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Online publications of the Gesellschaft für Popularmusikforschung/ German Society for Popular Music Studies e. V.
Ed. by Eva Krisper, Eva Schuck, Ralf von Appen and André Doehring
www.gfpm-samples.de/Samples16/revosborn.pdf
Volume 16 (2018) - Version of 2/21/2018

CHRISTOPHER DOLL (2017). *HEARING HARMONY. TOWARD A TONAL THEORY FOR THE ROCK ERA.*

Review by Brad Osborn

Christopher Doll's recent book *Hearing Harmony: Toward a Tonal Theory for the Rock Era* is »the first academic monograph devoted entirely to chords in the popular sphere« (1). Given the plethora of journal articles, chapters in edited collections, and large *portions* of monographs devoted to rock harmony, this claim is astounding—especially because it's true.

Doll's Introduction quickly reveals his uncanny ability, sustained throughout the monograph, to anticipate logical rebuttals just as the reader begins to formulate them. In refining his primary object of study (»harmony«), Doll carefully differentiates between the *changes* (»a kind of melody of chords«) and the polyphonic definition more familiar to music theorists (»all notes in a musical texture, including those of the lead and backing vocals«) (8).

In Chapter 1 (»Tonic and Pretonic«) Doll tiptoes trepidatiously into the waters of tonal center *without* reference to either »scale« or »key.« His method for finding tonic is revealed in a discussion of Björk's »Hyperballad« (24). It is essentially a two-step process, with an optional third step for confirmation. First, a collection of pitch-classes in the melody, (B♭, C, D, E♭, F, G, A), eliminates tonics *not* contained in that collection (e.g. C♯). Second, the strings' and lead vocal's emphasis on B♭ and F confirm B♭ out of the four *likely* tonics (B♭, C, F, G).[1] Though not essential, a tonic »chord« on B♭ can then confirm the tonic.[2]

Doll's method of finding tonal center is, to be sure, complex, but perhaps just as complex as actually *hearing* harmony? It is obviously less pragmatic than defaulting to an approach that I have elsewhere called »diatonic major

1 On page 45 Doll lists Ionian, Dorian, Mixolydian and Aeolian as the only viable diatonic tonal centers.

2 By »chord,« Doll really does mean a simultaneity played by a guitar or keyboard, rather than the ethereal floating »harmony« that is more-or-less addressed in step 2. »Hyperballad« contains no such chord, and is therefore exemplary.

until proven otherwise.«[3] Such an approach would find the diatonic major tonic in »Hyperballad« in just one step—the two flat collection would default to B♭ major. So, what are the conditions under which a diatonic major could be »proven otherwise«?

Doll would agree with me that clear tonic-oriented contrapuntal motions, especially in the lead vocal melody, can establish tonal centers on scale-steps other than diatonic major. Lorde's hit song »Royals«, despite a one-sharp collection, confirms its pitch center through lead-vocal melodies that emphasize $\hat{5}$, $\hat{3}$, and $\hat{1}$ in D Mixolydian. R.E.M's »Losing my Religion« articulates an Aeolian tonic with Em (v) and A minor (i) chords supporting $\hat{2}$—$\hat{1}$ lead vocal melodies. But when such tonic-oriented contrapuntal motions *fail* to disambiguate a mode from its relative major, as is so often the case in rock, I tend to hear the former only when it contains a true leading tone (admittedly scarce). But privileging the leading tone over the subtonic is, as we shall see, antithetical to Doll's theory of dominant function.

Radiohead's »Lucky«, analyzed at length throughout Chapter 1, seems tailor-made to illustrate Doll's expanded conception of dominant function, which he renames the *pretonic function*. »Lucky« has an unmistakable E pitch center in both its verse and chorus. The lead vocal melody starts on G, climbs up to B, and descends stepwise to E. By showing just how many different chords precede that tonic, Doll aims to prove how many different chords provide pretonic function in rock: B minor in the verse (suggesting Aeolian), A major at the onset of the chorus (suggesting Dorian), and finally B7 at the end of the chorus (suggesting harmonic minor, preceded by an augmented sixth chord!). Doll's valuable contribution here is to think of dominant function both in terms of predictive potential—each of these three chords predicts tonic—and in terms of scale-degree content.[4] In service of the latter, Doll introduces the distinction between »lead dominant« (those containing the leading tone, e.g. B7) and »rogue dominant« (those containing the subtonic, e.g. Bm).

Doll has anticipated the obvious counterargument that his »pre« seems to mean »preceding« as much as »predicting«. Rather than risk diluting the definition of dominant—that most potent of forces in tonal music—to essen-

3 See Osborn, Brad (2016). *Everything in its Right Place. Analyzing Radiohead*. New York and Oxford: Oxford University Press, p. 150. Doll is almost ready to support when he mentions rock's »diatonic default« (44) scalar collection.

4 In this we can sense a debt to Dan Harrison's (1994) work, cited throughout the chapter. See Harrison, Daniel (1994). *Harmonic Function in Chromatic Music. A Renewed Dualist Theory and an Account of its Precedents*. Chicago: University of Chicago Press.

tially »before the tonic«, he defends the point in using an *intra-opus* approach: »we will thus describe the AM triads in the chorus of ›Lucky‹ as primarily pre-tonics, because they resolve that way repeatedly throughout the song« (26). I do, however, wonder how an *inter-opus* approach would play out here. If, for example, »once we know the AM triads are consistently followed by stable Em triads, each AM will undoubtedly be heard as projecting pre-tonic function« (25), will we then begin to hear major IV chords *in toto* as predicting minor tonic?

Having defined tonic and pretonic functions, Chapter 2 (»Chains, Numerals, and Levels«) traces predictive potentials backward into the pre-pretonic, pre-prepretonic, and so forth. Doll's chains brilliantly disentangle predictive potential from numerals. He points out that classical theory already does this: II, ♭II, and IV each express predominant function despite their different numerals. In a clever reversal, he then shows how the subdominant (IV) regularly occupies both the pretonic (<IV—i>) and pre-pretonic (<IV—V—I>) positions in a rock chain.[5] After asserting that »as an aural quality, function is not knowable in the abstract; it must be assessed by ear in the context of a musical passage« (60), Doll counters with »to hear a chordal root in a scale is frequently also to hear a function, and vice versa« (66), attentively balancing *intra-opus* and *inter-opus* approaches.

Doll spends a lot of time in this chapter debating chord tones, non-chord tones, implied chord tones, and omitted chord tones. This continued attention to chords, rather than counterpoint, made me wonder about Schönberg's dictum: »watch the bass line«.[6] Doll is correct that »a root of $\hat{5}$ is not even a *requisite* for dominant function« (26)—but only in guitar chords, a distinctively inner-voice sonority.[7] In the bass register, $\hat{5}$ either struck by the pianist's left hand or plucked by the bassist, has a profound ability to affect our hearing of dominant function.

Chapters 3 and 4, consisting largely of nearly exhaustive lists of rock's most schematic chord progressions, will likely end up being the most widely cited section of this book. In Chapter 3 alone, the list of two-four chord schemata numbers 77, each proved with a multitude of examples. The breadth

5 < > is Doll's chiffre for chord progression, which I will be using here as well.

6 Schönberg, Arnold (1967). *Fundamentals of Musical Composition*. Ed. by Gerald Strang and Leonard Stein. London: Faber and Faber, p. 118.

7 As Allan Moore has shown, the guitar is usually playing the role of »harmonic filler« relative to some »functional bass layer« played by the bass guitar or keyboard. Even when the guitar is playing solo, its lack of fullness in the low register (especially the acoustic guitar) severely impacts its ability to produce a true functional bass layer. See Moore, Allan (2012). *Song Means: Analysing and Interpreting Recorded Popular Song*. Farnham: Ashgate, p. 21.

and depth of Doll's encyclopedic knowledge of chord progressions is rivaled perhaps only by Walter Everett in *The Foundations of Rock*.[8] Crucially, Doll's attention to function never waivers in these lists. He shows how V acts not as dominant, but as a »pre-subdominant« (94) in the common <I—V—IV> progression. For schemata greater than two, Doll even entertains what could be termed hierarchical, or »second level« analyses. Allowing for rotational arrays, <IV—I—V> can, for instance, either project a larger <V—I> motion if it starts on V, or, <IV—V> if it starts on IV, or even <I—V> if it starts on tonic. It is here that Doll confronts two of the most discussed pop-rock schemata: the »zombie« <Am—FM—CM—GM> and the »journey« <CM—GM—Am—FM>. Because each of Doll's schemata allows for rotational (yet not permutational) variation, I would assume these two were in fact the same schema—starting on the third chord of either gets you the other. But that's because I'm assuming a major tonic for both. Given these four chords, Doll would only hear a »zombie« progression if it projected the numeric effects <I—↓VI—↓III—↓VII>, while reserving the »journey« for major mode rotations, including *both* <I—V—↑VI—IV> and <↑VI—IV—I—V>. Like Scott Murphy's key-agnostic characterization of this four-chord loop,[9] Doll's astute naming system does *not* reduce a chordal schema to a single set of numerals, but rather celebrates the ambiguity that attends when »the <↑VI—IV—I—V> phrasing of the ›journey‹ typically projects, at least to some degree, numeric effects of <I—↓VI—↓III—↓VII>« (118).

Doll's idiosyncratic chord notation here deserves some attention. He eschews typical sharps, flats, and naturals in favor of up and down arrows to denote chordal roots: ↑ corresponding to scale-steps found in the major scale, ↓ to those in the minor scale. More controversially, until halfway through Chapter 4, Doll's chordal notation excludes chord quality (note that all roman numerals in the previous paragraph are uppercase). While Doll celebrates this agnostic notation as emblematic of rock's ambiguity, it occasionally leads to confusion. For example, in his analysis of Alanis Morissette's »You Oughta Know« (<I—↓VII—↓III—IV>, 133), I was only able to appreciate the chromatic relationship between the first and second chords because I knew, from memory, that the first chord was major. I therefore found his comparison between the Alanis Morissette song and Moby's »Natural Blues« suspect: »[a]t slower tempos, however, the ↓III will assert itself as an alternative tonic … as

8 Everett, Walter (2009). *The Foundations of Rock: From »Blue Suede Shoes« to »Suite: Judy Blue Eyes«*. Oxford: Oxford University Press.

9 Murphy, Scott (2014). »A Pop Music Progression in Recent Popular Movies and Movie Trailers.« In: *Music, Sound, and the Moving Image* 8(2), pp. 141–162.

happens in the chorus to Moby's … Natural Blues« (133). Unlike the Alanis Morissette, the Moby example has a *minor* first chord. This distinction is entirely lost in both his notation and prose, requiring instead the reader's inner ear.

It is not until halfway through Chapter 4 (»Pentatonic, Meta-, and Extended Schemas«) that Doll does begin to specify chord quality, and, in some cases, even chromatic voice-leading. This increased specificity helped me understand the enigmatic harmony in Soundgarden's »Black Hole Sun«, in which each sonority contains both a chordal root, quality, and scale-degree: <IM, $\hat{1}$—Im, ↓$\hat{3}$—↓VII, ↓$\hat{7}$—↑VI, ↑$\hat{6}$—↓VI, ↓6—V, $\hat{5}$>. Comparing this ingenious system to Doll's earlier practice in which »[t]he numerals of these sonorities, which denote only their roots, give no indication of the prominent ascending string of semitones … any numeral can hypothetically include any scale degree« (137), convinced me that amending the entire book's notation system to this more specific chromatic designation would be worth giving up the ambiguity.

Chapter 5 (»Transformational Effects«) has nothing to do with the Neo-Riemannian transformational theory popular in North America. Instead, it describes an individual listener's changing perceptions of something heard either earlier in the song, remembered from a different song, or of an imagined schema. A section on modulation expands Doll's celebration of the relative major/minor ambiguity in the »zombie« and »journey« progressions to larger examples in which these two tonal centers span separate formal sections.[10] Using the Foo Fighters' »Everlong« as an example, Doll shows himself incredibly aware of not just chords and harmony, but also melody. He shows that the verse (<DM—Bm>), despite starting on D, is actually centered in Bm, while the chorus, despite starting on Bm (<Bm—GM—DM>), is in D major. Hypermeter is no longer privileged, but instead a source of irony. Despite this astute reading, I remain unconvinced of any tonic *besides* D major in »Everlong« due to the lack of B minor's would-be leading tone A♯. Such a conservative approach to diatonic-major-monotonality seems like exactly the thing that Doll is begging me to unlearn.

Chapter 6 (»Ambiguous Effects«) is a rhetorical *tour de force* in which Doll concretizes and synthesizes several points regarding ambiguity made throughout the book. He is especially interested in five types of »centric ambiguity«. Minor-third-related tonal centers, discussed at length in Chapters 3 and 5, make up the most common type, now renamed »narrow«, followed by

10 Doll previously addressed this hallmark of rock in his article on »Breakout« choruses. See Doll, Christopher (2011). »Rockin' Out: Expressive Modulation in Verse-Chorus Form.« In: *Music Theory Online* 17(3).

»wide« (perfect 5th), and, in order of frequency in the repertoire: major third, major second, and minor second. Doll now seems more willing to entertain »absent tonic« modes of hearing than in previous chapters.[11] He celebrates the ambiguity of the incessant <FM—GM> progression in Fleetwood Mac's »Dreams« by stating that it's »not altogether clear whether the scale degree 1 we seek is C, <IV—V—I>, or A <↓VI—↓VII—I>«, but still cautions that the lack of a D chord in the <GM—AM> progression of Jane's Addiction's »Jane Says« constitutes »a definite strike against D as center« (247).

Throughout the text, Doll deconstructs monolithic concepts that have meant too many things for too long (e.g. »key«, »dominant«) into carefully defined, discrete concepts (e.g., »rogue dominant«, »reorienting effect«). Readers who share Doll's propensity for atomism will, for example, celebrate his insistence that we address all 13 types of potential tonal centricity (222, 238) for a single song, or his renaming of all formal sections (e.g., chorus) as six separate phenomenological »effects« (e.g., »chorus effect«, 271). For readers who find this increased particularity cumbersome to work with, I leave you with Doll's own clever defense, which turns rock's revolutionary, anarchic ethos on its head: »we are merely being good rock citizens in our revolt against the hegemonic dogma that the music be appreciated in certain ways« (268).

Christopher Doll (2017). *Hearing Harmony. Toward a Tonal Theory for the Rock Era*. Ann Arbor, MI: University of Michigan Press (320 pp., Paperback: $39.95; 35,99 €).

11 Mark Spicer's 2016 article addresses absent, fragile, and emergent tonics. While it is likely that Doll's manuscript was largely completed before Spicer's article was published, this concept has been a hallmark of Spicer's work since 2009, and I therefore believe its »absent citation« from Doll's monograph to be intentional, since a single monotonal hearing between disparate sections, usually defaulting to diatonic major, would be nearly antithetical to most of Doll's theory. See Spicer, Mark (2016). »Fragile, Emergent, and Absent Tonics in Pop and Rock Songs.« In: *Music Theory Online* 23(2).