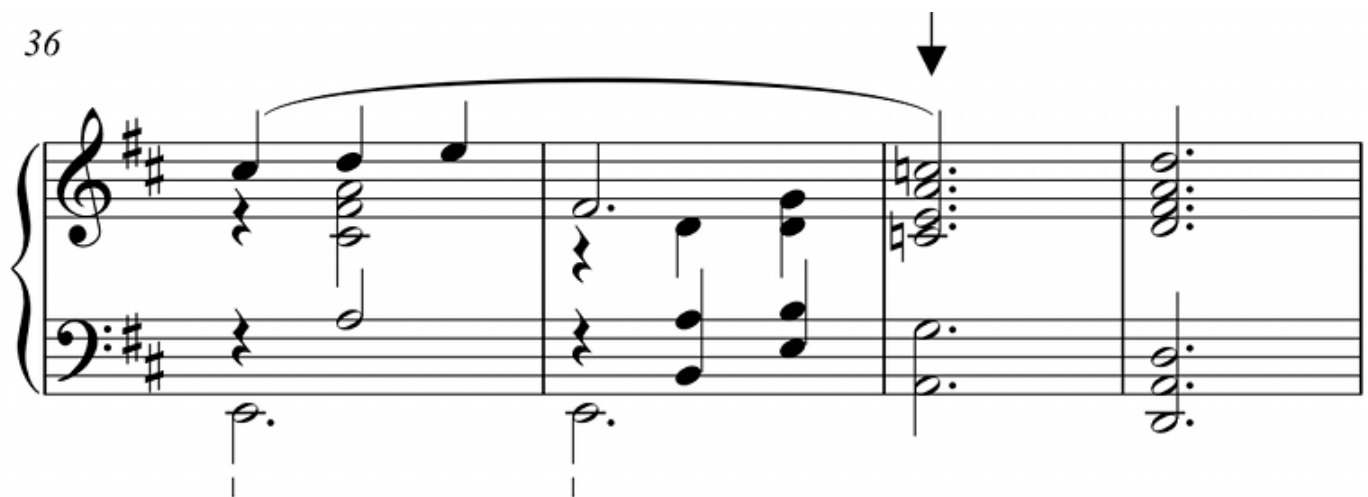
e: i IV ii v

Example 26. Piston's guidelines for voicing a ninth chord



Example 27. Flexibility of the third in two-note anchor-structure chords

(a) chromatically altered third in Satie's *Gymnopédie No. 1*, mm. 36–39



Example 27. Flexibility of the third in two-note anchor-structure chords

(b) omitted chordal third in Debussy's "a fille aux cheveux de lin," mm. 18–19



Example 28. Comparison of Hull's analysis and anchor-structure analysis of Butterworth, *A Shropshire Lad*, mm. 54–56

Largamente

Hull's analysis: V (3rd inv) - - 7 I
 anchor-structure analysis: IV V I

24|e|7

Example 29. Ravel, *Valses nobles et sentimentales*, mm. 56–61; verticalities interpreted as the coincidence of a chord background and non-essential dissonance are marked with arrows

Example 30. Debussy, "La Puerta del Vino," mm. 5–12; viable additive chords interpreted as chords with nonessential dissonance

5 *p* très expressif

passing tones

simile

74|t| 74|e|? |7|4|? 74|t|3

Example 31. Reduction of Poulenc, *Les biches*, “Rag Mazurka,” R89; suspension of a major tenth above the bass

Moderato suspension chord

89

I iv bII vii^{o7} I

736|e| 736|e|

Example 32. Epigraph to “Les entretiens de la Belle et de la Bête”

Epigraph to “Les entretiens de la Belle et de la Bête.”
(Ravel, adapted from Jeanne-Marie Leprince de Beaumont)

—“Quand je pense à votre bon cœur, vous ne me paraissez pas si laid.”—“Oh! dame oui! j’ai le cœur bon, mais je suis un monstre.”—“Il y a bien des hommes qui sont plus monstres que vous.”—Si j’avais de l’esprit, je vous ferais un grand compliment pour vous remercier, mais je ne suis qu’une bête. ...

La Belle, voulez-vous être ma femme?”—“Non, la Bête! ...”

—“Je meurs content puisque j’ai le plaisir de vous revoir encore une fois.”—“Non, ma chère Bête, vous ne mourrez pas: vous vivrez pour devenir mon époux!” ... La Bête avait disparu et elle ne vit plus à ses pieds qu’un prince plus beau que l’Amour qui la remerciait d’avoir fini son enchantement.

English translation by author

“When I think of your good heart, you do not appear so ugly to me.”—“Oh! yes, my lady, I have a good heart, but I am a monster.”—“There are plenty of men who are more monstrous than you.”—“If I had the wit, I would pay you a great compliment to thank you, but I am nothing but a beast.”

“Beauty, would you be my wife?”—“No, Beast! ...”

“I die content because I have had the pleasure of seeing you once again.”—“No, my dear Beast, you will not die: you will live to become my husband!” ... The Beast had disappeared and she saw at her feet only a prince more handsome than Love who thanked her for having broken his spell.

Example 33. Use of anchor structures to resolve the relationship between Beauty and the Beast in Ravel, “Les entretiens de la Belle et de la Bête” (a) Beauty’s theme; weakly anchored F-Lydian melody followed by |10|-anchored circle of fifths

Mouv't de Valse très modéré **F Lydian**

pp *doux et expressif*

Circle-of-fifths of |t|-anchored chords

10

|t|27 |t|27 17|t| 4|t|27 |t|357 |t|247 3|7|2 |t|46

WT chord (& tritone substitution)

F Lydian reasserted

19

3|7|2 |t|46 3|7|2 6|t|24

WT chord (& tritone substitution) WT chord

Example 33. Use of anchor structures to resolve the relationship between Beauty and the Beast in Ravel, “Les entretiens de la Belle et de la Bête” (b) Beast’s theme; use of symmetric scales and eschewal of tonal plausibilities

WT1

OCT1,2

49

pp

3

p

tonal plausibility ($|t|/E$) unrealized

WT1

56

pp

WT subset of OCT1,2

mf

3

tonal plausibility ($|t|/F$) unrealized

OCT0,1 (w/ G# appoggiaturas)

63

p

pp

WT subset of OCT 0,1

tonal plausibility ($|t|/F\#$) unrealized

Example 33. Use of anchor structures to resolve the relationship between Beauty and the Beast in Ravel, “Les entretiens de la Belle et de la Bête” (c) failed union of Beauty and the Beast; |10| -anchored chords indicated with arrows

106

F major undercut by chromatic bass notes

114

122

Example 33. Use of anchor structures to resolve the relationship between Beauty and the Beast in Ravel, “Les entretiens de la Belle et de la Bête” (d) anchor structures tonally resolve the Beast’s melody and symmetrical scales

WT1

147 *pp* très expressif 3 *p*

Circle-of-fifths progression with |t|-anchored chords . . .

157 *pp* *p* expressif et en dehors

... into authentic cadence in F major

17|t|4 / F; octatonic ensconced over tonic pedal

165

Example 34. Poulenc, *Trois pièces pour piano*, Pastorale, mm. 1–2

Calme et mystérieux ♩ = 72

The musical score is written for piano in 4/4 time, key of B-flat major. The tempo is 'Calme et mystérieux' with a quarter note equal to 72 beats per minute. The music is marked 'p' (piano) and 'm.g.' (mezzo-gusto). The right hand features a melodic line with a triplet of eighth notes and a triplet of sixteenth notes. The left hand features a bass line with a triplet of eighth notes and a triplet of sixteenth notes.

Example 35a. Exploration of the tonal potential of the opening chord in Poulenc, *Trois pièces pour piano*, Pastorale (a) opening section casts C-rooted offspring of the chord as ii^{o7} in B^b and iii^{o7} in A^b

Calme et mystérieux ♩ = 72

$|t|36$ $|6|t|4|8$ $|6|93|8|$ $|t|36$ $4|t|68$ $|53|827$

root progression: C A B^b C E^b A^b

↓ appoggiatura to E^b ↓ appoggiaturas to E^b

A^b minor

chromatic decay

Example 35b. Exploration of the tonal potential of the opening chord in Poulenc, *Trois pièces pour piano*, Pastorale (b) middle section casts C-rooted chords as vii^{ø7} in D \flat , V7 in F minor, and I in C

C-rooted chord as vii^{ø7}

11 *p* *m.g.* *m.d.* CPT

root prg.: | 36 | 6 | 2 | 36 | 159 |
C Eb C A \flat
D \flat : vii^{ø7} V⁷

C-rooted chord as V⁷

14 *p* *clair* *mélancolique*

37 | 2 |
D \flat
I

ro-interval 1 presents E \flat as a non-harmonic tone that should resolve to D \flat . . . [F] V⁷
ro-interval 1 presents B \natural as a non-harmonic tone that resolves to B \flat

. . . but key of D \flat dissolves;
E \flat resolves to C rather than D \flat

C-rooted chord as I

18

unresolved ro-interval 1

[C] I

ro-interval 1 presents G as a non-harmonic tone that should resolve to F . . .
. . . but key of f dissolves;
G resolves to F \sharp rather than F \natural

22 *animez un peu*

V⁷

key of C dissolves;
G7 turns into E \flat 7

Example 35c. Exploration of the tonal potential of the opening chord in Poulenc, *Trois pièces pour piano*, Pastorale (c) final section emphasizes the ambiguous and unresolved nature of the chord

WT version of the opening chord

29

m.g.

pp toujours très calme

m.g.

36 6|4|8 6|93|8|

32

m.g.

clair *pp*

root prg.: C A B \flat

m.d.

ppp m.g.

chromatic descent G \flat -B \flat

6428|t|

C

* Led.