

Walter Everett, "Making Sense of Rock's Tonal Systems," *Music Theory Online* 10/4 (2004), https://mtosmt.org/issues/mto.04.10.4/mto.04.10.4.w_everett.html

ABSTRACT: Despite frequently voiced assertions and their underlying presumptions, there is no single sort of tonal behavior common to all rock music, but rather a spectrum of approaches to scales, harmonic function and voice leading. This essay addresses the issue from two perspectives. The first suggests an array of six tonal systems ranging from the traditional major mode through modal (including minor-pentatonic) practices having increasing structural value, to chromatic relations with little basis in any deeper diatony. The second perspective studies the varied degrees of interaction between harmony and voice leading evidenced in samples of rock music from two historically opposed timeframes, the more homogeneous span of 1957–58 and the more radically experimental period of 1999–2000. Finally, Beck's "Lonesome Tears" (2003) serves as a model for an analytical approach to one iconoclastic combination of voice leading and harmony.

III. A Complex Tonal Structure Yields Its Secrets

[33] Most pop tunes and a good many rock records can be slipped into one of the "Classification" pigeonholes quite easily. Many rock songs, however, yield up their identity only very reluctantly. One recent song, Beck's "Lonesome Tears" from *Sea Change* (2003), is a case in point. Beck's often iconoclastic approach to chord succession (perhaps more obvious in *Odelay*, *Mutations* and *Sea Change* than in the intervening parody album, *Midnite Vultures*) demands an unusually deep penetration below the surface to appreciate the nature of harmony in many of his songs, "Lonesome Tears" included. A recognition of the forces of voice leading upon harmony is vital to an interpretation of chord succession here, and would thus make for a useful illustration of the factors considered thus far more abstractly.

Figure 26. Chords in "Lonesome Tears" (Beck Hansen), *Sea Change*, Beck, 2003

[INTRO:] B^bm - A - C[♯] (2x)
[VERSE:] C[♯] - B - F[♯] - A - C[♯] - B - B^bm - F[♯] (2x)
[CHORUS:] B^bm - A - E (2x)
[INTERLUDE:] G[♯]m - E - G[♯]m - G - B

Figure 27. Analysis of "Lonesome Tears" (Beck Hansen), *Sea Change*, Beck, 2003 (below)

[34] Because "Lonesome Tears," like nearly all other rock music, is unavailable in a reliable score, the resourceful analyst might first look for a cheat at OLGA, the Online Guitar Archive, a

database of song lyrics and tabs (guitar parts written by amateur contributors either with chord symbols showing root and color or with full tablature), and may be lucky enough to find chord symbols such as those shown in **Figure 26**.⁽²⁴⁾ This information, with CD and guitar at the ready, will get the listener far into picking and singing through the pitch-world of “Lonesome Tears.” But not too far. Even the pondering of the rectification of enharmonic spellings (B-flat minor = A-sharp minor?) and consideration of the clues offered by metric accent leave unanswered many questions regarding which pitch-class or pitch-classes might claim tonal centrality, which “chords” have harmonic function and which are embellishing, where harmonic syntax might be operating and where voice leading is purely or largely contrapuntal. Clearly, more work needs to be done before one could begin to classify the sort of tonal operations at work here.

[35] Only a consideration of voice leading will lead to progress with this puzzle, and so the analyst might come up with a sketch such as that given as **Figure 27**. Many things then start to make sense: as confusing as the bass line may be at first, all vocal and string parts in the Introduction, Verse and Chorus clearly prolong C-sharp-major harmony. While the Introduction, for instance, does actually sound the triads, B-flat minor - A - C-sharp, the string lines allow this to be heard as a simple C-sharp major chord whose third and fifth are ornamented by a normally resolving chromatic augmented fourth, as shown in the two parts of the Introduction. In the Verse, the bass line can only be understood as support for the vocal and string parts: the bass A-natural is a leaping passing tone, supporting the chromatic passing tone in the tenor range (which clarifies how the vocal part omits the diatonic a-sharp²). The first tenor a-sharp, neighbor to the following g-sharp, is supported by the bass F-sharp, which thus has the largest bass role other than C-sharp itself, functioning as a plagal IV. That makes the prior B-major sonority a double-plagal, working as IV of IV. The second bass B-natural passes to A-sharp, representing the unfolded third above a second plagal F-sharp, which is shown (by the arrow) to resolve only in the vocal e-sharp² that follows in the repeat. So every single bass tone of the Verse is present for contrapuntal reasons, mostly in support of motion among the complex of upper lines, leaving C-sharp the only tone of real harmonic value, and F-sharp the next-strongest sonority. Clearly, it would be senseless to try to evaluate the harmony of this song by studying its OLGA roots alone, which are nearly all of an illusory nature.

[36] E-major harmony is prolonged in the Chorus, which plays both upon a variation of the chords heard in the Introduction and upon a continuation of the Verse’s descending line through the C-sharp-major triad (replicating the Verse’s “descant” part in unfolded thirds above). We also have here a neat tying-up of all the A-sharp - A-natural business, with the bass “explaining” that the singer’s b¹ is a mere passing tone to an unrealized a-sharp¹, and that A-natural, once a tenor-register chromatic passing tone, now takes over the diatonic role once played by A-sharp. In fact, a local diatonic spelling here would show B-flat as bass neighbor to A, and the vocal part should then read d-flat² - c-natural² - (b-flat¹) - a¹ - g-sharp¹. The Interlude is somewhat ambiguous but its tonality can be interpreted as B major inflected with an Aeolian cadence, the final tonic of which side-steps up to the overall tonic of the next verse’s C-sharp. (The song concludes with a minute-long passage with C-sharp-major scales in a contrary motion that tips the hat to “I Am the Walrus,” all brought into some vertical synchronicity by the addition of an F-double-sharp passing tone in the upper ascending part and a repeated C-sharp in the lower descending part.) Overall then, the song presents us with the harmonic progression C-sharp (Intro - Verse) - E (Chorus) - B (Interlude) - C-sharp (Verse). Along with the Verse’s important

F-sharp chord, this series gives prominent voice to four of the five triads of the C-sharp minor-pentatonic scale, but such a construction seems as off-base as did the E-flat-minor black-note-scale argument for "Pretty Ballerina." Clearly, the voice leading argues for a key of C-sharp major colored by a touch of mixture in the Chorus, moving to a modal neighboring \flat VII as a substitute for V at the close of the Interlude. This hearing places Beck's innovative and recalcitrant song squarely into Box 3a.

[37] If this essay has accomplished nothing else, I hope it argues successfully that there is no single monolithic style of rock harmony, that blues is not the basis of all modern popular music, and that there are gradations between and among approaches based on the interrelated roles of harmony and counterpoint. Even if many rock composers and performers seem to rely on chord changes with obsessive metric regularity and at great expense of the horizontal domain, there is in many styles quite enough contrapuntal interest and quite a strong enough hierarchy of harmonic values to reward the listener who likes a challenge here and there. The study of rock music can take any number of literary, historical or sociological directions, but it could keep quite busy an army of analysts charged merely with furnishing an understanding of its tonal behaviors. Fortunately, there are plenty of interesting recordings, and plenty of qualified listeners to make a go of it.

Figure 27. Analysis of “Lonesome Tears” (Beck Hansen), *Sea Change*, Beck, 2003

INTRODUCTION

The introduction consists of two staves in bass clef with a key signature of three sharps (F#, C#, G#). The top staff features a melodic line with a slur over the first two notes. The bottom staff features a bass line with a slur over the first two notes and a slur over the last two notes. A guitar chord diagram for C# is shown in the center, with a bar at the first fret and a dashed line indicating a barre from the fourth to the sixth fret. Chord labels Bbm, A, and C# are placed below the bottom staff.

C#: | +4 ----- 6

B^bm A C# B^bm A C#

VERSE

The verse consists of three staves. The top staff is labeled 'Vocal' and contains a melodic line. The middle and bottom staves are grouped by a brace and labeled 'Strings' and 'Bass' respectively. The bass staff contains a bass line with notes labeled N, LP, and N. Chord labels C#, I, and N are placed below the bass staff. An arrow points from the end of the bass line to the end of the vocal line.

Vocal

Strings

Bass

C# I N N

CHORUS

(P)

B^bm A E

INTERLUDE

B:

G[#]m E G[#]m G B

^bVI (^bVII) I

Capuzzo, Guy, 2004: 'Neo-Riemannian Theory and the Analysis of Pop-Rock Music', *Music Theory Spectrum*, 26/ii, pp. 177–199

Beck's "Lonesome Tears" offers a closing example of a descending chromatic line.³⁸ The song begins with an introduction, proceeds to a verse-chorus-bridge succession, and ends with repeated statements of the introduction. The harmonic language involves two groups of triads, shown in Example 8(a).³⁹ Each group emphasizes a shared note, realized as a shared pitch in Example 8(a) but as a shared pitch class in the music. Group 1 consists of four triads that share

$$\hat{7} - \hat{7} - \hat{6}$$

music.

38 Beck 2002.

39 In the context of Example 8, the term "group" is not intended to carry mathematical connotations.

the note C#: A#-, F#+, A+, and C#+. The chords of Group 1 are found in the introduction, verse, and chorus, where the only exceptions to it involve harmonies that are “borrowed” from Group 2. Group 2, found in the bridge, consists of four triads that share the note B: G#-, E+, G+, and B+. Group 2 is the T₁₀ transposition of Group 1. Example 8(a) also reveals the song’s chromatic line, which I shall refer to as the “tears motive.” In Group 1, the tears motive appears as A#₄-A \flat ₄-G#₄, scale degrees $\hat{6}$ - $\natural\hat{6}$ - $\hat{5}$ in C# major. In Group 2, the motive appears two semitones lower as $\hat{6}$ - $\natural\hat{6}$ - $\hat{5}$ in B major. The triads of Groups 1 and 2 form LPR loops around the notes C# and B respectively. Example 8(b) shows how the loops operate in the song, using an analytic précis of “Lonesome Tears” in which each written quarter note represents one sounding whole note. The introduction traverses the LPR loop around C# in clockwise fashion—the NROs that map one chord to the next are ⟨LPR, LP, R⟩.⁴⁰ In the verse, the Group 1 tears motive is part of every chord except B+.⁴¹ The tears motive persists through the chorus as well, using A#₄-A \flat ₄-G#₄ as in the introduction but newly harmonized as ⟨A#-, A+, E+⟩. The chorus’s plagal progression ⟨A+, E+⟩ echoes the ⟨B+, F#+⟩ and ⟨F#+, C#+⟩ plagal progressions of the verse. As in the introduction, the progression that ends the bridge traverses an LPR loop in clockwise fashion—the consecutive NROs are ⟨LPR, LP⟩; the final R is absent since the bridge does not repeat.

To summarize these harmonic processes, Example 8(c) presents a transformational network for the song. The layout of the network places the introduction at its center to demonstrate how the harmonies of the chorus and bridge may be understood as transformations of those in the introduction. Because the verse is adequately described in terms

40 I interpret the relation between A#- and A+ as LPR instead of P' to draw the connection with LPR loops.

41 Although B+ could be said to harmonize F#₄ from the Group 2 tears motive, the chords in the verse belong to Group 1, and inserting F#₄ at this juncture upsets the strict chromatic ordering of the motive.

of functional harmony, it does not appear in the network.⁴² Arrows labeled with an I operation map the first two harmonies of the introduction onto the first two of the chorus. An arrow labeled PR relates the terminal harmonies of these sections. T_{10} arrows map the harmonies of the introduction onto those of the bridge. A rich fusion of pop-rock harmony and transformational procedures, “Lonesome Tears” illustrates how NROs, functional harmony, a chromatic line involving $\hat{5}$, and transformational relationships interact in a pop-rock song.

v. seventh chords

Many pop-rock chord progressions combine triads and seventh chords. In such progressions, chordal sevenths typically act non-functionally as colorations of triads. To illustrate, Example 9(a) presents the introduction to “Dinosaur” by King Crimson.⁴³ The introduction divides into two four-measure units; mm. 5–8 vary the harmonies and voicings of mm. 1–4. Each four-measure unit harmonizes a series of five chord roots, E–C–E \flat –C–G, with triads and seventh chords. I interpret the E $^{\circ 6}_3$ triad in m. 3 as a C⁷ chord with no root, and I interpret the C minor-minor seventh chord (C⁻⁷) in m. 7 as an embellishment of E \flat +. Each four-measure unit features a pedal pitch: G $_3$ in mm. 1–4, G $_4$ in mm. 5–8.

The progression’s ambiguous tonality (E minor or G major?), chromatic relations among E-, E \flat +, and G+, and non-functional dominant-seventh chords make a meaningful Roman numeral analysis difficult.⁴⁴ The seventh chords also strain a neo-Riemannian approach. One way to approach this problem is to excise the chordal sevenths. The progression then reads ⟨E-, C+, E \flat +, C+, G+⟩, and the NROs that

42 Each four-measure unit in the verse may be understood as an elaborated I– \flat VII–IV progression.

43 King Crimson 1994.

44 For further discussion of the tonal structure of “Dinosaur,” see Robison 2002.

Group 1
 Shared note: C#
 In introduction, verse, and chorus
 Tears motive: (A#, A+, G#)

(a) Beck, "Lonesome Tears," two groups of triads.

Verse

Group 2
 Shared note: B
 In bridge
 Tears motive: (G#, G#, F#)

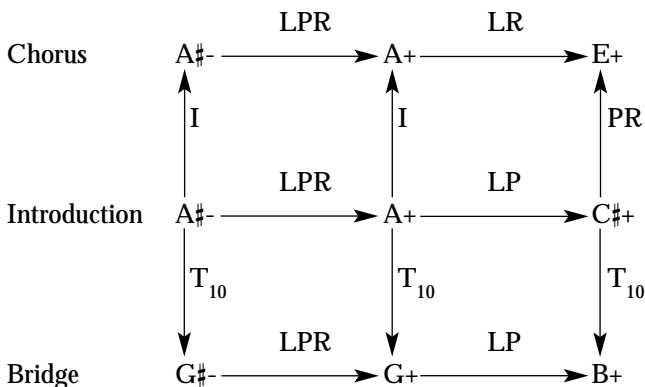
Chorus

Bridge

Tears motive: (G#, G#, F#)

Upper staff: strings, keyboard
 Lower staff: bass

(b) Beck, "Lonesome Tears."



N.B.: LPR = P'

(c) *“Lonesome Tears,” transformational network.*

example 8. [continued]

map one triad to the next are $\langle L, PR, RP, LR \rangle$. These NROs can then be modified to accommodate seventh chords. Julian Hook’s *cross-type transformations* use NROs in tandem with the inclusion transformation \subset to map a major or minor triad to the unique major-minor seventh or half-diminished seventh chord that contains that triad.⁴⁵ To illustrate, Example 9(b) provides a transformational network for the King Crimson progression. Horizontal arrows are labeled with cross-type transformations. $L\subset$ maps the opening E- triad onto C^7 .⁴⁶ This transformation may be understood in two stages: L maps E- onto an implicit $C+$, and \subset maps $C+$ onto C^7 . $\supset PR$ maps the second chord, C^7 , onto E_b+ . This may likewise be understood in two stages: \supset , the inverse of \subset ,

45 See Hook 2002, 110–12.

46 Callender’s 1998, 224, “split” relation effects the same mapping by “splitting” the fifth of a minor triad into the two notes that flank it by semitone, e.g. $\{E, G, B\} \rightarrow \{E, G, B_b, C\}$.

maps C^7 onto an implicit C_+ , and PR maps C_+ onto E_{b+} . In similar fashion, RPC maps E_{b+} onto C^7 through an implicit C_+ , and $\supset LR$ maps C^7 onto G_+ through an implicit C_+ . An analysis that invokes cross-type transformations has the advantage of employing the NROs discussed in connection with the triads-only analysis, $\langle L, PR, RP, LR \rangle$, extending them in a natural way to accommodate seventh chords: $\langle LC, \supset PR, RPC, \supset LR \rangle$. Two further operations appear in the network: “P,” so named because of the parallel relation between the C_+ and C_- triads contained in C^7 and C^{-7} respectively, and \subset , the traditional inclusion transformation, which maps E_{b+} onto C^{-7} .⁴⁷

47 For additional operations on seventh chords, see Childs 1998, Douthett and Steinbach 1998, Gollin 1998, Hook 2002, 98–101 and 110–18, and Strunk 2003.