A Relational Network Approach to Rock Music Syntax

* Nobile 2016 argues for a syntactical approach to harmonic function in rock music. “This brings me to my second claim: a pure function-as-syntax definition is best suited to analyze pop and rock music.” (Nobile 2016, 151).
* Regardless of whether a “pure” syntactical approach is ideal for this (or any) repertoire, we agree it is a worthwhile first step.
* Nobile 2016, however, still depends on chord categories and energetic notions of pitch stability for defining his syntactical functions. Pitch stability is paradigmatic, not syntactical (“When formal stability intersects with pitch stability, we get syntactical tonic function. Thus a functional circuit expresses a progression from stability (T) through instability (PD – D) then back to stability (T).” Nobile 2016, 164).
* Nobile’s notion of the functional circuit is also not solely a syntactical unit but is also, as evidenced by his examples, conceptually dependent on chord categories (i.e., chord function paradigms). Why for instance does he consider the functional circuit incomplete (ending with a half-cadence on V) in the first phrase of Example 1? The author appeals to the rhetoric of the antecedent/consequent phrase. But if both phrases had ended on I chords, would we still implicate that rhetorical scheme? The author is begging the question. (“As is generally the case with a parallel period, this section contains a functional half-circuit in the antecedent phrase and a full circuit in the consequent. Identifying the prolongational structure of the antecedent’s chord progression is simple: one measure of tonic, two measures of pre-dominant … and one measure of dominant.” Nobile 2016, 177).
* We propose instead a *metrical* unit to perform the role of Nobile’s functional circuit. This is the normative four-bar hypermeasure typical of the main sections of pop and rock music (citations needed). For our purposes, *a chord’s position in the hypermeasure alone determines its syntactical category*. In this way, we can construct a relational network that relies in no way on chord category. This hypermetrical model is shown below in Figure 1.

Measure: 1. 2. 3. 4.

Functional Bin: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

FIGURE 1: The normative four-bar hypermeasure. Each measure can be thought of as a bin into which chords are placed.

* Notice that in the model proposed in Figure 1, there are four possible syntactical categories (one for each bin in the hypermeasure), as opposed to the three of Nobile’s functional circuit and Laitz’s phrase model (T, PD, and D). In Nobile’s system, the same syntactical function (T) is forced to occur in two different locations in the syntactical ordering (an obvious problem). In our system, the initial and terminal functions are distinct.
* Although he is somewhat in the minority within the literature, we adopt Edward T. Cone’s rhythmical conception of form. (“…musical form, as I conceive it, is basically rhythmic. It is not, as conventional analysis would have it, thematic, nor, *pace* Schenker, harmonic. Both of these aspects are important, but rhythm is basic.” Edward T. Cone. 1968. *Musical Form and Musical Performance*. New York: W.W. Norton, 25).
* We can refer to the four functions as F1, F2, F3, and F4.
* The syntactical functions themselves are not useful for analysis, but they allow us to build a relational network out of the *undirected chord root intervals* from one functional bin to the next (Figure 2).

Measure: 1. 2. 3. 4.

Functional Bin: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Chord Root Interval: I1 I2 I3 I4

FIGURE 2: The undirected chord root interval between functional bins.

* I1 refers to the interval between the roots of the chords located in the F1 and F2 bins, and so on. (Chord Root Motion or Chord Root Interval? I.e., transformational or GIS approach). Note that I4 is the chord root interval from the fourth measure of a hypermeasure to the first measure of a hypermeasure. It does not matter whether this is an actual return to the beginning of a four-measure vamp (i.e., the same chord that occurred in m. 1 of the hypermetrical unit) or whether it is a continuation of the phrase to a new chord, continuation into the next phrase, or even continuation into a new formal section (although these options will be analyzed in the discussion section). In all cases, the measure immediately following F4 is a hypermetrical downbeat (i.e., F1).
* Chord root motion is a viable approach to harmonic function and has been applied to rock music in the past. Stephenson, Ken. 2002. *What to Listen For in Rock: A Stylistic Analysis*. New Haven, CT: Yale University Press, 103-104; Miller, Gabriel. 2008. “The Death and Resurrection of Function.” *Ohio State Online Music Journal* 1 no. 1. osomjournal.org/issues/1-1/miller (concept of “chord behavior”); Tymoczko, Dmitri. 2003. “Function Theories: A Statistical Approach.” *Musurgia* 10 nos. 3-4: 35-64.
* The chord root motion is said to be *undirected* because - P5 is equivalent to + P4, etc. We will use only the descending root motion in our notation. There are therefore 12 possible undirected chord root motions.
* The connected sequence of four chord root intervals is called an I-sequence. The number of unique I-sequences is 12^4 = 20,736.
* Figure 3 shows an example.

Measure: 1. 2. 3. 4.

Functional Bin: \_\_\_\_\_DM\_\_\_ \_\_\_\_CM\_\_\_\_ \_\_\_\_GM\_\_\_\_ \_\_\_\_GM\_\_\_\_\_

Chord Root Interval: - M2 - P4 0 - P4

FIGURE 3: A sample analysis of the cadence phrase of a 12-bar blues form in the key of G major.

* In this case, the sum of the chord root intervals is -12 semitones (-2 – 5 – 0 – 5 = -12), which means that the I-sequence returns to the same chord that it began with and is therefore *capable* of behaving as a vamp. The number of unique vampable I-sequences is \_\_\_. (must sum to 12 or a multiple of 12)
* Because the analysis focuses on the root motion *between* chords and not the chords themselves, the harmonic and modal ambiguity that is characteristic of rock music is analytically unproblematic. For example, the chords used in Figure 3 would be heard as V – IV – I – I within a 12-bar blues form, but might be construed as I – bVII – IV – IV, as in the chorus of “Sweet Home Alabama.” (Lit). This difference in roman numeral interpretation is equivalent to a difference in modal interpretation – the former Ionian and the latter Mixolydian. Homologous chord progressions such as this would be grouped together as instances of the same I-sequence.
* I-sequences and I-sequence segments map onto traditional notions of schema theory. The sequence [-M2, -P4, -P4, 0] is a close variant of the sequence shown in Figure 3, and was identified by Biamonte 2010 as a rock schema (the “double-plagal progression” as in “Sympathy for the Devil”). Other previously identified schemata include the Aeolian cadence, \_\_\_\_.
* If we want to be bratty, we can point out that our approach fits the missing possibility in Nobile’s Table 1 and discussed in footnote 7. “On the other hand, I have not included an area in which function-as-progression and function-as-syntax intersect without function-as-category because I cannot envision what such a theory would look like.” (Nobile 2016, 152 fn. 7).