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# Anti-Circles as an Explanatory Model for Harmonic Motion in Pop-Rock Music

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## Four Main Types of Non-Circle Progressions

As readers of this journal all know, macro analysis takes the falling fifth and the resultant circle progressions as its foundational harmonic motion. And for good reason: much of the tonal music we hear, play, and study, features progressions derived from the circle of fifths. But thankfully, not all music comes from just falling fifths; as Bruce Benward stated, “[a] composition containing only circle progressions, void of interruption, would be quite monotonous and lack spontaneity.”<sup>1</sup> There are, in fact, a number of ways that composers deviate from the falling-fifths patterns. According to Benward, these “non-circle type” progressions divide into four main categories, as shown in Figure 1.<sup>2</sup>

### *Non-Circle Progressions*

1. Positioning chords or areas
2. Parallel movement
3. Pre-dominant collections
4. Anti-circles

**Figure 1. Four types of non-circle progressions.**  
**Benward, 2005.**

Three of these categories are relatively straightforward. “Positioning chords” (or “positioning areas”) are quite simply links, or places where the harmony is just about to begin or has just completed a circle progression. “Parallel movement” describes those places where counterpoint takes over and chords simply move in first-inversion, as in ascending or descending sequential passages. “Predominant collections”

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1. Bruce Benward, “In Search of Musical Logic,” *Musical Insights* 3 (2005): 30.

2. Benward outlines each of these categories in “Musical Logic,” 30–35. For further reading, see Kristy Bryden, “Maximizing Macro: A Macro-Analytical Explanation of Non-Circle Progressions,” *Musical Insights* 2 (2002): 23–34.

occur just before strong cadences and serve to set up the dominant arrival. As Benward pointed out, since so many chords can lead effectively to the dominant, there is often some kind of non-circle motion involved in building tension during these cadential passages.

A fourth and final type of non-circle progression involves what are sometimes called “anti-circles.” Anti-circles occur when, instead of moving by falling fifth, the harmony moves by ascending fifth. As Benward’s graphic (shown here in Figure 2) clarifies, anti-circles are fundamentally different than typical circle progressions.



Figure 2. Graphic from Benward showing anti-circles.  
Benward, 2005.

In an anti-circle, the fifth of any given chord becomes the root of the next chord. This is of course the opposite of a “forward” circle progression, where the root of a given chord becomes the fifth of the next chord. As Benward pointed out, anti-circle progressions are relatively rare in common-practice tonal music and—not unlike parallel movement—tend to occur most often in sequential passages.<sup>3</sup> This is certainly the case in his analytical example (given here as Figure 3), which shows how an ascending sequence results in a clear anti-circle progression beginning on B-flat.

B $\flat$  —————> F —————> C —————>

Figure 3. Bach, English Suite III, Prelude, mm. 100–109.  
Benward, 2005.

3. Bruce Benward, “Musical Logic,” 31–32.

Figure 3, continued.

In his 2002 essay on macro analysis and chromatic harmony, Daniel Sommerville proposed the notational symbols shown in Figure 4 as a representation for anti-circles.<sup>4</sup>

Figure 4. Symbol for retrogression or anti-circle.  
Sommerville, 2002.

The over-arching slur represents the opposite of a descending fifth, which of course is represented by an under slur. Sommerville provides the example shown in Figure 5 from Mozart's Jupiter Symphony. Again here we see a long anti-circle progression heard as a sequence that eventually brings back the tonic (D minor) before entering the cadential progression.

4. Daniel Sommerville, "An Expanded Macro Analysis System for Chromatic Harmony," *Musical Insights 2* (2002): 59–60.

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*f*<sub>3</sub> *p*<sub>3</sub> *f* *p* *f* *p* *f* *p* *f* *p*

*54*

*f* *p* *f* *p* *d*

*d* *E<sup>b</sup>(N<sup>6</sup>)* *g<sup>#</sup>7* *A* *It<sup>+</sup>6* *A*

Figure 5. Mozart, *Symphony 41, II*, mm. 51–56.  
Sommerville, 2002.

Still, these examples are carefully chosen; both authors stress that anti-circles are not the norm in common-practice tonality. They are exceptional and are used in specific ways for short-term effects. But is this always the case? What if we studied a repertoire where anti-circles were more central? To find such a repertoire, one need only turn on the radio and tune it to most any pop or rock music channel. While not at home in common-practice tonality, anti-circles do play a prominent role in pop and rock music. This essay presents some contexts where anti-circles are clearly a central part of the tonal language. The focus will be on repeating patterns—the ground basses of pop and rock if you will—and the role anti-circles play in them.

Figure 6 provides a few definitions that should prove useful as we move through the examples. Please note that, while the “anti-” in anti-circle comes from the motion by ascending fifth (as opposed to descending fifth), anti-circle progressions are equally common as descending fourths (and thus invoke strong plagal motions). I will simply refer to this motion as A5/D4. Also note that this discussion

focuses on segments from the complete circle of fifths, and sometimes there will even be one fifth “missing,” as in the elided or “gapped” progressions.<sup>5</sup> Furthermore, the notion of rotation—both in terms of tonal emphasis and the circle of fifths—will be an important one as we move forward.

#### *Anti-Circle Progression*

Harmonic succession with root motion moving in A5/D4, such that the fifth of a given chord becomes the tonic of the next chord.  
Example: C–G–D–A–E, etc.

#### *Elided (or “Gapped”) Progression*

Progression in fifths where one fifth is simply skipped over. Example: C–G–A–E.

#### *Rotated Tonic Emphasis*

When the same chord succession is heard as having one tonic in one setting and a different tonic in another. Example: G–F–C as V–IV–I in C versus I–♭VII–IV in G.

#### *Rotation of the Circle of Fifths*

An instance where a set of relationships (i.e., a shape) is held, but rotated to incorporate new members of the circle of fifths.

**Figure 6. Definitions.**

## Triangle Progressions

All the progressions represented in Figures 7–11 contain three chords. Each progression contains two A5/D4 motions (represented by solid lines), plus one other motion (represented by a dotted line). When mapped onto a truncated circle of fifths, these progressions form clear triangles.<sup>6</sup> Arrows show the clockwise motion of the progression. A small box indicates the initiating chord in the progression, while a small circle highlights its ending point. To the left of each circle are some defining characteristics, two or three definitive song examples, and an illustration

5. The term “gapped fifth-progression” is taken from Guy Capuzzo’s work. See his article, “Sectional Tonality and Sectional Centricity in Rock Music,” *Music Theory Spectrum* 31/1 (2009): 158.

6. The circle of fifths used here is abbreviated for convenience.

of the macro analysis of the progression in C major.<sup>7</sup>

Figures 7–9 show three different ways that pop-rock music moves between the I, IV, and V chords. Figure 7 simply shows the progression that results when a pair of A5/D4 motions depart from the subdominant. The goal of this motion is the dominant, so it is commonly heard at the end of phrases. This is the case in both the Paul Simon and the Tom Petty songs listed: after an initial tonic, there is motion to the subdominant, which quickly returns to tonic before moving to the dominant to end a phrase. The progression will typically return to tonic and start again, but there are cases where the motion simply moves from the dominant back to the subdominant, thus completing the triangle.

DEFINING CHARACTERISTICS

- Consecutive ascending fifths
- Often used at end of phrases
- May or may not return to tonic after motion to V

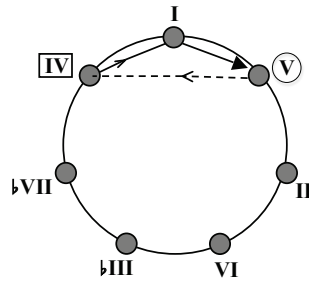
DEFINITIVE EXAMPLES

- Paul Simon, “Me and Julio...”
- Tom Petty, “Wildflowers”

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Figure 7. IV–I–V.



DEFINING CHARACTERISTICS

- Rotates departure to the tonic
- Basically an embellished motion to IV
- Consecutive fifths are incidental

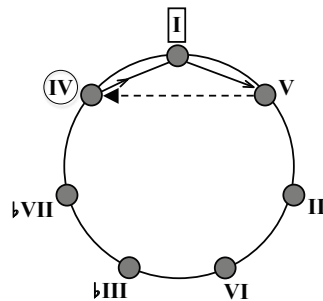
DEFINITIVE EXAMPLES

- The Who, “Baba O’Riley
- Pete Townshend, “Let My Love Open the Door”

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Figure 8. I–V–IV.



7. Numerous examples for each progression are given at the end of the article.

DEFINING CHARACTERISTICS

- Rotates departure to V
- Clearest “retrogression”
- Can be difficult to discern from I-♭VII-IV

DEFINITIVE EXAMPLES

- Warren Zevon, “Werewolves of London”
- Johnny Cash, “Ring of Fire”

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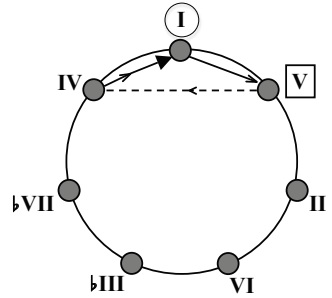


Figure 9. V-IV-I.

Figures 8 and 9 rotate the initiation point (shown in the small box) and form new progressions using the same three chords. In both cases, the resultant progression is a common one in this repertoire. The I-V-IV progression of Figure 8 is essentially an embellished motion from I to IV. The Who’s “Baba O’Riley”—with its famous “Teenage wasteland” lyric—is the quintessential example. In Figure 9, the harmonic motion departs from the dominant, resulting in the V-IV-I retrogression so famous in blues and rock.<sup>8</sup> Warren Zevon uses this progression throughout “Werewolves of London,” and it is featured in the chorus of Johnny Cash’s “Ring of Fire.”

In Figures 10–11, we see rotation working on a different, higher level. By rotating the entire triangle one notch to the left (i.e., counterclockwise), we form a new progression that still incorporates a pair of A5/D4 motions. In these two progressions, the subtonic chord (♭VII) replaces the dominant.

DEFINING CHARACTERISTICS

- Rotates triangle counterclockwise to ♭VII
- Sometimes called “double-plagal”

DEFINITIVE EXAMPLES

- Fatboy Slim, “Praise U”
- ZZ Top, “Gimme All Your Lovin’”

MACRO ANALYSIS IN C MAJOR

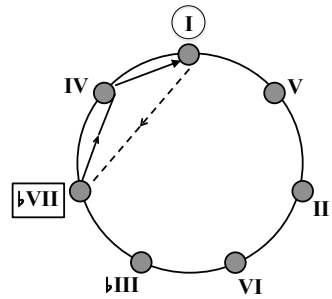


Figure 10. ♭VII-IV-I.

8. This progression is often confused with I-♭VII-IV. In most cases, the voice leading clarifies things.

## DEFINING CHARACTERISTICS

- Is inverse of I–II–V
- Can be difficult to discern from V–IV–I
- Often a four-chord I–♭VII–IV–I progression\*

## DEFINITIVE EXAMPLES

- “Sweet Home Alabama,” Lynyrd Skynyrd
- The Go-Go’s, “Our Lips Are Sealed”
- The Beatles, “Hey Jude” (ending)\*

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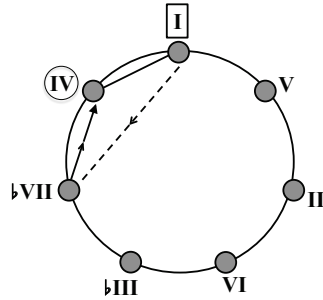


Figure 11. I–♭VII–IV.

In Figure 10, the A5/D4 motions actually bring the return of the tonic via two plagal motions. In fact, this progression is sometimes called the “double-plagal” motion.<sup>9</sup> Clear examples of this progression come from the techno hit “Praise U,” by Fat Boy Slim, and from the chorus of ZZ Top’s hit, “Gimme All Your Lovin’.”

Figure 11 keeps the same triangle, but rotates the initiation point to the tonic and forms the famous I–♭VII–IV, or the “Sweet Home Alabama” progression. This progression is very widespread, especially in rock (as opposed to pop). “Back in Black” by AC/DC and Credence Clearwater Revival’s “Fortunate Son” provide just a couple more very clear examples. In order to spread this motion evenly over four measures, the progression sometimes returns to tonic within a single phrase, making the tonic chord both the departure and the goal. The fadeout of “Hey Jude” from The Beatles, which moves I–♭VII–IV–I, is the iconic example, but there are many others.

Of course, it is possible that these five triangle progressions all stem from the blues. In a standard blues progression, there are a few different places where anti-circle progressions occur. Figure 12 represents three passes through a standard 12-bar blues chorus. After the initial four-bar unit on tonic, there is motion to the subdominant for two bars. This subdominant then moves to tonic before the final phrase begins with dominant harmony, resulting in a IV–I–V chord sequence (shown in the shaded area). This progression actually occurs again when IV returns to I a final time, just prior to another motion to the dominant for the turnaround and return to the opening bar. As the other levels of Figure 12 show, both V–IV–I and I–V–IV are included—if perhaps incidentally—in the standard blues.

9. Walter Everett uses this terminology in his “Making Sense of Rick’s Tonal Systems,” *Music Theory Online* 10/4 (2004).



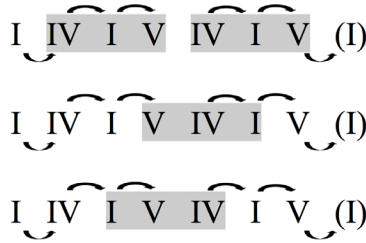


Figure 12. Blues Progressions.

### Trapezoid Progressions

While the three-chord patterns that formed the triangle progressions are all very common in rock music, there are a group of four-chord progressions that are equally prevalent. To form these patterns, a third A5/D4 motion is added to the progression. As seen in Figures 13–16, these patterns form a clear trapezoid when mapped onto the circle of fifths. We begin with Figure 13, which shows the foundational string of three A5/D4 motions, leading from ♭III back to I. Sometimes called “triple-plagal,” this progression is very much an extension of the ♭VII–IV–I “double-plagal” seen earlier in Figure 10. The chorus of “Jumpin’ Jack Flash” is a clear examples of the triple-plagal effect. The progression can also be made to sound more like an ascending sequence, as it does in the verse to Aqualung’s “Brighter Than Sunshine.” In Figure 14, the initiation point of the progression is rotated to tonic, creating a I–♭III–♭VII–IV harmonic pattern, with the subdominant as the goal. This is actually a more common pattern than that shown in Figure 13, perhaps because of the firm tonic beginning. Several songs feature this progression prominently, including Neil Young’s “Old Man” and Lenny Kravitz’s “Fly Away.”

#### DEFINING CHARACTERISTICS

- Three consecutive fifths; creates trapezoid
- Sometimes called “triple plagal”
- Can sound like ascending sequence

#### DEFINITIVE EXAMPLES

- The Rolling Stones, “Jumpin’ Jack Flash”
- Aqualung, “Brighter Than Sunshine”

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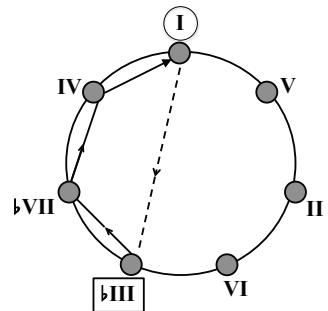


Figure 13. ♭III–♭VII–IV–I.

DEFINING CHARACTERISTICS

- Departure rotates to tonic
- Subdominant is goal

DEFINITIVE EXAMPLES

- Neil Young, "Old Man"
- Lenny Kravitz, "Fly Away"

MACRO ANALYSIS IN C MAJOR

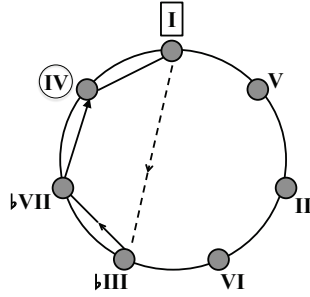


Figure 14. I-III- $\flat$ VII-IV.

DEFINING CHARACTERISTICS

- Rotates trapezoid to include V
- Sounds like descending sequence

DEFINITIVE EXAMPLES

- Duran Duran, "Rio"
- Fountains of Wayne, "All Kinds of Time"

MACRO ANALYSIS IN C MAJOR

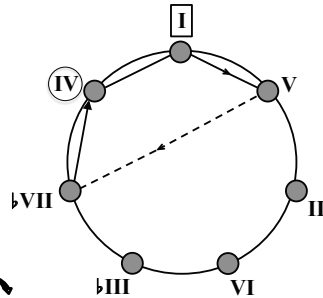


Figure 15. I-V- $\flat$ VII-IV.

Figures 15 and 16 show two rotations of the trapezoidal shape. In each case, tonic is the initial point and the subdominant is the goal. In the first rotation (Figure 15), the motion is I-V- $\flat$ VII-IV, which is a powerful progression, perhaps due to the combination of V and  $\flat$ VII, both of which have dominant function. Several songs take this progression to set their chorus, which usually features a strong title hook. This is certainly the case in Duran Duran's "Rio," and "All Kinds of Time," by Fountains of Wayne. In Figure 16, yet another rotation of the trapezoid results in a somewhat different progression. It is certainly less powerful, perhaps because it does not incorporate the  $\flat$ VII. Indeed, the progression is more attractive to pop acts—as opposed to rock—who strive for non-threatening moods and therefore avoid the force that goes with the lowered subtonic.

DEFINING CHARACTERISTICS

- A third rotation of the trapezoid to include II
- Generates three fifths

DEFINITIVE EXAMPLES

- Semisonic, "Closing Time"
- The Cure, "Just Like Heaven"

MACRO ANALYSIS IN C MAJOR

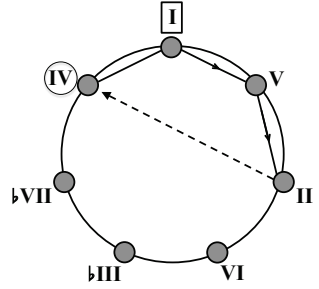


Figure 16. I-V-II-IV.

### Kite-Like Progressions

To this point, each progression studied has included either two or three consecutive A5/D4 motions. In Figures 17–18, we see progressions that span a fourth A5/D4 motion, but in practice, one member of this sequence is skipped, resulting in an elided or “gapped” fifth-progression. When mapped onto the circle, these unique progressions form a kite-like shape. For example, in Figure 17, the (F)–C–G–a motion can be thought of as an elided version of (F)–C–G–D–a, which contains an uninterrupted string of four A5/D4 motions. The resulting I–V–vi–IV progression is easily one of the most widely used in all of popular music. Established rock bands like U2 (“With Or Without You”) are drawn to it as much as more current pop-oriented acts, such as The Last Goodnight, who feature the progression in their hit song “Pictures of You.” And once again, as in the other progressions, a single rotation of the emphasis results in a new harmonic motion, as shown in Figure 18. The point of departure shifts to the submediant, while the goal of the progression becomes the dominant. This less stable version of the previous progression can be found in hits such as Toto’s “Africa,” and “Save Tonight,” by Eagle Eye Cherry.

DEFINING CHARACTERISTICS

- Clear example of a “gapped” or “elided” fifth
- IV–I–V is intact
- Very common in modern rock / top-40

DEFINITIVE EXAMPLES

- U2, “With or Without You”
- The Last Goodnight, “Pictures of You”

MACRO ANALYSIS IN C MAJOR

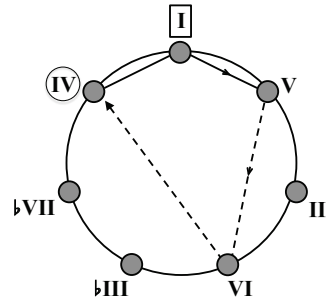


Figure 17. I-V-VI-IV.

DEFINING CHARACTERISTICS

- Rotation of the progression from Fig. 16
- Often used continuously
- Lack of tonic stress creates ambiguity

DEFINITIVE EXAMPLES

- Toto, "Africa"
- Eagle Eye Cherry, "Save Tonight"

MACRO ANALYSIS IN C MAJOR

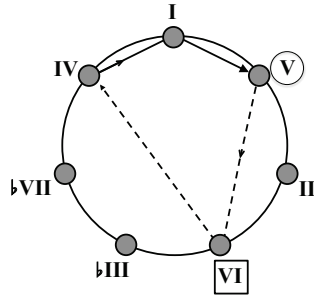


Figure 18. VI-IV-I-V.

Unique Examples

Figures 19–21 show three unique instances of anti-circle progressions. Figure 19 shows the primary harmonic motion that sets the verses to Brother Henry’s song, “Deep in the Dark.” As this shows, aside from one positioning motion, the entire progression consists of anti-circle motions. In Figure 20, we see how Jimi Hendrix’s “Hey Joe” completes four consecutive A5/D4 motions, this time with no “gaps” as seen in the kite formations from Figures 17–18. Finally, in Figure 21, we see a complex example by SpencerAcuff called “Cold Feet.” This beautiful ballad actually skirts the line between G# minor and B major. The final chorus (Figure 21) begins as the first did, but gets extended. The chords establishing the chorus feature a nice “gapped-fifth” progression—B-c#-g#-D#—which seems to lead to the dominant of G# minor. The extension occurs here, just as the harmony launches into three consecutive A5/D4 motions—B-F#-c#-g#—and the voice—perhaps beyond words at this point, switches to “whoa,” rather than trying to move the story forward.



Figure 19. Brother Henry, “Deep in the Dark.”

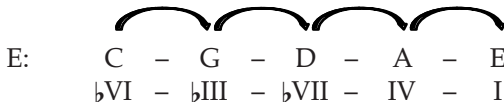


Figure 20. Jimi Hendrix, “Hey Joe.”

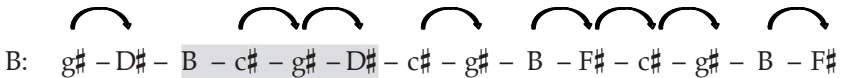


Figure 21. Spencer Acuff, "Cold Feet."

## Conclusions

As with any style of music, pop-rock has its stock harmonic patterns. Songwriters and performers in this style need to know these patterns as well as blues musicians know the 12-bar blues or jazz players know ii-V-I patterns. What is interesting here are a couple of things. First, when related to the circle-of-fifths, these patterns create familiar geometric shapes, making them easy to categorize and supplying an obvious pedagogical tool. Second is the role rotation plays. Regardless of which progression is taken as a point-of-departure, there is at least one rotation of the same chord succession that can yield another familiar harmonic pattern. This suggests how strongly economical pop-rock songwriters can be in terms of harmonic function.

Finally, it is important to note how incredibly pervasive each of the progressions covered here are in the pop-rock repertoire. The list which follows provides a partial list of songs that incorporate these progressions in one way or another. This list is in no way exhaustive; any careful listener will surely add many more songs to each category. It does, however, suggest that A5/D4 motion is crucial to this repertoire that is such an important part of our musical world. That said, the falling fifth will always be fundamental to any understanding of tonality. And indeed, it is important to stress that even pop and rock music primarily features common-practice major/minor tonality. But clearly there are numerous and important ways in which it diverges. This study suggests that anti-circles help represent a bit of that divergence.

## Song List

### *Triangle Progressions*

#### IV-I-V

- Fats Domino, "I'm Walkin'"
- Bill Monroe, "Georgia Rose"
- Paul Simon, "Me and Julio"
- Barenaked Ladies, "Call and Answer"
- Tom Petty, "Wildflowers"
- Tom Petty, "Free Fallin'"

*Triangle Progressions, continued*

## I-V-IV

- The Who, “Baba O’Riely” (F C B♭)
- Pete Townshend, “Let My Love Open the Door”
- Neil Young, “Helpless”

## V-IV-I

- Warren Zevon, “Werewolves of London”
- Johnny Cash, “Ring of Fire”
- U2, “Still Haven’t Found”

## ♭VII-IV-I

- Fatboy Slim, “Praise U”
- ZZ Top, “Gimme All Your Lovin’”
- Jackson Browne, “Looking East”

## I-♭VII-IV

- Lynyrd, Skynyrd, “Sweet Home Alabama”
- The Go-Go’s, “Our Lips Are Sealed”
- Fleetwood Mac, “Don’t Stop”
- AC/DC, “Back in Black”

*Four-Chord Examples*

## I-♭VII-IV-I

- The Beatles, “Hey Jude”
- The Rolling Stones, “Sympathy for the Devil”
- Tom Petty, “Last Dance of Mary Jane”
- Guns N Roses, “Sweet Child of Mine”
- Steve Miller Band, “Rock ‘N Me”

*Trapezoid Progressions*

## ♭III-♭VII-IV-I

- The Rolling Stones, “Jumpin Jack Flash”
- Aqualung, “Brighter Than Sunshine”

## I-♭III-♭VII-IV

- Neil Young, “Old Man”
- Lenny Kravitz, “Fly Away”
- Bryan Adams, “Run to You”
- Brandi Carlisle, “Losing Heart”

## I-V-♭VII-IV

- Duran Duran, “Rio”
- Fountains of Wayne, “All Kinds of Time”
- Neil Young, “Pocohontas”
- Led Zeppelin, “Hey Hey What Can I DO”
- Journey, “Girl Can’t Help It”

*Trapezoid Progressions, continued*

I-V-ii-IV

- Semisonic, "Closing Time"
- The Cure, "Just Like Heaven"
- Katy Perry, "Hot-N-Cold"

*Kite-Like Progressions*

I-V-vi-IV

- U2, "With or Without You"
- Journey, "Don't Stop Believin'"
- Green Day, "When I Come Around"
- Jason Marz, "I'm Yours"
- Fountains of Wayne, "All Kinds of Time"
- Bob Dylan, "Rock Me Mama"
- Fountains of Wayne, "Mexican Wine"
- Maroon 5, "And She Will Be Loved"
- The Last Goodnight, "Pictures of You"
- Natalie Imbrulia, "Torn"
- Five for Fighting, "Superman"
- The Calling, "Wherever You Will Go"

vi-IV-I-V

- The Fray, "You Found Me"
- Toto, "Africa"
- Eagle Eye Cherry, "Save Tonight"
- SpencerAcuff, "Far From Here"

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