

Tileyard Education 18/19

Foundation Assessment

MA Commercial Music Producer - Term 1

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1. Introduction

As part of this first term of the CMP MA course, this assessment is set to discuss the analysis and production of different contemporary commercial genres and a practical approach of these genres by producing new tracks that fit into the music genre. The purpose of this assessment is not to replicate the reference song, but to apply the techniques that have been used and to explain why the produced tracks are matching the genre.

2. Agenda

The following agenda to be followed:

- Select three reference tracks of contemporary commercial music, in three different musical genres,
- Analyse the genre and research the defining characteristics of each genre,
- Explain why the selected tracks fit into their respective genres and the production techniques being used,
- Produce one track for each genre that matches that specific genre and discuss why and how the track fits in that genre.

3. Technical Details

1. Hardware

- Universal Audio Apollo Twin MKII audio interface
- Rode NT1 Microphone with anti-pop filter
- ISOVOX vocal recording booth
- Fender Telecaster electric guitar
- M-Audio Code49 midi controller
- Novation Bass Station II Analogue synth
- Native Instruments Maschine MK3

2. Software

Here is a list of the different DAWs used to produce and record the songs:

- Ableton 10 (Production)
- Maschine 2 (As beat making plugin)
- Logic Pro X (Vocal recordings)

4. Commercial Music Tracks: Genres Characteristics & Analysis

This section contains the analysis of the three chosen genres for this assessment. All the songs were released commercially after the 2010s. These reference tracks share some basic characteristics such as a 4/4 time signature, drums and vocals.

1. Hip-Hop/Rap: Logic - Take It Back

Hip-hop has become one of the most popular and influential musical genres of the last two decades and all across the globe. This style and movement originally started developing in the Bronx in New York in the late 1970s. In its early days, hip-hop was defined by some precise characteristics such as rapping, a rhythmic and rhyme driven spoken vocals on top of repetitive loops of records played by DJs over turntables. The style evolved throughout the years adding more characteristics such as slow-mid tempos, using organic and minimalistic instrument setups such as drums and bass guitar with some famous bands like The Roots from Philadelphia. Sampling also became a big part of the hip-hop with pioneers like J-Dilla, Pete Rock and Dj Premier. Nowadays, hip-hop has transformed in several sub genres, like Trap and Grime for instance, but has kept some of its initial and minimalistic concepts.

The reference track for this genre is Take It Back by American rapper Robert Bryson Hall II aka Logic. The co-producer for this song is 6ix, a record producer from Gaithersburg, Maryland.

The song represents a typical hip-hop vibe where it contains a simple and minimalistic instrumentation and only includes a few elements such as drum machines, distorted 808 bass, a single sample loop and Logic's vocals. The tempo has a relatively fast pace of 135 BPM and the key of the song is in G Major. The arrangement made for this track follows a structure in three parts: Hook, verse and a long outro where Logic narrates about his life as a mixed-raced individual. The arrangement follows a A B A B C sequence.

“ There is brilliance in simplicity” - 6ix

The track was produced on FL Studio and 6ix explains his approach on how he produced the song during a video interview for Youtube channel *Genius*.

The drums were left pretty dry as 6ix himself mentions in the interview: *“I like to keep my kicks dry because sometimes you put compression on it and it loses that edge. And I like to keep my snare punchy, [...] super dry!”*. The main vocals were also left very dry and with a few editing effects such as chopping. 6ix used a sidechain compression over the hi-hats in order to give the kick more space and also adding some dynamic to the whole drum groove. The open hi-hats were pitched down 4 semitones to sit better in the overall sound of the whole kit.

The main loop used in the entire track is a sample that 6ix was given by Bobby Campbell, primary recording engineer for Logic. The sample has been pitched a semitone to adapt to the tempo of the original drum beat. Pitching shifting is the main effect used in this track. The bass line was composed with a 808 bass, with a fast and knocking attack and distortion to give it more character.

In terms of mix and balance, the track presents some typical characteristics. It is noticeable that the recording is rich in the low end and not so in the high end. Regarding the stereo image, the song is surprisingly very central. The two following figures show the spectrum and goniometer:



Figure 1: Take It Back spectrum

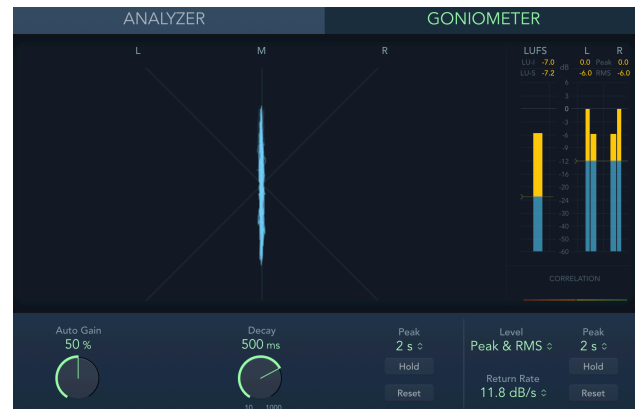


Figure 2: Take It Back Stereo image

2. Contemporary R&B: Mahalia - Sober

Contemporary R&B also made its place as a very popular genre worldwide. This genre combines a lot of elements from other genres such as funk, soul, hip-hop, synth pop and also electronic music. The genre came out as a sub-genre of R&B. R&B started appearing during the beginning of the 20th century, in the 1940s, 1950s and the 1960s in America. The genre had its legacy from American blues and soul music and became very popular amongst the Afro-American community. Throughout the years, the music has been propagated over the world by legendary artists such as Ray Charles and Aretha Franklin, to name a few.

Contemporary R&B started emerging in the early 1980s and was more pop-oriented than its precursor as the improvement of technology helped to add more modern production elements such as synthesizers. Today we can note the change to tempo between the two genres, as where R&B is more upbeat, the sub-genre has more slow tempos with laid-back beats and is very focused on the artist vocals. Many famous artists throughout the years (1980s and 1990s) found massive success in that genre such as Stevie Wonder, Michael Jackson, Whitney Houston, Prince and the list could continue. In the 2000s contemporary R&B became very influenced by Hip-Hop with acts like Beyoncé, Alicia Keys and Usher.

The analysed song is by a Birmingham-based singer and songwriter, Mahalia. The track was produced by Timothy James, aka Maths Time Joy, a British music from London. Maths Time Joy's influences come from a variety of backgrounds, ranging from artists and bands such as The Strokes and Block Party to bigger names like Dr. Dre, Kanye West and Flying Lotus. The London producer states in an interview with Toronto based magazine LYFSTYL: *"It's much more soulful \ RnB vibes now"*.

Sober is characterised by having a typical contemporary instrumentation. The song features Mahalia's soulful vocals where she executes a mix of spoken and sang vocals which makes it modern and fit into the genre. Very snappy and hip-hop influenced drums intertwining well with a punchy but underwater sounding synth bass line make a great combination for this 82 bpm song. The track also includes piano, synths and arpeggiated keys as a foundation. Maths Time Joy incorporated some electric guitar riffs to add rhythm and ended the song with a solo. A saxophone can be heard as well as a nice gimmick, adding a jazzy feel to the song. The final modern touch was the addition of chop vocals with a high-pitched tone that added some soul to the record.

The arrangement for his song has a similar structure than the song analysed in the previous section. The song starts with an instrumental intro and then leads into the chorus before going into the verse. A different vocal part is added after the second verse that flows into the final chorus and then an outro with the guitar solo and an old school fade out.

As most commercial songs, the vocals have a big place in the mix and are very in front. The recording has a uniform and good balance as well as a more spread stereo image than the previous reference as shown in the two figures below:

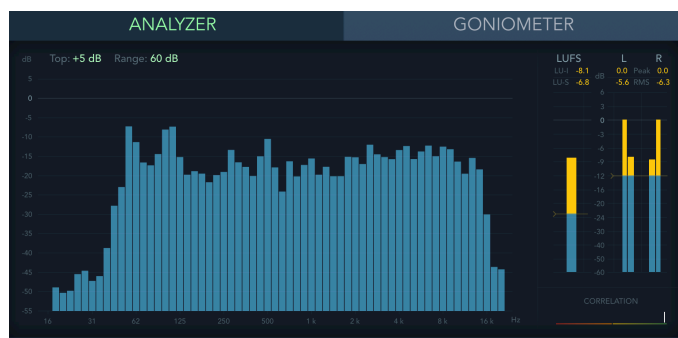


Figure 3: Sober spectrum

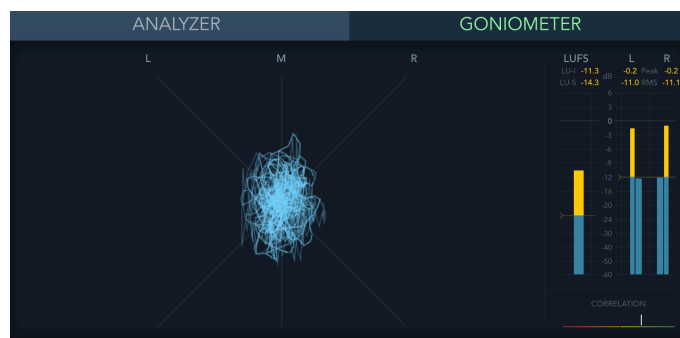


Figure 4: Sober Stereo image

Maths Time Joy used filtering on some instruments throughout the entire intro of the song until the chorus hits. This effect has been used all across today's music genres and remains as a classic.

The producer also included some dynamic effects such as the "vinyls slowdown" before the first verse. Side chain compression was applied over the keys/synths group in order to give a pulse to the song.

3. Dance/Electronic: SG Lewis - Warm

For this third genre, the reference is the song *Warm* by producer SG Lewis. The song has an ambient and atmospheric feeling using electronic and dance elements.

Back in the days James Brown brought a new face to funk and soul music by developing a genre with repetitive patterns that were played throughout an entire piece of music. The 1970s was the beginning of the appearance of DJs in nightclubs (also called discos) as the cost of hiring bands was too high. Throughout the years DJs started performing tracks with simpler beats in order to make it easier for people to dance. Complex funk grooves got reduced to a simple floor on the floor beats with hi-hats playing the off-beat. Eventually this change turned into a new genre called disco music. The genre is characterised by fast tempo music usually on an average of 115 bpm to 135 bpm. It became popular in most clubs around the world and have been popularised by many producers and bands such as Giorgio Moroder and Kraftwerk for instance.

The influence of drum machines and analogue synthesisers resulted in the fruition of several new genres such as House music in the 1980s, which developed in the United States. Sidechain compression is a key effect in the genre as it helps the kick and snare to stick out from the rest. Many sub-genres from dance/electronic music appeared and used slower tempos like dub-step and downbeat music for example.

Warm is a 97 BPM song with atmospheric synths and piano. The beat is a basic four on the floor with a back beat but without any hi-hat. Most of the atmospheric vibe is brought by the use of pads and ambient vocals with a lot of reverb. The bass line has a wobble effect which drives the song.

The track has a progressive structure where each chorus increases in intensity by the addition of new synths and layers of sounds. The post-choruses are characterised mainly as catchy vocal adlibs while maintaining the structure of a “classic” pop song.

Lewis used a lot of sidechaining over the melodic instruments to provide dynamic motion to the song which is one of the main characteristics of Dance/Electronic music. Whilst the kick drives the song, the reverb provides a lot of depth with an airy and dreamy feel, especially over the piano and main vocals. One of the key points is also the fact that the vocals are pitched down from a regular human voice. This makes them more “robotic” or “artificial”.

As for the previous references, the two figures show the balance of the master as mainly mid-range and dragging to the low-end whereas the stereo image is relatively spread.

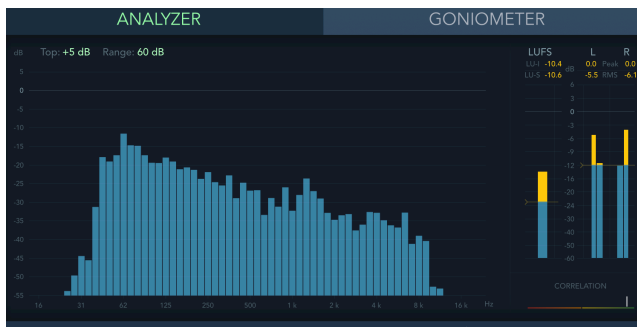


Figure 5: Warm spectrum



Figure 6: Warm Stereo image

5. Applied Production Techniques

1. Sidechain compression

Dynamics processing is a key point in any recording. Using a compressor is one of the most critical processes in order to control the dynamic range of any signal by making louder signal softer and keeping consistency. The human voice is a good example as it is hard to sing on a constant level, so applying a compressor on a vocal recording will help maintain the signal on a good level.

Sidechain compression is a process used in a lot of genres and became very popular especially in electronic and modern music. The process was invented by Canadian sound engineer Douglas Shearer in the 1930s when Shearer wanted to get rid of sibilance in recorded dialogues. He created a compressor using a side input signal with an EQ acting as a de-esser. Sidechaining is basically using an external signal as a trigger for the compressor. It has been mainly used to help the kick to stand out from the rest.

2. Parallel compression

Sometimes instruments can lack punch, especially drums or bass. A way to “solve” that problem is to use parallel compression. This technique blends two signals: the original dry signal and the same signal but heavily compressed. The compressor uses a very high ratio that is relatively close to a limiter. The compression will add slap to the signal and the blended signal will sound louder and fatter.

This technique is mostly used on drums but can also be used over vocals. Technically speaking, use a send or return track (Ableton) and put the compressor on the AUX channel.

3. Chop vocals

Chop vocals has now been established as a big and important part of modern commercial music, especially in pop and EDM. Most of the time, chop vocals are rhythmical syncopated patterns made of effected vocals that have been chopped via a sampler. Every DAW has a stock sampler like *simpler* and *sampler* in Ableton or EXS24 in Logic Pro X.

4. Filters

The EQ process is obviously a major part of mixing a song and getting all instruments to sit in their respective spectrum whilst providing space for each of them to be heard. Filters are the components that help cleaning the frequency spectrum. Filters exist in different types and have their own characteristics: Low pass, high pass, bandpass, low shelf and high shelf.

There are a list of several different filters like linear and analogue filter such as Butterworth, Chebyshev, Bessel, Elliptic, RC, RL or RLC filters to name a few. And there are also digital filters such as FIR (Finite Impulse Response) and IIR (Infinite Impulse Response).

From an artistic point of view, most filters are used to create atmosphere and contrast to a sound.

6. Produced Tracks Analysis

This section is set to explain why and how the produced tracks share the same characteristics as the chosen references. All the following songs include all of the techniques described in the previous section. For all the tracks the vocal chain is always compressor, EQ and then de-esser. Compressor used with a fast attack, mid release and a ratio 4:1. EQ using a high shelf to bring some air and a low cut around 120 Hz. Reverb and delay were inserted on AUX with sends as inputs. As a mixing technique, vocals were also heavily compressed in parallel in order to give them punch and snap. Auto tuning was also used obviously.

1. Comfortable (feat. Black Smith) [Hip-Hop/Rap]

This hip-hop track includes a limited number of elements such as drums, bass, chords and vocals. The main loop is a combination of a chopped sample and chop vocals, a heavy drum beat and distorted 808 bass.

What makes the song fit into the genre is the repetitive pattern throughout the whole song and of course the rap performance. Regarding the production techniques that have been used, the sidechain compression was used over the 808 and the chords. The 808 was more critical because it has a fast attack that sounds like a kick drum. In order to avoid the clash between the two instruments, a compressor has been added over the 808 with the kick as side chain trigger.

Distortion has also been added to the 808 in order to bring up some harmonics as it is difficult to hear them especially on laptops phone speakers.

2. The Real Thing (feat. Bim) [Contemporary R&B]

The Real Thing was co-written and performed by Abimbola Amoako-Gyampah aka Bim, a professional singer and backing vocalist for established British acts such as Bastille, Jamie Cullum, Years & Years. She was also the one who put the Kingdom Choir together.

Snappy drums with a laid-back groove, soul/R&B guitar chords and chop vocals make the song fit into the Contemporary R&B genre. The vocal performance is also the main characteristic of the genre as they are the centre of attention for the listener. Chop vocals add modernity to the song whereas the drums have crispy and "old school" sound which references to the R&B genre.

3. Where Have You Been [Dance/Electronic]

This song was written and performed by myself, Aurélien Merz. The elements that make the song fit into the genre are the four-on-floor drum kick and the repetitiveness of the chord progression with different layers throughout the song. It also features a minimalistic instrumentation based on drums, pads, piano and sub bass. The side chain compression used over the pads and keys is also a technique that is used a lot in this style. Side chain has also been added to the vocals in order to add movement to the song and also as an artistic execution of the technique. The song is mid-range heavy with a tendency to go in the low-end as well.

7. Conclusion

The main objective of this coursework was to find the main characteristics that define a genre. Through the three analysis, it is not uncommon that the genres share similar influences and production techniques such as side chain compression and chop vocals for instance. After listening to several songs for each genre, it was not hard to notice that a genre is not only characterised by its tempo or the chords but also because of the production techniques around it.

This coursework was a good exercise for analysing and getting to know where the genre originally comes from and to see how it evolved throughout the time. Applying different production techniques from a genre onto another genre was also a great way to see how most of the genres are influenced by each other nowadays.

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