

# **Case Study #15**

## **The Beatles:**

### **Ancient Sounds in Hit Parades**

Paul McCartney and George Martin had a few interesting discussions about the orchestration of The Beatles “Yesterday” (the first song where the very unusual string quartet was used on a rock-band recording). “Mozart would not have used that minor seventh”, said George Martin to Paul, and that gave Paul even more incentive to put this seventh into the arrangement. Of course, John Lennon loved this “bluesy” minor seventh. On another occasion Martin did not like the idea when Paul said he wanted one of the violins to keep the high “A” during the last appearance of the immortal melody of “Yesterday”. “You can’t double the third!” George Martin said to Paul. “You wanna bet?” answered Paul (Coleman, 1995:46). I think many would agree, that this long hovering “A” gives the last appearance of the melody some special beauty and even poignancy.

George Martin, as usual, was absolutely correct from the point of view of the sacred rules of professional harmony – many music students would remember that according to classical harmony, doubling of the third was considered a big mistake. In the 18<sup>th</sup> and 19<sup>th</sup> century European composers were openly criticized for the lack of professionalism for making such blunders (like doubling the third, or even, God forbid, having parallel fifths).

Paul McCartney was correct from the point of view of the highest authority of musical art – our ears. George Martin finally agreed with him, because despite his strong classical musical education, going against the established rules was an important part of his own creative nature.

Every epoch has its own aesthetic rules, its musical language, connected to the whole set of specific technical elements. For most of human history most people were raised in a musical environment of a single culture, therefore they were familiar with one “musical language” only. It was almost impossible for them to comprehend the music based on a different set of rules. For example, according to James Porter, “Beethoven and Haydn ... clearly puzzled by the modality of the [Scottish] tunes and effects derived from bagpipe technique (such as a double tonic or a free pentatonic structure), could not understand why some tunes did not end on the “tonic” or home

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key” (Porter, 2000:367). Even these composers, deservedly ranked among the greatest in human history, “failed to understand the modality of the tunes. Even when they found them attractive, they cast them in continental harmonies” (Porter, 2000: 372-373).

If we look at the history of European music it is not difficult to see that professional and traditional musical languages often existed side by side, sometimes misunderstanding each other. Traditional music was often perceived by the professional composers as simple and even “primitive”, at best deserving a new life by harmonizing traditional tunes with new professional harmonies. Despite this arrogance of professional musicians, the traditional musical language was sometimes well ahead of the development of the musical language of professional music. The Lithuanian traditional singing style *sutartines* used polytonality much earlier than Ives, Bartok or Stravinsky. Georgian composers Dimitri Araqishvili and Zachary Paliashvili recorded but never used complex traditional polyphonic songs from Guria, western Georgia, because the Gurian songs harmonic language was too dissonant and too complex for them. For the same reason one of the greatest pioneers of contemporary professional music, Stravinsky openly admired western Georgian polyphony.

In this “Case Study” we will concentrate on the musical language of arguably the most creative band in the history of popular music, the Beatles. I will try to trace the origins of several elements of the Beatles musical language, revolutionary for European popular music and Rock-n-Roll. I’ll try to argue that some of the most revolutionary elements of the Beatles musical language have interesting parallels with the traditional polyphonic cultures of archaic polyphonic Europe. Some of these topics, concerning the closeness of the Beatles legacy with traditional musical cultures (particularly of British peoples) are known from more than 400 books, published about the Beatles, but some will be discussed for the first time. I organized this “Case Study” into separate sections.

**Unity of the music creator and the performer. The strict division of all functions across society was one of the cornerstones of professional music in Europe. This division included a whole range of professions, ranging from the composer, performer or performers, and conductor, to the music copier and music critics. Even listeners were supposed to follow the strict rules of the game (for example, how to behave, or when to remain silent and when to clap). This tradition was so strong in European music, that even Rock ‘n’ Roll mostly followed the trend. For example, “King of Rock ‘n’ Roll” Elvis had not written any of the songs he performed. On the other hand, in a traditional society a performer is a creator (or at least co-creator) of the music he (or she) performs.**

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**By establishing the trend of writing their own songs, the Beatles brought back this ancient tradition of the unity of the creator and the performer.**

It became a standard after the Beatles for the rock bands to write their own songs. They were certainly not the first rock musicians to do this, of course, but their phenomenal success gave a strong message to the existing or the new bands to write their own material, and therefore, to be not only the performers, but creators of their own songs (it was difficult for me to believe that even such a “self-contained” rock band as the Rolling Stones were not writing their own songs before they had a positive example from the Beatles).

**Writing music together. Maybe one of the biggest differences between the professional and traditional polyphonic cultures is the process of creating music. Composing music professionally is very much an individual enterprise. On the contrary, composing music in a traditional polyphonic society is a group activity. Readers might remember the examples of creating new compositions in western Georgia, Polynesia or among Bushmen from the first part of this book. Sitting together for hours and putting different parts together to come up with a shared polyphonic composition is usual for traditional singers.**

Acknowledging the crucial difference between these two models of music composing, I would like to propose the existence of two music-composing models: (1) **individual** (we could call it “mono-brain”) and (2) **group** (or “multi-brain”). I am not talking about the well-known but not very clear idea of the “collective” authorship of traditional songs, when several generations of creative singers may contribute to the development of a song (implying that song had an individual author, whose name is lost). I am talking about the polyphonic cultures, where the very **process of initial creation of the song is also a group activity**. These two different music-composing models fundamentally affect both the composing process and the final product.

Professional composition is entirely constructed by an individual, and the composing process is very much “authoritarian”. That could be the reason why professional polyphonic compositions contain so much imitation, strict parallelisms, and are generally more vertically organized. On the other hand, in traditional society, when two or more creative talents are trying to put their individual creative power to work for the shared composition, the process has more “democratic” features. That’s why the traditional compositions are usually less based on imitation, have more contrastive (non-parallel) movements between the parts, and are more melodically (rather than harmonically) organized.

The Beatles was a wonderful example of group creative activity. There was no clear leader, or even a main singer of the group. This was a novelty that gave some initial headache to George Martin: “When I first met them, there was no obvious leader. They all spoke in turn, and I went home wondering which one of them was

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going to be the star. My thinking was so colored by the success of people like Tommy Steele and Cliff Richard that I couldn't imagine a group being successful as a group. I felt that one of them was bound to come out as having a better voice than the others. Whoever that was would be the one, and the rest would become like Cliff Richard's backing group, the Shadows. I was quite wrong". (Martin, 1979:124). Fortunately for all of us, Martin liked going against the established rules and trends and accepted the idea of a group.

Most importantly for our topic, writing music for John Lennon and Paul McCartney, particularly in the first period of their partnership, was very much a shared creative act. Paul describes their process of writing a song the following way: "We would sit down with nothing and two guitars, which was like working with a mirror. I could see what was he doing, and he could see me. We got ideas from each other. In fact, it was better than in a mirror because if he plunking away in D, I could see where his fingers might go and then I could suggest something. So that was like writing from the ground up. 'She loves you', 'from me to you', 'This Boy' were all written that way, as were most of the earlier songs" (Smith, 1989:201). Their (Lennon and McCartney) composing model was obviously a "group model" of music writing, widely employed in traditional polyphonic cultures, and very different from the "individual" model employed by professional composers.

This early period of intense use of the "group model of composition" resulted in some very interesting and unusual voice leading of the Beatles. Their song from the first single, "Love me do", is a good example of this kind of unusual harmonizing:

**Fig. 14. Love me do, vocal harmonies**



The combination of the fifths, thirds and sixth, with the melodies moving sometimes in parallel motion and sometimes against each other, would hardly be written if this all was the brainchild of the single composer.

During the later period of the existence of the Beatles, this immediate co-writing practice was mostly replaced by more individual efforts, although both Paul and John would still share ideas about the new songs, and particularly, if they were "stuck", they knew where to go. Writing music as a creative communication apparently was

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particularly important for Paul McCartney. During his post-Beatles years McCartney wrote songs together with different musicians (Danny Lane, Eric Stewart, Elvis Costello, Stevie Wonder and Michael Jackson. See Coleman, 1995:127-128).

As with many from my generation, I have been a Beatles fan from my early teen years, when their music went through the unfriendly Communist “iron curtain” as if it did not even exist. My personal interest in music, playing the guitar and studying the English language started when I tried to work out their outrageous chordal progressions and play their songs. Watching them from a distance, I came to the conclusion, that one of the factors that contributed to the break-up of The Beatles as a group, was the inner creative conflict of Paul McCartney, the de facto leader of The Beatles during their final years. On one hand, Paul always relished and very much enjoyed the “group model” of songwriting with very open creative communication (that’s why he tried so many songwriting partners after John Lennon), but on the other hand, his perfectionist attitude towards the final product was taking over at some stage and did not allow too much creative freedom to his songwriting partners. George Harrison in particular was suffering from Paul’s perfectionist and sometimes single-minded working style. In a well-known argument recorded in the film “Let it Be” George is getting frustrated as Paul wants him to play what Paul wants to be recorded. In another case, when recording Paul’s classic “Hey Jude”, Paul did not like George’s idea of the guitar answering Paul’s opening phrases. In a recent (2006, May) TV interview with Parkinson Paul McCartney was talking about playing almost all the instruments on his last album, as a means to have more creative control on the final production: “I was actually all geared up to play with my band, but he [producer, Nigel] said...on a second week he said: “I’d like to try something different. I want you to play a lot of instruments”. So he got me drumming a bit... Which I *love* to do. And I think the trick for me... I thought of it afterwards...it’s possible what has happened is that... I write a song, I bring it to the studio, and then, the drummer, kind of takes over and he writes the drum part, whereas if I play it, I’m still sort of composing, I’m still writing the guitar, the base, the drum...”

**Performance style.** Arguably the most loved Russian rock-musician, Andrey Makarevich, the front man of the most popular Russian rock band “Time Machine” said about the Beatles, that listening to their music for the first time for him was like taking the cotton buds out of your ear for the first time in your life. I agree with him and I think many, whose lives were enriched by the Beatles music would also agree, that there is something very important in this simple and maybe awkward comparison.

If we try to characterize the Beatles performance style (first of all, their singing style), this would be a performance with no reservations, very open, full of emotions, including exciting panting and shouting.

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“Up until then there had been nothing to involve young people to quite the same extent. The rock-and-roll gyrations of Tommy Steele and Cliff Richard were clinical, anaemic, even anaesthetic, compared with the total commitment of the Beatles, which somehow got down to the very roots of what the kids wanted,” wrote Georgia Martin about the British rock scene in the beginning of the 1960s (Martin, 1979:125).

The European classical tradition of music performance has always been based on the professional control of the vocal apparatus. Singing with excited shouts was as unimaginable for the classical European tradition, as singing in “bel canto” style for the rock-musician. In this regard the performance style of rock music was again very close to the performance style of the traditional music, particularly traditional polyphonic music.

In my opinion, the electrifying emotional power of the Beatles music was based on two important elements: (1) the performance style, coming from Rock ‘n’ Roll, and based on honesty and openly expressing emotions, and (2) the sophisticated harmonic and melodic language that will be discussed very soon. Let us remember: despite the very limited harmonic vocabulary (only three-chords!), Rock ‘n’ Roll swept the world with its honesty of emotional expression. The Beatles magnified this emotional intensity, coming from the Rock ‘n’ Roll performance style, with hundreds of new inventive harmonic combinations and melodies.

**The performance as a social experience.** The readers may remember the crucial difference in the models of relationship between the performers and listeners in different styles and genres of music from the introduction of this book. European classical music represents maybe the most rigidly divided model of the social interaction between the performers and the listeners. Listeners are not supposed even to clap between the parts of the symphony, let alone the encouragement of the performers during the performance. On the other end of the relationship models between the performers and the listeners is the traditional polyphonic society. Here the society is not even divided between the performers and the listeners, as all the society is expected to be involved in the performance. Therefore, there are no listeners at all.

One of the crucial elements of contemporary rock and pop-music is the unparalleled (in classical music or even jazz) close connections between the performers and the listeners. Emotions that are pouring from the stage elicit strong emotions from the audience. And although the reaction of the audience might be deafening and distracting for the performers, this loud response is a vital and generally very positive part of live rock performances. Participation in the electrifying atmosphere is crucial for the rock-concert goers. Here are the Beatles’ drummer’s words from the interview with the British media on 12th December 1972:

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Q.: “Was the Wembley show in any way a nostalgic experience for you?”

Ringo: “Very much so. They were screaming and shouting and I love that.”

Q.: “So you enjoy the scream then?”

Ringo: “Oh yeah. If they had been quiet when I played I would have died. I wouldn’t have known what to do” (Badman, 1999:86).

So if you ever go to a rock concert, do not complain “it was too noisy”. People go to rock concerts not only to listen to the music, but to participate as well. To participate the same way, as the guests participate in singing at a Georgian wedding, or the members of the community participate in an African village celebration (clapping, singing, stomping, and dancing). We could compare attending a classical concert and a rock concert to a reading of the brilliantly written essay about the Carnival in Rio, and being in Rio in the midst of a crowd during the carnival. If you do not like too much noise, you’d better stay home and read the book.

**Harmony of The Beatles songs.** Arguably the biggest contribution that the Beatles made to the development of contemporary popular music was the new exiting harmonic language. In the early 1960s classical 12 bar blues and Rock ‘n’ Roll were still mostly based on the basic harmonic progressions of European classical music: the use of Tonic, Dominant, and Subdominant harmonies (in a C-major key the C-major chord is a Tonic, G-major chord is the dominant, and F major chord is the Subdominant). Basically speaking, the only difference harmonically was that Rock ‘n’ Roll used the Subdominant after the Dominant (this harmonic change was strictly forbidden in the classical tradition).

The Beatles were often praised for their innovative harmonies, although the praise of professional musicologists shows they were mostly still looking at the Beatles legacy through the window of European classical harmony. For example, arguably the best-known praise that came from a professional musicologist was for their use of the “Aeolian cadence”. This is one of the simplest cadences in classical harmony, and to praise the Beatles for the use of this cadence sounds like praising Ian Thorp because he can swim, or Michael Schumacher because he can drive a car. The harmonic genius of the Beatles is in the fact, that most of their harmonic progressions cannot be classified within the very restrictive system of classical functional harmony.

For the development of harmonic language of popular music The Beatles did what the romantic composers did for the development of harmonic language of classical music – they brought all the unrestricted richness of chordal changes and new colorful modulations. Before the “harmonic revolution” of the Romantic composers (like Schubert, Chopin, Tchaikovsky or later Rachmaninoff) the harmonic language of “classical” music was unbelievably strict and limited. For example, if the key was C-major, the composer could not use an F-major chord after G-major, or E-

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minor after D-minor, or F-major after the D-minor, and forget about using chords like B-minor, or E-flat major, or even B-flat major at all – these kind of harmonies were totally out of limits of classical harmony. I remember that preparing students for the oral test for the Classical style chordal progressions was relatively easy, as each chord in Classical harmonic language had only two or three options where it could “legitimately” go. For example, in the C-major key, a G major chord could go only to C major or A-minor (by the way, G-major followed by A-minor is the mysterious “Aeolian cadence”), E minor could be followed only (!) by F-major; F major had the biggest number of options – it could go to C-major, D-minor, D-major, or G-major. Of course, preparing students for the aural test of the “Beatles style harmony” would have been much more difficult, as chords can go to any other chords without formal restrictions.

Despite the assertions of George Martin that Paul and John were first and foremost tunesmiths (see: “the ability to write good tunes often comes when someone is not fettered by the rules and regulations of harmony and counterpoint. A tune is a one-fingered thing, something that you can whistle in the street; it doesn’t depend on great harmonies”, Martin, 1979:139-140), they first and foremost revolutionized the harmonic language of popular music.

European classical music traditions were based on the unchallenged primacy of the melody (melody was considered the “soul of music”), so creating the melody (or “theme”) was usually the first and most important stage of constructing a new composition. In traditional polyphonic cultures, on the contrary, musical composition was primarily concerned with the richness of the harmonic language.

Both Paul McCartney and John Lennon emphasized the crucial role of harmonic development in their songwriting. They spoke directly that they were often starting the new musical ideas with the chord progressions. Here are Paul’s words, indicating that harmony usually was the initial element that would suggest to him the melodic idea of a new song:

“I knock a couple of chords off, and it suggests a melody to me. If I haven’t heard the melody before, I’ll keep it” (Gambaccini, 1976:79).

John Lennon’s words from his very early (1964) interview give even a better insight of the importance and primacy of the harmonic element in his songwriting:

“If I found a new chord (I used to) write a song around it. I thought that if there were a million chords I’d never run out. Sometimes the chords got to be an obsession and we started to put unnecessary ones in. We then decided to keep the songs simple and it’s the best way. It might have sounded okay for us but the extra chord wouldn’t make other people like them any better. That’s the way we’ve kept it all along” (Turner, 1994:54).

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Interestingly, aware of their own revolutionary harmonies, at the beginning Lennon and McCartney were a bit concerned not to make their songs musical language too complicated. Their second number 1 hit – “From me to you” (which they wrote during a bus ride on a tour) contained some new harmonic colors, including the wonderful change of key, going through the minor dominant chord. After writing the song, they were concerned, that “the music was a bit on the complicated side and it “wouldn’t catch on with the fan’s”. [Let us not forget, that at this moment The Beatles had only one number 1 hit, and the longevity of their success was by no means guaranteed!] Fortunately, Paul’s father calmed them down (Turner, 1994:30). Paul’s father was absolutely right – their fans followed them in all their harmonic endeavors with fascination (unless they discarded harmony completely as in “Revolution #9”).

Steve Turner also emphasizes the importance of harmony in the Beatles’ songwriting, particularly during the early years: “In the early days, the Beatles had concentrated mainly on mastering the musical side of the songs – chord construction, arrangement, and delivery. Dylan was the first recording artist to affect them primarily as lyricists” (Turner, 1994:60).

Lennon’s well-known fascination with deep meaningful lyrics combined with his love of colorful harmonies created an interesting mixture. Predilection towards deeper lyrics among songwriters often leads to the excessive recitation [repeating of the same pitch many times in a melody] and a more monotonous and simple harmonic language. This is usually the case with artists who put the meaning of the lyrics above all other elements of the song. A great example is Bob Dylan, arguably the most influential lyricist of popular music. Unlike such artists, Lennon also had a great love of colorful harmonies, so this mixture gave birth to some of his very interesting songs, where the recitation is coupled with the inventive harmonic progressions (in a song like “Julia”, “Help”, or “Lucy in the sky with diamonds”).

It was not a coincidence that Lennon was so deeply impressed by Beethoven’s brilliant use of Neapolitan harmony from the opening of the 14th (“Moonlight”) sonata, that he wrote his choral masterpiece “Because” under the deep impression of Beethoven’s music (Turner, 1994:194).

The particular importance of the harmonic element in Lennon/McCartney puzzled music critics, because sometimes it was not even clear which of the singing parts was the “main melody”. Tim Riley wrote about “If I fell”: “...the melody itself seems written as harmonized – both lines are so lyrical it’s hard to say just which one is the “melody”. The intertwining harmonies are so strong that they seem to carry the entire song along behind them” (Riley, 1988:102). Here we can recall the puzzling absence of the “main melody” from Georgian (and other cultures) polyphonic songs. I believe that musicologist’s search for the “main melody” does not make much sense

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in such compositions, because it is not the melody, but the combination of the different parts, the resulting harmony is the “soul of music”. The same is the case, for example, for the song “Julia”. The melody of “Julia” is mostly a long monotonous recitation on one note, but the combination of this simplest melody with the cascade of colorful harmonies represent the “soul” of this sublime music.

**The ambiguity of the tonal centre** is another feature that connects the Beatles harmonic thinking with at least some traditional polyphonic cultures. The tonal centre (or the “tonic”) is very easy to define in classical music (or even in “classic” Rock ‘n’ Roll), as compositions usually start and finish with the tonic harmony. The tonic here is the only fully stable harmony. In traditional polyphonic cultures, on the contrary, it is difficult even to speak about the presence of the “tonic”. The genius of Beethoven was needed to do what Mozart or Haydn never did – to begin a musical composition with other than the tonic harmony. In the very beginning of his 17<sup>th</sup> sonata, Beethoven starts with the dominant chord: the first inversion of an A-major triad in the key of D major (Csharp, E, A). In the next, the 18<sup>th</sup> sonata, Beethoven starts with the subdominant instead of the tonic in the key of A-flat (a D-flat major chord with added sixths, of, more formally, a B flat minor 5/6 chord). The Beatles classic “And I love her” is a great example of starting the song with the non-tonic (subdominant II) chord and generally using tonally ambiguous harmonies. “All my loving”, “Hello, Goodbye” and “Paperback writer” start with subdominant chords (II and IV), “I wanna hold your hand”, “Oh, Darling”, “I feel fine” and “Revolution” start with the dominant chord (V), and “She loves you” starts with the Submediant (VI). Another of the Beatles classics, “Michelle”, starts with the tonic chord, but the unusual sound in the bass overturns the stability of the tonic harmony.

**The ending of songs on non-tonic chords** is something that even Beethoven did not attempt to do. Classical pieces (at least music from the Viennese School of composers – Haydn, Mozart, and Beethoven) always finish with the tonic harmony. It seems to me that classic Rock ‘n’ Roll also always comes to the tonic at the end. For traditional songs, where the idea of the tonic is often alien, finishing on unusual places is perfectly acceptable. For example, for a popular Spanish (Flamenco) harmonic progression (A-minor, G-major, F-major, E-major), finishing on the “dominant” (E-major) chord is normal. To name the few songs that finish on other than the tonic harmony, we could recall the Beatles songs, “From me to you” (which finishes on the Submediant), “And your bird can sing” and “Help” (which finishes on the Subdominant). “For no one” (which finishes with the Dominant chord), “And I love her” (which finishes with the major Submediant).

One of the interesting features of the Beatles harmonic language was the wide use of the **Secondal connection of chords**. I am talking about the chord progression like

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I, II, III, IV (C-major, D-minor, E-minor and F-major). You cannot find even a single instance of the use of this harmonic progression in any of the compositions of Mozart, Haydn or Beethoven. This kind of chord progression was not part of Rock 'n' Roll either. In traditional polyphonic music, on the contrary, secondal connections between the harmonies are the most usual (in Georgia and the Balkan traditions, for example). The Beatles used a lot of I, II, III, IV harmonies, for example, in "Here there and everywhere", or IV, III, II, I in "Long, long, long". I, II, III chords were used very early in a song "ask me why" on their first LP, and in "If I fell". The secondal progression VI-flat, VII-flat, I appears in songs like "With a little help from my friends" (in a coda) and "Ps I love you." Interestingly, in a later rendition of this latter, very much underrated early song ("PS I love you") Paul McCartney slightly changed the original chordal progression, and instead of D, Em, D, A, Bm, A, B-flat, C, D, he put D, Em/D, D, A/C-sharp, Bm, A, B-flat, C, D. So in a new version of this song the bass moves exclusively by seconds during the whole verse.

By the way, this song has one of the most amazing chord sequences in the opening of the song. On a very simple melody hardly anyone other than the Beatles would have used any other than G and D major chords. The Beatles put between the G and D triads a brilliant C-sharp seventh chord.

**The structure of the Dominant chord.** The appearance of the D7 (Dominant seventh chord) was crucial for the formation of the classical system of harmony. This chord (G7 chord in a key of C-major) is named "Dominant" because it is "dominating" the whole tonal system in classical harmony. This chord, with the specific diminished fifths between the third and the sevenths of the cord, was the main element that distinguished classical functional harmony from the medieval modal harmony or traditional harmonies of different polyphonic traditions. Traditional music (unaffected by European professional music) does not use this chord. Although The Beatles still widely used the "classical" D7 chord, they started using the other chord as well, sometimes known among jazz and pop musicians as "Suzi" (play on a piano an F-major chord with the right hand and G in the bass with the left hand and you'll get "Suzi"). This new type of dominant chord does not contain the crucial (for Classical harmony) diminished fifth (b-f in a chord G, B, D, F). Instead it uses G, F, A, C, G. For example, in a song "Hello, Goodbye" the "classical" cadencial chord progression (K6/4, V7, I) is replaced with K6/4, V7, V"suzi", I (listen to the words "you said goodbye, I said "hello". V"suzi" sounds on the words "I said...").

**Dissonances.** The wide and innovative use of dissonances is another important element that brings the Beatles musical language closer to ancient European traditional polyphonic cultures. My colleagues would remember that dissonant chords

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and harmonies were considered in professional classical music “auxiliary” to the consonant harmonies. There were rules to be observed when using the dissonances – one had to know how to prepare and resolve dissonances. Of course, in the 20<sup>th</sup> century music dissonances were fully “emancipated”, but classical harmony rules of using the dissonances were very restrictive. Chopin’s brilliant harmonic language was often considered “too dissonant” by his peers. In the Rock ‘n’ Roll of the 1950s and the 1960s dissonances were created mostly by the use of the blues notes against the major triadic and seventh chords (T, S, D chords). Chords based on other than third intervals were very seldom.

The musical language of the ancient European traditional polyphonic cultures, still surviving in mountainous isolated areas, is based on the wide use of harsh dissonances. In these traditions (as found in the mountain ranges of Caucasia and the Balkans) dissonances do not need any “preparation” or “resolution”. That’s why secondal Sutartines and west Georgian dissonant harmonies were so much ahead of the development of European harmonic language in the 18<sup>th</sup> and 19<sup>th</sup> centuries. European professional music only reached the same level of acceptance of dissonances roughly during the musical impressionism (Claude Debussy) and later.

The Beatles love of the dissonant chords and intervals is acknowledged, but still underrated. I will not describe here their use of parallel fourths and fifths, often mentioned in the published works, but want to briefly discuss one particularly interesting case of the use of the sharp dissonance. Stunning vocal harmony is heard in a song “Drive My Car”. At the end of the verse, on the words “you can do something in between”, John and Paul are reciting together during two bars on “F” (John) and “G” (Paul), a second apart from each other. Most importantly, this is happening on the harmonic background of an A7 chord. The resulting chord (A-F-G) is one of the harshest harmonies you can hear in popular music. Incidentally, this chord is identical to the chord that starts the medieval west Georgian church-song “Centuries and Epochs” (here too this chord is used for reciting):

**Fig. 15. Harmonies from The Beatles song “Drive my Car” (the recitation before the chorus)**

The image shows two staves of musical notation. The top staff is labeled 'McCartney-Lennon harmonies' and features a treble clef with a common time signature. It contains two measures of music, each with a pair of eighth notes. The notes in the first measure are F4 and G4, and in the second measure are G4 and A4. The bottom staff is labeled 'A7 chord' and features a bass clef with a common time signature. It contains two measures, each with a single whole note. The notes in the first measure are A2 and G2, and in the second measure are G2 and F2.

Joseph Jordania (2006). From the Book: WHO ASKED THE FIRST QUESTION? The origins of human choral singing, Intelligence, Language and Speech. Logos Publishing.

**Fig. 16. Medieval West Georgian church song “Zhamta da tselta” (opening recitation)**



The love of dissonant harmonies was, I believe, one of the main driving forces of the long lasting interest of George Harrison in Bulgarian traditional singing, famous for the secondal dissonant clashes, during the 1980s.

**Drone.** The use of the drone is quite usual for classical harmony, although it is very unusual for the dynamic Rock ‘n’ Roll. Drone is also widely used in traditional polyphonic cultures (particularly in Europe, but not in Africa). Unlike professional classical music, where the drone is mostly used in the bass, in traditional polyphonic cultures the drone is often used in the middle and the top of the polyphonic texture as well. If we look at the use of a drone in the Beatles songs, we will see that the drone is mostly used on the top of the texture, and sometimes in the middle.

**The Vocal drone** on the top of the harmonic texture is used in “You won’t see me”, where the simple but brilliant vocal harmonies are almost “stealing the song”, and in a dynamic “Sergeant Peppers lonely heart’s club band” (Reprise), where out of two leading parts the top one is actually reciting the text on the tonic (F) of the F-major key, and after the modulation, on G (in the G major key).

**The Instrumental drone** on the top is held for almost the whole song in compositions like “You’ve got to hide your love away” (where the high drone is held on a tonic) and “Getting better” (the drone is on 5<sup>th</sup> step). Drone also appears for the most important, dramatic last appearance of the melody in several songs. Among such songs are: “Eleanor Rigby” and “Yesterday” (the violin holding the high drone in both songs, on the tonic in “Eleanor Rigby” and on a very unusual third in “Yesterday”), and “Back in the USSR” (the high pitch guitar playing a drone on the tonic). The use of the drone in the middle of the harmonic texture, where it is held against colorful harmonic changes and even modulations, is outstanding in “Blackbird”. The use of the drone in the lowest point of the texture (the most widespread in classical music) is very rare among the Beatles, although John Lennon’s “Tomorrow never knows” is completely based on a long bass drone. And of course, George Harrison’s “Indian” songs with the use of Indian instruments are mostly based on the use of the drone in the lowest range.

**Vocal harmonizing.** The guitar sound and general instrumental texture was crucial for pop and particularly rock music followers. Paul McCartney relished himself first and foremost as a bass player, then as a singer, and then as a songwriter. Elvis Presley could himself play a guitar and this was in the eyes of the young Beatles a major achievement. Despite this high rank of guitar playing, the Beatles were primarily a brilliant vocal band. Harmonizing was a crucial part of the Beatles sound. Many of the harmonic innovations that I was talking about, were realized in vocal harmonizing. Harmonizing was particularly active during the first period of the Beatles existence, when the songwriting between John and Paul was mostly based of the “group model”. During the later period they did not have question-and-answer hocketing style songs with active and dynamic vocal interaction (like “It won’t be long”, or “Tell me why”) and harmonizing generally declined.

Paul McCartney was mostly responsible for the richness of the vocal harmonizing style of the Beatles. His vocal harmonizing in many of Lennon’s songs was crucial to the final sound of the song. It is difficult to imagine songs like “If I fell” and “Because” without Paul’s high harmonies. In these songs his harmony successfully competes with the original leading melody. During the second period of their partnership it was mostly Paul harmonizing in John and George’s songs (I am talking not about the wordless harmonizing [like “doo”, “ah” or “la-la-la”], freely used by the Beatles, but about the active contrapuntal intertwining of the melody and harmonizing parts, both using the verbal text).

The brilliant vocal harmonies from the introduction of the song “Paperback writer” epitomize most of the elements I was discussing about the Beatles music language: starting the song with non-tonic harmony, pure a cappella sound, expressing the idea not with a melody, but with a combination of melodies, a richness in the four-part harmony, a wide use of several drones and clashing dissonant seconds:

**Fig. 17. Opening a’cappella harmonies of “Paperback Writer”**



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### **Conclusions**

Profound changes occurred in many important elements of popular music, particularly from the second half of the 20<sup>th</sup> Century, no question about that. Contemporary means of technology, sound-recording, media, communications, globalization, the legal system, issues of performance rights and a booming marketing system created a phenomenon that is difficult to compare to any other musical (or cultural) phenomenon in the history of humankind. At the same time, as I tried to demonstrate with the example of the Beatles, a few very important elements of ancient traditional polyphony came back in the rock-musician's songwriting practices, performance style, and even their harmonic and melodic style. According to these elements the legacy of the Beatles is closer to the traditional polyphonic cultures than to early classic Rock 'n' Roll. Some of these elements are:

- The **Group creative** process and the **unity of composers and performers**;
- The Music is **composed and recorded orally**, mostly by individuals **without classical music education**;
- **No formal rules of harmony or counterpoint** – the ear is the only legitimate point of reference;
- Unparalleled (in classical music or even jazz) **close connections between the performers and the listeners**;
- Unrestricted **richness of chordal changes** and new colorful modulations;
- Partial **diminishing of the role of pure vocal melody**, and particular **importance of the harmonic element** (sometimes puzzling professional musicologists, unable to decide which of the harmonizing melodies is the “main melody”);
- **Ambiguity of the tonal centre**; beginning and finishing musical composition with other than tonic harmonies;
- Wide use of the **secondal connection** between the chords;
- **Changes** to the all-important (for the classical musical system) **dominant chord**;
- The wide and innovative use of **dissonances**;
- Wide use of vocal and instrumental **drones**, particularly on the top and in the middle of the musical texture.

Many of the elements that were successfully used by the Beatles, were later used by other rock and pop-bands. In some cases certain elements were particularly widely used by bands. For example, both “U2” and “Cold Play” started using drones in a high range in a large number of their songs.