

The Harmonic Language of the Beatles

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[I] INTRODUCTION

What kind of knowledge makes it possible to play a song by ear? How can a musician play a song that he or she has never played before, and maybe never even heard before? What happens in the moment of playing? These questions, delimited to harmony and to the field of rock music, will be addressed in a study consisting of two parts: a) a description of rock harmony, and b) an interview study with rock musicians. The description of rock harmony in itself consists of two parts: this study of Beatles harmony, and a later study of rock harmony in the 1990s.

From literature about rock harmony, my primary sources have been Allan Moore's *Rock: The Primary Text* (1993), Richard Middleton's *Studying Popular Music* (1990) and Lars Lilliestam's *Gehörsmusik* (1995), and *Svensk rock. Musik, lyrik, historik* (1998).

Moore (1993) divides rock harmony into "open-ended repetitive patterns" and, citing Arnold Schoenberg, different pairings of harmonic phrases: open-closed, open-open, and closed-closed—a closed phrase being one that ends on the tonic. Middleton (1990), in the chapter "Change gonna come?" Popular music and musicology" (pp. 123–26) treats methods for musicological analysis of popular music. Lilliestam (1995) submits a catalogue over common chord progressions in rock music (pp. 195–200), while his *Svensk rock* (1998) has a section about modality in rock.

Among the vast literature on the Beatles, I've mainly used Wilfrid Mellers's *Twilight Of The Gods* (1973); Ian MacDonald's *En revolution i huvudet: The Beatles inspelningar och 1960-talet* (1994; original title *Revolution in the Head*); Terence O'Grady's *The Beatles: A Musical Evolution* (1983); and finally Allan Moore's *Sgt. Pepper* (1997).

Mellers (1973) consists of analyses of a number of Beatles songs, today somewhat dated but still containing valuable insights. MacDonald (1994) writes a short chapter on every song that the Beatles recorded, sometimes including comments on harmony. O'Grady (1983) is a Ph.D. thesis on the music of the Beatles, discussing "Style Characteristics" in terms of "Form," "Melody," "Harmony," "Arrangements," and "Lyrics."

A common trait in the works mentioned above is that none of them studies the total musical output of the Beatles. Chord progressions are described as "very common" or "fairly common," and conclusions are made by way of examples: "e.g. the bassline so-and-so." To understand the harmonic language of the Beatles, it is necessary to study the whole picture.

This study is made from a musician's perspective and attempts to answer the question: What chords are found in music by the Beatles, and how (in what order, for how long) are they used? In other words, what can someone who plays by ear expect from this music?

The Beatles were chosen because of their large output and great influence on contemporary and later music. From their first single (*Love Me Do*, October 1962) to their last album release (*Let It Be*, May 1970, one month after their official disbandment in April 1970; cf. MacDonald 1994) their music can be seen as “the ultimate barometer of stylistic change in the popular music of their time” (O’Grady 1983, p. 2).

The Beatles recorded 211 songs during their time together as a group. One of the songs, “Revolution 9” is a sound collage without chord progressions and was excluded from the material. The remaining 210 songs were studied, using the original recordings and also a book of transcriptions (Beatles Complete Scores, 1989).

To facilitate comparisons, all the songs were transposed to C major or A minor. The form of each song was described in terms of intro, verse, chorus etc. The chord progressions for all form parts of the 210 songs were written into a word processing program (Microsoft Word).¹ By using the search and replace functions of the word processor, it was then easy to answer questions like: “how often is the Dm chord used?” or: “how often is the G7 chord followed by the C chord?”

The material was divided into major and minor songs. The form, harmonic rhythm and chord progressions were then analysed. Also, a study was made of the original keys, to see if different harmonic material was used in different keys.

[2] FORM

The music of the Beatles uses the form parts common to popular music:

intro – an introduction to the song;

verse – a form part that is repeated several times, with the same harmony and melody, but with different lyrics each time;

chorus – a form part that is repeated several times, with the same harmony, melody and lyrics each time; different from the verse at least as to lyrics, but almost always also as to harmony and melody, too;

bridge – a contrast to verse and chorus, containing new harmonic, melodic and lyrical material, in Beatles songs most often played twice;

solo or *instrumental interlude* – like the bridge, a contrast to other form parts, in Beatles music most often played on guitar. The solo mostly is played over another form part (e.g., “solo over the verse”), but sometimes uses new harmonic material;

pre-chorus – a form part after the verse, building up to the chorus, seldom used by the Beatles and their contemporaries but very common in rock music of the 1980s and 1990s;

coda – an ending to the song.

Considering the relatively few types of form parts, the amount of variation in the Beatles’s music is striking. However, songs often start off with (intro)–verse–verse– bridge–verse (57 cases) or (intro)–verse–chorus–verse–chorus–bridge (23 cases); they then continue in many different ways. A common principle seems to be to repeat something twice: verse–verse or verse–chorus–verse–chorus, and then follow this by a contrast, either verse–verse–bridge, verse–verse–chorus, verse–verse–solo, verse–chorus–verse–chorus–bridge or verse–chorus–verse–chorus–solo.

The form part first heard, excluding the intro, seems to be the “home” of the song. Since the Beatles most often started their songs with the verse—once again, excluding the intro—the verse will feel like the home that the listener returns to after excursions to the chorus,

bridge and/or solo. Thus, a song with a verse in A minor and a chorus in C major will feel like an A minor song.

The Beatles's form parts most often follow the Western convention of being constructed of multiples of two bars, which means that most form parts are 4, 8, 12 or 16 bars long (Moore 1993, p. 40). However, there are many exceptions: e.g., choruses in Beatles music vary from 19 bars in length ("She's Leaving Home") to 2 bars ("Come Together"), with almost all possible variations in between (ibid.).

In a few cases, notably "Happiness Is A Warm Gun" and "You Never Give Me Your Money," *collage forms* are used. Such songs do not have the usual repetitions of verse, chorus etc, but instead consist of a string of different parts which may or may not be repeated. The song then gives the impression of a collage of musical ideas (Lilliestam 1995, p. 214).

[3] HARMONIC RHYTHM

Since the Beatles songs in major consist of a total of 5058 bars and contain 5112 chord changes, it might be said that the average rate of change is once per bar. However, the harmonic rhythm is very varied, from songs totally without chord changes ("Within You, Without You," with its C drone) to songs with two chords per bar (e.g. "This Boy" and "I Will"). In a few cases there are more than two chords per bar; e.g. "You've Got To Hide Your Love Away," which has four chords per bar, if it is considered to be in slow 12/8 time.

There are no rules for harmonic rhythm. A form part might use the same chord for six bars and then change once a bar in the last two bars (the verse of "Ticket To Ride") or change once a bar for two bars and then use the same chord for four (the intro of "Magical Mystery Tour"). While there is a *tendency* to "keep going in the same rhythm," e.g. one chord per bar, there are a multitude of exceptions. Two randomly chosen examples are the verse of "Sexy Sadie," with two chords in the first bar, one in the second, and then two chords per bar for six bars; and the verse of "From Me To You," with one chord per bar except in the seventh (next to last) bar, where there are two. Musically, this is easy to understand: Depending on which chords are used, a resting point might be needed anywhere in a period or form part.²

[4] HARMONY: SONGS IN MAJOR

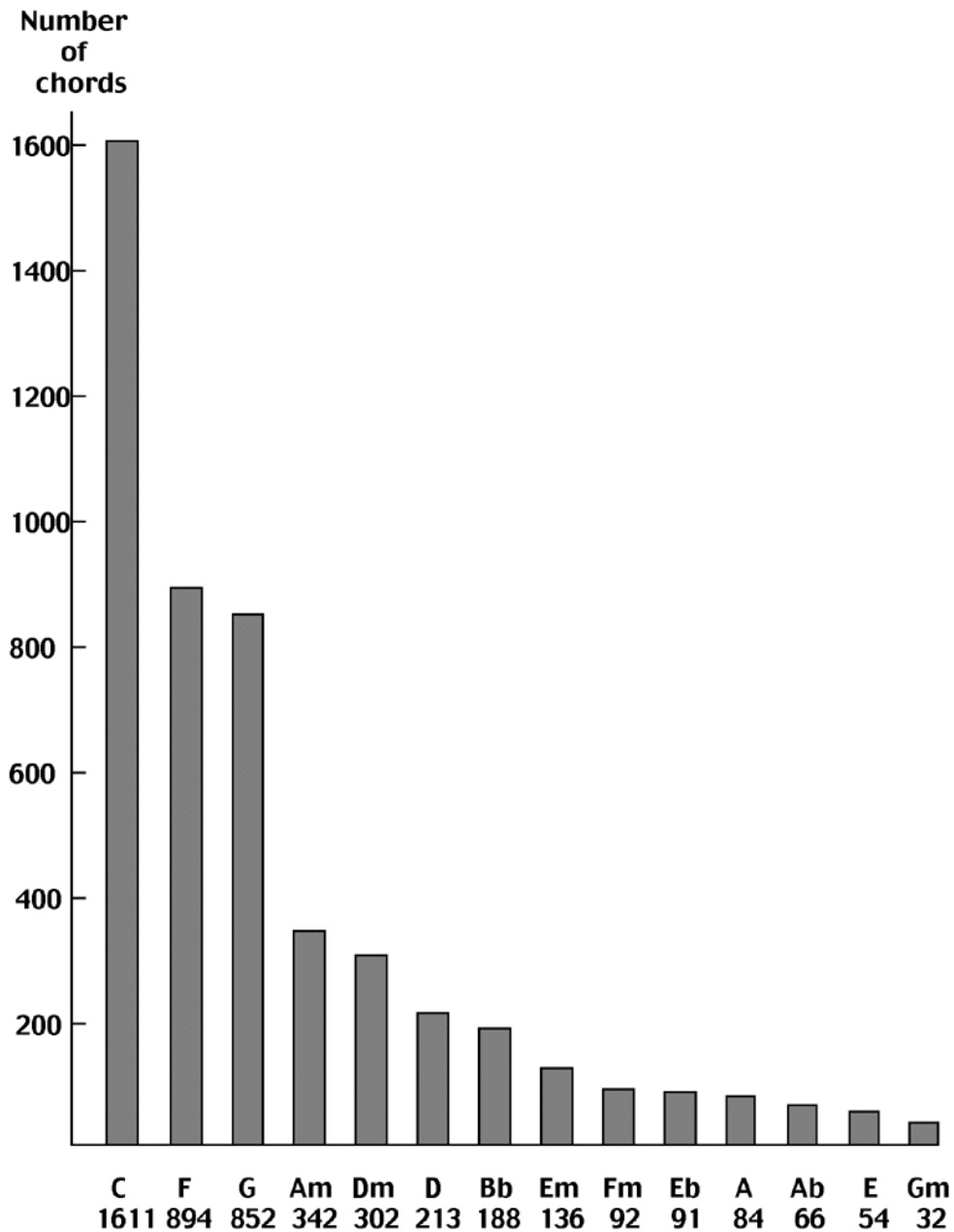
Of the 210 Beatles songs, no less than 194 are in major keys. 165 of these are in the keys of E major (38 songs), G major (38), A major (36), D major (28) and C major (25). Of the remaining 29 songs, 10 are in F major, 6 in B, 4 in B^b, 4 in E^b, 2 in A^b, 2 in G^b; there is one song in D^b. Although songs may have been transposed for different reasons—the famous splicing together of "Strawberry Fields Forever" from two takes in different keys being one example—this shows the dominance of the "guitar keys" of C, G, D, A and E major (cf. section 7).

[5] THE I, IV, V, VI AND II CHORDS

The harmonic language of the Beatles mainly uses the chords I, IV and V (in C major: C, F and G major) and the relative minors vi and ii (A minor and D minor). *Table 1* shows the frequencies of chords in songs in major, transposed to the key of C.

The chords mentioned above can be combined virtually any way at all, provided that the I chord can be discerned as the tonic or "home" chord. In the key of C major, all the chords F, G, Am and Dm can have the penultimate position in cadence-like contexts or in entire songs. The IV and V chords are used more frequently than the vi and ii chords in this way, but these relative minors are by no means uncommon.

Table I. Frequencies of chords in major songs (transposed to C major)



THE \flat VII AND II CHORDS

The \flat VII chord (the chord of B \flat major in the key of C major) also is used very freely. The \flat VII chord, too, can stand as penultimate chord, and a telling detail is that *both* of the progressions G – B \flat – C and B \flat – G – C are used as cadences: as long as the tonic comes in the right place and feels like home, the chords before it can be combined in different ways.

The II chord (the chord of D major in the key of C major) most often follows traditional harmonic conventions and proceeds to G(7) to continue to the tonic, *but* the II chord also is used in other ways: it very often proceeds to IV and then to I, and in a number of cases it leads directly to I (e.g., “I’ll Follow The Sun”).

THE III CHORD

The iii chord (Em in the key of C major) is used less frequently than the other relative minors, vi and ii, and also less frequently than \flat VII and II. The iii chord furthermore is not used as the penultimate chord in cadence-like contexts. Two suggested explanations for this are: a) the only note that discerns a C major chord from an E minor chord is the note B. This is the fifth, i.e. the least important note, of the Em chord; and b) The root note of the Em chord also is part of the C chord. Both these facts make the change from Em to C sound weaker than a change from Dm or Am to C major.

[6] CHORDS IN THE DOMINANT DIRECTION

Chords further away in the dominant direction than the II chord, i.e. in C major the chords of B minor (or in just a couple of cases B7), E(7) and A(7), are used in the same way as in traditional harmony. When any of these chords is used in the Beatles's music, it will with very few exceptions move "home" to the tonic in the traditional way: Bm to E(7) to A(7) to D(7). The D(7) chord then may proceed to G(7), to F or directly to C, as stated above.

THE IV CHORD AND ITS RELATIVE MAJOR

The iv chord (Fm in the key of C major), in traditional harmony considered as very tension-laden, in the music of the Beatles continues to I or in a few cases V, following traditional principles.

The \flat VI, the relative major of iv (the chord of Ab major in the key of C major), is often used as a substitution for iv (e.g., "I Saw Her Standing There"; cf. Middleton 1990, p. 198), but also in other contexts: in the cadence \flat VI – \flat VII – I, often used in rock music; as a temporary dominant to the V chord; and in circle of fourths progressions (Everett 1995, p. 183), to name the most common usages.

THE \flat III CHORD

The \flat III chord (the chord of E \flat major in the key of C major) is most commonly used together with I, IV, V and \flat VII (C, F, G and B \flat). The \flat III chord will only in rare exceptions be used together with any of the relative minors vi, ii and iii (Am, Dm and Em).

THE v CHORD

The v chord is most often used in modulations to the subdominant key, e.g. verse ends in C; bridge begins Gm – C7 – F. In a few cases, the v chord also has the function of minor dominant, notably in "She's Leaving Home."

SUBSTITUTIONS AND MODULATIONS TO OTHER KEYS

Chords other than the above are not used in the Beatles's music, except as substitutions (e.g., the D \flat chord as substitution for the G chord, leading to C), or in modulations to other keys. The most common modulation in the Beatles's music is a key change in the bridge, with the bridge beginning in the key a minor third above the tonic (e.g., verse in A major, bridge in C major).

[7] EXPLODING FUNCTIONAL HARMONY

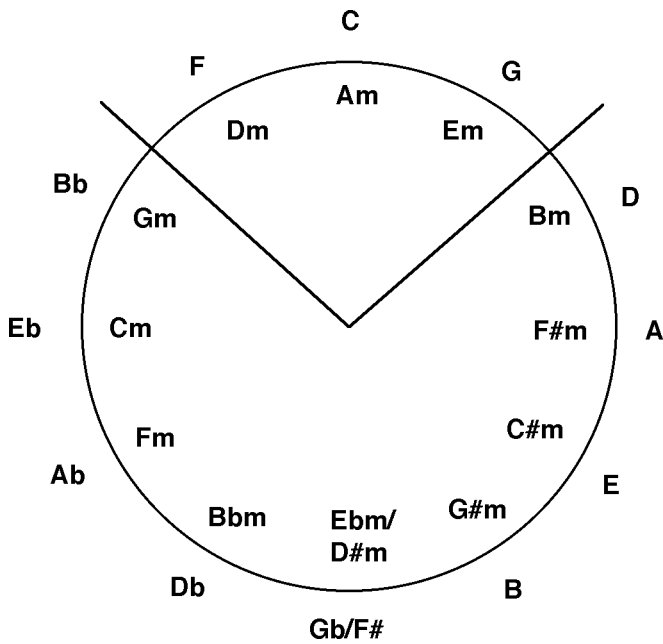
Why did the Beatles’s harmonic language turn out this way? This question can be answered on several different levels.

A rather self-evident answer is that this kind of harmony was “in the air” in the early 1960s. Roger McGuinn of the American group The Byrds said of the Beatles that “All their chords were folkie chords” (the BBC TV series “Dancing In The Streets,” 1996). Comparisons with other groups and music styles show that the Beatles were not unique in their use of harmony (cf. O’Grady 1983, pp. 7–21). What they did was to use influences from everything from American rock and roll, rhythm’n’blues and jazz to English music hall and, indeed, folk music, and combine these into something of their own. The Beatles (in this case meaning Lennon-McCartney and to some extent George Harrison) no doubt were talented composers; still, it must be remembered that their music wasn’t born from nothing, but was firmly rooted in its time and place.

So why did the Beatles and their contemporaries use harmony in the way that they did? I would like to answer this question by the term “exploding functional harmony.”

The well-known circle of fifths (*diagram 1*) can be found in many music theory books (e.g. Schoenberg 1978, p. 155; Ingelf 1982, p. 6).

Diagram 1: Circle of fifths in traditional harmony

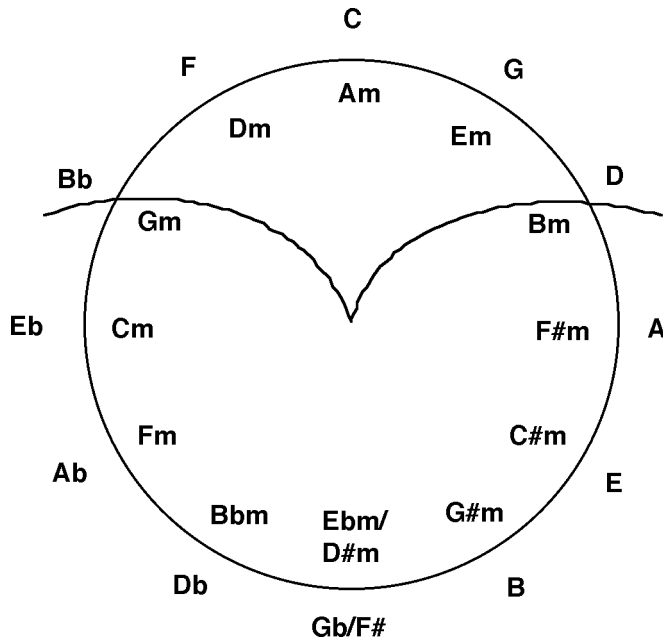


In diagram 1, a sector shows the most often used chords in the key of C in traditional harmony: The I chord in the middle, IV to the left, V to the right and the relative minors inside the circle.

Even in traditional harmony, there is a certain freedom in the use of the chords within this sector. When traditional harmony uses chords further to the right on the circle (e.g., an E7 chord in the key of C major), the way back to the tonic is regulated by descending fifths: E7 – A – D – G – C. Chords to the left of IV (like B^b, E^b and A^b in the key of C) are seldom used.

Diagram 2 shows a circle of fifths with Beatle harmony.

Diagram 2: Circle of fifths in Beatles harmony



The chords used in a freer way by the Beatles are the chords closest to the traditional sector— \flat VII and II, or the chords of $B\flat$ and D in the key of C. The \flat VII chord is used totally freely. The II chord also is used freely, although it can be said to retain a strong preference for moving to V and then to I.

Combining chords freely in this way means that many songs seem modal, rather than tonal (Lilliestam 1998, p. 254). However, it is often a matter of taste if a certain chord progression is perceived as modal or tonal. A somewhat more radical approach would be to consider tonality as a special case of modality: among many musically meaningful ways of ordering e.g. the chords C, F, G and Am (in the Beatles music e.g. “The Continuing Story Of Bungalow Bill” with Am – C – F – G and “Let It Be” with C – G – Am – F), there are a couple of cases where the chords have traditional “functions”: C – Am – F – G and F – G – C – Am.

It’s not a coincidence that it’s \flat VII and II, the two major chords closest to respectively IV and V on the circle of fifths, that are used more freely. There are two reasons for this:

1) The further away from the tonic one moves on the circle of fifths, the greater the risk that melody notes will collide with chords and create unwanted dissonances. Using for example a $F\sharp$ major chord in the key of C will mean a very great risk for clashing with the melody—not to mention the drastic contrast in the chords themselves. The closer to the tonic one stays on the circle of fifths, the lesser the risk for such clashes.

2) That Western musical instruments are built and tuned the way they are depends to great extent on the music they were built for. The piano is an obvious example, showing how Western music has disregarded microtonality (notes *between* the keys of the piano, e.g. the “blue” notes of blues, jazz and rock)—while the Indian sitar, on the other hand, obviously is built for *using* microtonality. The six strings and standard tuning of the guitar mean that the five “open” major chords on the instrument (chords played without barring, in the first position, and using at least one open string) are C, G, D, A and E, and the three most easily played open minor chords are D minor, A minor and E minor. A comparison with the pictures above shows how the easiest and best-sounding chords on a guitar lie closely together on the circle of fifths.

Another answer to the question “why did the Beatles’s harmony turn out the way it did?” thus will be *instrument idiomatics*. Different chords will to some extent be used more or less

frequently, depending on how they feel and sound when played on a guitar. The fact that 165 of the Beatles's 194 songs in major keys are in the "practical guitar keys" of C, G, D, A and E major in itself shows that the music very often was conceived using guitars (cf. Lilliestam 1995, pp. 171–180, on how rock songs are composed) and Mellers (1973, p. 28) wrote: "...the wide-eyed, open-eared effects created in Beatle songs by mediant relationships and side-stepping modulations are the empirical product of ... the behaviour of the hands on guitar strings and keyboard."

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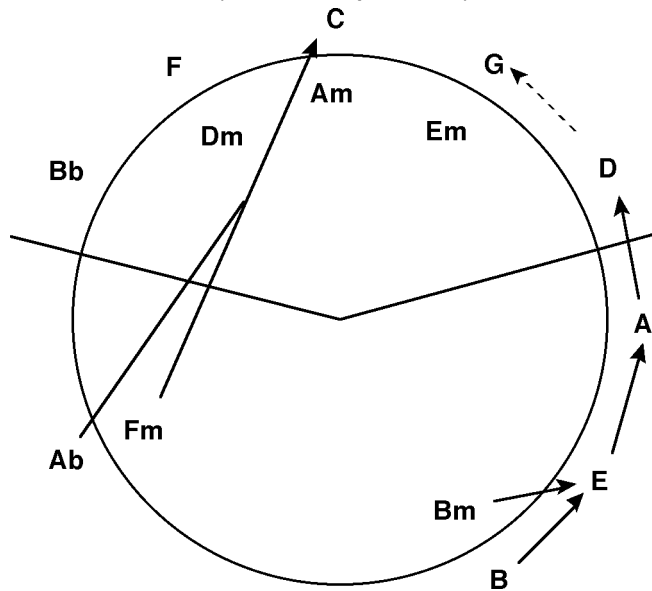
It is a well-known fact that the Beatles had no traditional music education (Mellers 1973, p. 26). Unfortunately, there is no room in this paper for a discussion of rock music as opposed to music education, but quotes like "The good thing about the guitar was that they didn't teach it in school" (Jimmy Page of the group Led Zeppelin, quoted in Lilliestam 1995, p. 230), are telling; and Gullberg (in press) found clear differences in taste between young people in and outside music schools. The problem might not be education in itself, but deficient or incomplete education: "A little learning is a dang'rous thing," wrote Alexander Pope, and "a little learning" in this case might mean all the times when people have been "taught" that it is "forbidden" for instance to combine certain chords... without consideration of the fact that the question of how chords are combined together is a matter of style.

Without a limiting "little knowledge" of traditional music theory, but with a great practical knowledge of how different popular music styles sounded, the Beatles composed their songs on guitar (and to some extent on piano). It's very likely that this might lead to situations like the following: We have learned, played and even written songs in the key of G, that have used for instance the chords G, Em, C and D; now we are writing a song in the key of A, and why not try the chords C and Em in this key too? They are easily within reach on the instrument, and depending on how they are used, they might create interesting colours.

When the Beatles's harmony leaves the I, IV and V chord and their relative minors to go further in the dominant direction on the circle of fifths it follows traditional conventions—this holds true, as we have seen, for the chords vii (or in just a couple of cases VII7), III(7) and VI(7). Also, the iv and \flat VI chords are almost always used in a traditional way, even if the \flat VI chord also is used in other contexts.

We may now draw a circle of fifths (*diagram 3*), showing which chords the Beatles used totally freely (in the top sector), versus which chords are governed by traditional rules. (Note that some chords are missing, e.g. the \flat III chord; see below.)

Diagram 3: Chords used freely in Beatles harmony (top sector), and chords governed by traditional rules (outside top sector)



[9] “ \flat III MODALITY”

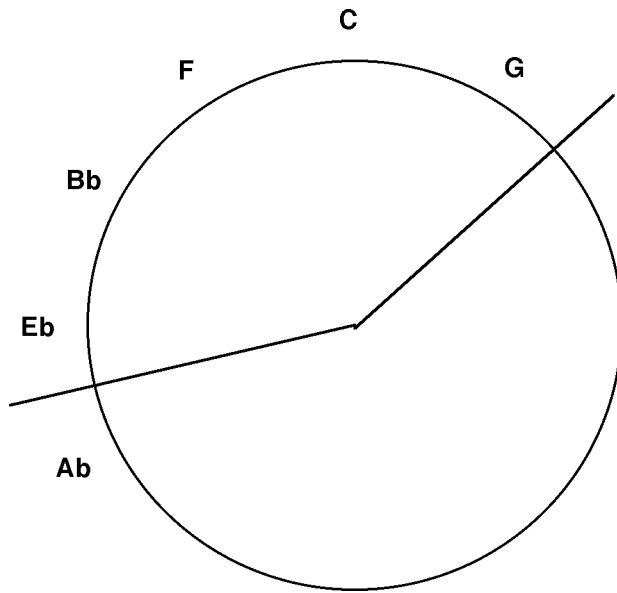
Only in rare exceptions is the \flat III chord used together with the minor relatives ii, vi and iii. Instead, \flat III is most often used together with I, IV, V and \flat VII. Ingelf (1982, p. 6) draws a simple but effective picture of “traditional harmony,” which mainly uses the chords of F – C – G – D – A in the key of C, in other words I, IV, V and two chords in the dominant direction; while “rock harmony” in the same key will use the chords of $E\flat$ – $B\flat$ – F – C – G, that is, I, IV, V and two chords in the *subdominant* direction.

The only form part in the Beatles’s music where these five chords and none other are used is the instrumental middle section of “Here Comes The Sun.” In chord progressions like C – $E\flat$ – F – G (“Please Please Me”), C – $E\flat$ – F (“Sgt. Pepper”) and C – $E\flat$ – $B\flat$ (“Everybody’s Got Something To Hide, Except For Me And My Monkey”), a couple of these five chords are used. They seem to be combined any which way, as usually with the pre-requisite that the tonic or “home” chord is used often enough, and in such places, that it really is made to feel like “home.”

Even during the Beatles’s time as a group there were songs written using these five chords and no others. Two examples are Wilson Picketts “(In The) Midnight Hour” (1965) and Creedence Clearwater Revivals “Proud Mary” (1969). Both songs use the progression (transposed to C major) $B\flat$ – G – F – $E\flat$ – C in their introductions. A later example, among many others, is “Middle Of The Road,” by The Pretenders (1982).

This justifies consideration of a new kind of “modality,”³ built on the five chords I – \flat III – IV – V – \flat VII, and in many cases implying that other chords (except in some cases \flat VI) are not present in form parts using these chords—with, of course, the \flat III chord being essential, as I, IV, V and \flat VII are used in other contexts, too. Another circle of fifths (*diagram 4*) shows this new “modality.”

Diagram 4: Circle of fifths showing bIII modality



It should be noted that music of the Beatles only shows tendencies to this new “modality.” Further research might reveal how commonly used it is in rock harmony. It is not impossible that it actually is rather uncommon, but that the characteristic sound of the bIII and bVII chords in a major key makes the listener react strongly to such songs.

One explanation for using the chords I, bIII, IV, V and bVII might be that the root notes of the chords spell out a C minor pentatonic scale (C, Eb, F, G, B^b), and the chords could be seen as this scale, harmonised with major triads on each note (cf. Everett 1995, p. 221).

HARMONY: SONGS IN MINOR

Of the 16 songs in minor, 10 are in the guitar keys of E and A minor, 2 in C minor, 2 in F# minor, one in C# minor and one in Eb minor; this song, “I’m Only Sleeping,” however, is played using E minor chords on detuned guitars.

Songs in minor keys use chords much the same as major songs do, although minor songs also use different modes, i.e. an Eolian song in A minor might use a D minor chord, while a song in A Dorian might use a D major chord. Different modes will not be found in the same form part.

[10] CONCLUSIONS

What might someone who plays by ear expect in music by the Beatles and other, stylistically closely related music?

Regarding *form*: that the song has a verse, that most often will feel like “home,” and that probably will be the first form part (after the intro, if there is one) to be heard. In relatively few cases, the first form part to be heard (after the intro) will be the chorus. Furthermore, a chorus and/or a bridge that have a contrasting function, often (in songs in major keys) beginning on one of the relative majors, and most probably occurring after two verses (bridge or chorus) or after two pairs of verse—chorus (bridge).

Regarding *harmony*: that songs in major are a lot more common than songs in minor; that there will be an easily discerned tonic, or a chord that feels like “home”; that chord progressions to a very large extent will be built on I, IV and V, and in lesser degree on their relative minors vi, ii and iii and the bVII and II chords. Chords other than these will either

follow traditional functional harmony (i.e. chords in the dominant direction, plus the minor subdominant and its relative major) or imply a new “modality,” using the major chords I, \flat III, IV, V and \flat VII.

This means that the music of the Beatles and their contemporaries has its starting point in traditional functional harmony, but a functional harmony where the limits for what is allowed are slowly being expanded. Chords close to the tonic on the circle of fifths are combined totally freely; more chords in the subdominant direction appear in the music; and the II chord can be used in the traditional way, but also with a new freedom. In rock music, functional harmony has started a slow explosion, that continues to this day. In the 1990s, it is possible to compose using progressions like (in C major) C – F \sharp m (“Fade Away” by the English group Blur, from their CD “The Great Escape,” 1995) or C – A – F – C \sharp – B (“In Bloom” by the American group Nirvana, from “Nevermind,” 1991) as the foundation of a song, without being too extreme. The Beatles and their contemporaries very seldom used that kind of chord progressions.

In such latter-day cases it obviously gets more and more meaningless to think in terms of functional harmony: the explosion of functional harmony is completed.

As mentioned in the Introduction, this description of Beatles harmony will be followed by a study of rock harmony in the 1990s. Then, an interview study will be made. The interview study will use recordings of three original songs: one song composed to be “as simple as possible,” using only the chords I, IV and V, combined in old and trustworthy patterns; one song containing some irregularities, i.e., unexpected or surprising chords; and one song written to consist as far as possible *only* of unusual chord patterns. Accomplished ear players will be asked to play these songs by ear and discuss the chord progressions, their impressions of them and their problem solving strategies.

ENDNOTES

This is a short version of the book *Beatles harmoniska språk* (Johansson, 1998).

1. As in this example:

C.Dm[^]tEm.Ebo[^]tDm7[^]tG7[^]tC.Dm[^]tEm.Ebo[^]tDm7[^]tG7[^]tC[^]tFm.G7

(“If I Fell,” verse; original key: D major)

Here, (.) means space and (^t) tabulation. A space was used when there were two or more chords in one bar; a tabulation meant a new bar.

2. Rock music is very often composed without conscious regard to concepts such as “bars” or “periods”; indeed, one might ask with Moore (1993, p. 40): “In a music that is not notated, how long is a ‘bar’?”
3. Of course, not a modality in the traditional sense; but still, the chords seem to be used in a “modal” way.

DISCOGRAPHY

The following 15 LP or CD albums are the 13 records that the Beatles released during their time as a group, plus two compilations. Together, they contain the 210 songs used in this study.

Please Please Me. Parlophone. PCS 3042. March, 1963

With The Beatles. Parlophone. PCS 3045. November, 1963

A Hard Day's Night. Parlophone. PCS 3058. July, 1964

Beatles For Sale. Parlophone. PCS 3062. December, 1964

Help!. Parlophone. PCS 3071. August, 1965

Rubber Soul. Parlophone. PCS 3075. December, 1965

Revolver. Parlophone. PCS 7009. August, 1966

A Collection Of Beatles Oldies... But Goldies. Compilation. Parlophone. PCS 7016. December, 1966

Sgt. Pepper's Lonely Heart's Club Band. Parlophone. PCS 7027. June, 1967

Magical Mystery Tour. Parlophone. SMMT1. November, 1967

The Beatles (the "White Album"). Apple. PCS 7067/8. November, 1968

Yellow Submarine. Apple. PCS 7070. December, 1968

Abbey Road. Apple. PCS 7088. September, 1969

Let It Be. Apple. PXS 1. May, 1970

Rarities. Compilation. EMI/Parlophone. PSLP 261. October, 1979

The following website (Beatles CDography) indicates which albums individual songs are on:
<http://netnow.micron.net/~mrolig/>

OTHER RECORDINGS

- Creedence Clearwater Revival: *Creedence Gold*. Fantasy. 9418. 1972
 Blur: *The Great Escape*. Parlophone. LC 0299. 1995
 Nirvana: *Nevermind*. Geffen. GED 24425. 1991
 Wilson Pickett: *Greatest Hits*. Duchesse. CD 352048. 1990
 The Pretenders: *Learning To Crawl*. Sire. 23980-1. 1983

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