

## A Harmonic Analysis of “Lucy in the Sky with Diamonds”

by Dennis Winge

Even if you take away the psychedelic lyrics, eastern instruments, tempo changes, and cool bass lines, *Lucy in the Sky with Diamonds* would still be an interesting piece of music because of its harmonic structure. For one thing, each section: the verse, pre-chorus, and chorus, are each in a different key. John Lennon transitions from one to the next so smoothly that it doesn't sound jarring at all to our ears. In fact, most listeners would not have even known that the key changed that many times within such a short duration.

Here are the chords, then the harmonic analysis, and the explanation.

### I. Chords

Verse

||: A | A/G | F#m | F+ |

| A | A/G | 1. F#m | F | % :|| 2. F#m | % | Dm | Dm/C ||

Pre-chorus

|| Bb | % | C9 | % |

| F6 | % | Bb | % |

| C6 | % | G | % | D | % ||

Chorus

|| G C | D7 | G C | D7 |

| G C | D7 | D ||

### II. Analysis

Verse

||: I | I7 (3<sup>rd</sup> inversion) | IV | bVI+ |

| I | I7 (3<sup>rd</sup> inversion) | 1. IV | bVI maj | % : || 2. VI | % | IV min = III of upcoming key | III of new key (with 7th, 3<sup>rd</sup> inversion) ||

## Pre-chorus

(bII of orig. key = new I)

|| I | % | II9 | % |

| V6 | % | I | % |

| II9 = IV9 of upcoming key | % | VI maj = I of upcoming key | % | III maj = V of upcoming key | % ||

## Chorus

(VI maj of previous key = new I)

|| I IV | V7 | I IV | V7 |

| I IV | V7 | V ||

## III. Analysis Explained

### Verse

In the verse, the progression I b VII VI b VI is nothing new, or at least was not anything new for the time period in which it was written. Many other songs of the late 60's use a similar progression, including Chicago's *25 or 6 to 4*, Cream's *White Room*, etc.

The interesting part of the verse comes in the last four bars. Instead of one bar of F#m that had come 3 times before it, this time we get two bars F#m in a row. When we hear that, we know something different is coming.

The next chord Dm is closely related to the F we have heard previously so it doesn't sound out of place. Besides that, Dm is a IV minor chord to the key of A. This in and of itself is nothing unusual, but in this case works ingeniously as a pivot chord to the new key of B flat, which is coming up in the pre-chorus. A pivot chord is a chord common to two keys that acts as a transition between them. Technically, the D minor is not in the key of A major; it is from A minor. However, since the verse used flat 7 (the G bass note in bar 2) and flat 6 (the F chords), our ear has no trouble adjusting to the minor harmony that those already implied. The final chord of the verse, Dm/ C, is simply a transition to the upcoming B-flat in the pre-chorus.

## Pre-Chorus

The pre-chorus gives us a I - II dominant – V - I progression in the first eight bars. The secondary dominant of the C9 is nothing unusual, but in this case, helps our ear adjust effortlessly to the key of G that is to follow. Thus, the C major chord which is found both as a C9 and later in the pre-chorus as a C6 act as a pivot chord between the key of B-flat of the pre-chorus and the key of G of the chorus.

To transition from the pre-chorus to the chorus, Lennon uses a technique known as back-cycling. It is much more common for chords to move in fourths than they are in fifths. An example of the chords moving in fourths would be the C to F to B-flat in the pre-chorus. Plotted out on the circle of fifths, these three chords move counterclockwise around the wheel. Back-cycling goes the other way: C to G to D goes clockwise around the circle of fifths. It is called back cycling, because it is in the opposite direction from the way that is more common, which is counter-clockwise, or, in 4ths.

The other thing to note about how the transition from the pre-chorus to the chorus sounds so smooth has to do with the melody and the way it interacts with the chords. The *d* melody note is prominent throughout the entire pre-chorus. It is the root of the D minor that preceded the pre-chorus, the 3<sup>rd</sup> of the B-flat of the pre-chorus, the 9<sup>th</sup> of the C9, the 6<sup>th</sup> of the F6, the 5<sup>th</sup> of the G chord, and the root of the D chord. Chords that change in relation to a static melody note are always much easier on our ear than those that do not have a melody note in common.

In addition to the common-tone connection between many of the chords, there is something else about the pre-chorus that provides a harmonic thread that we recognize subconsciously as we transition from the pre-chorus to the chorus. When we hear the 9<sup>th</sup> bar, the C6, we will have just heard an F chord and a B flat chord. If C were taken as the tonic just for this moment, the F would be a IV chord, and the B-flat the bVII chord. Skip ahead a few bars to the D chord, and we will have just heard a C chord, a G chord and a D chord. There is a similar relationship there where the C is the bVII and the G is the IV chord to the D chord. These are not in the same order as the F to B flat to C, but the relationship of I, bVII, IV is the common thread. In addition, the fact that we've already heard the C the G and the D chords before we get to the chorus means that when we get there and the G, C, and D act as a I-IV-V to that section, we have effortless adjustment to the new tonal center.

## Chorus

One interesting thing about the chorus is that it is only 7 bars long. As an aside, Paul McCartney was perhaps the first to do this in a pop song with his hit, *Yesterday*. Verse two of that song begins with the word "suddenly" which takes on a bit of a double meaning as it gets us back to verse two after only seven bars of the chorus (whereas the standard length of a chorus is eight bars long).

Getting back to *Lucy*, in addition to the unusual section length, the last chord D is a pivot chord between the keys of G of the chorus and A of the verse. It is the V chord of G and the IV chord of A. And once again the transition between keys is virtually effortless on our ear, especially because we will have already heard the music for the verse and we immediately recognize it as something familiar.

## Conclusion

The easy transition between keys is a harmonic lesson to be learned and relearned, because even after 50 years since *Lucy*, pop songs unfortunately are generally still very much centered in one key. There are some nice exceptions, such as in the song *Breathless* by the Corrs, whose verse and chorus are in two different keys, and several Sting/ Police songs. Although there are a good number of examples, for the most part these are the exceptions rather than the rule.

These days so much more attention is paid to melody and lyrics, and as I have said in my article, "A Broader Perspective for Singer Songwriters," variety rhythm and harmony are generally much more neglected in the popular music that you would hear on the radio than lyrics and melody. This analysis of *Lucy* shows that tonal modulation does not have to be anything unusual or in any way exotic or reserved for genres that are generally considered more sophisticated, such as classical music, progressive rock, and jazz for example. Any rock and roll song can do it, and so can you.