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In this essay I shall be examining the characteristics and features of three completely different tracks with their time signature of 4/4 being the only similarity. I will be discussing the well established genres of Pop , House and Electronically Produced Dance music which have become very popular in the late 2000's.

Electronically Produced Dance Music (EDM)

The artists I have used as a reference are The Prodigy and Pendulum two of the biggest artists and influencers of the genre.

The tracks I have used as reference included: Breathe, Smack My Bitch up, Voodoo People and Fire Starter as well as Pendulum's In Silico album.

The Prodigy's music is not confined to one genre they breakdown in several sub genres with in the genre including: Electronica, Big Beat, Techno, Break beat and Alternative Dance.

The defining characteristics of this genre include:

Is the use of large ranges of frequencies from sub bass to high-pitched synths and pads. The tempo is between 90 and 140 beats per minute (BPM) my track "Blue Wale" is at 132BPM. As well as use of high hats and cymbals to keep the pace and movement of the track these are usually samples and loops which feature within my track.

But the real defining Characteristics a kick and snare pattern with the kick on every beat with the snare on the second and fourth beat. which are often made up of multiple layers of several kicks with different EQ applied a sub kick 20hz and below ,a mid kick 100-250hz and a higher kick 250hz-500hz to create a kick that cut through the mix .

You will also find a modulated bass line, sound effects, samples combined with rises and drops. Which can be seen through my track Blue wale I have multiple drum tracks I use a kick and snare paten combined with a high Hat topper see fig 1.

Song length can vary from 3-7minutes in length often with lengthy introductions where the track builds and transitions through many rises and drops

"We knew we wanted some tracks that weren't just the drum & bass one minute 30 intro, 64 bars of drop, 32 bars of breakdown, 64 bars of drop, 32 outro"(Pendulum. 2008 Soundonsound.com)

My Track Blue Wale rises and drops 4 times through out the track.

"It is typified by deliberately inorganic sounds and timbres, frequently produced by cheap early-1980s gear—such as the 303 bass synthesizer and the 808 drum machine, both made by Japanese electronics firm Roland—or built from samples of previous recordings. Live instrumentation and singing are often featured but usually as a garnish rather than the main dish."

(Encyclopedia Britannica, 2019)

The Mix (EQ and level balances) with in the reference tracks:

Vocals are always prominent in the mix supported and backed by the music. Followed by the kick and snare pattern combined with the high hat to keep the feel and pace of the track.

"Even with a track like 'Spitfire', where the lyrics are very much 'in your face', there's still the sense that the music is the main thing." (L.Howlett . 2004 Soundonsound.com)

Use of effects with the genre :

"I'm going back to basics with two or three favourite analogue vintage keyboards and a nice big Manley EQ." I have use the Manly EQ Plugin to mix several instruments including my synths (L.Howlett . 2004 Soundonsound.com)

I took Liam's advice and applied the Manly EQ plugin to my synths as well see fig 2.

Side chaining the most noticeable effect used with in the dance genre, which is created, by using a compressor trigger by another instrument usually the kick drum. I choose to use this affect as it gives a pumping affect to the bass, synths and makes the kick and snare stand out with in the mix by using the correct EQ.

Along with heavy compression across several instruments including bass , synths and most importantly vocals.

“, The majority of the vocals were recorded at The Mews using a valve Neumann microphone and heavy compression. Liam explains: "There isn't a specific formula we use to record vocals. Usually it's just a case of trying out whatever outboard equipment I've got in the studio and seeing what works" (L.Howlett . 2004 Soundonsound.com)

To record my vocals on Blue Wales I used a Neumann microphone for its warmth and clarity and ran it through the LA1176 and a distresser to give the desired vocal sound I was aiming for a cross between the fire starter and Breathe style vocals.

Another effect that is commonly used in this genre clip distortion:

."The Culture Vulture distortion unit was crucial to this album — we used that a lot, and we used the [Logic plug-in] clip distortion on the Ping Pongs' vocals because it added a definite trashy close sound, which was sexy." (L.Howlett . 2019 Soundonsound.com)

I used clip distortion on the pitch-shifted vocal found in my track "Blue Wale" to give it exactly that the trashy close sound. I also used clip distortion and a bit crusher on my high hat topper to as it gave it a trashy edge it needed to stand out in the mix. Why clip distortion and not a bit crusher? I choose clip distortion over a bit crusher because it gave the sound I was looking for.

I couldn't talk about EDM with out mention Sampling, I have used many samples in my track and manipulated them see. The most noticeable is the "Been on the

planet" sample in my track "Blue wale" which I sampled from a fellow students song. Where I used a combined of vocal transformer, pitch shifting and parallel compression along side parallel vocals where you mix the original with the affected to gain clarity with in the vocal line. See fig.3.

With in my references for example "Voodoo People" samples the guitar riff from Nirvana's "Very Ape" "*which appears at the start of both tracks*" (People et al., 2019)

Its use of heavy sampling to be the basis with the guitar riff from Nirvana's Very Ape and the flute hook from No Good (Start the Dance) are very typical of the genre *On "Their Law", a guesting Pop Will Eat Itself supply a vitriolic vocal aimed at the powers that be. The knuckle-scraping guitar riff from Nirvana's "Very Ape" forms the scuzzy chassis to the flute-augmented 'Voodoo People'. And "No Good (Start The Dance)", with its Kelly Charles vocal hook, proves that despite The Prodigy's punk snarl, their pop impulse remained intact.* (Bbc.co.uk, 2019)

Additional musical decisions I have made in the creation of my tracks.

Reference mix on NS10s "*mixed the tracks at The Mews on the Mackie using Yamaha NS10s*" (L.Howlett . 2019 Soundonsound.com) As well as mixing my tracks on the Adams in the studio which were owned by The Prodigy .

As well as Doing a final Mix in Pro Tools "*it was a good idea to take Pro Tools to the mastering room and I'd certainly do it again.*" (L.Howlett . 2019 Soundonsound.com)

Pop

My reference track I am using is "Nancy Sinatra Bang, Bang (You Shot Me Down)" which is a cover of the originally performed by Cher. The song was mad popular after appearing in the 2003 Quentin Tarantino film *Kill Bill Volume 1*.

The instrumentation with in the track is very simple just guitar and vocals but the simplicity works with the guitar complementing the emotional vocals with its strange deep tremolo sound created by a Gibson 335 and a Fender Twin.

"The guitar was a Gibson 3 35 and was a gift from Nancy to Billy " it is an unheard of Guitar its unbelievable its great, I had a wah- wah pedal and it just made the right sound it has the deepest bass quality and it just made the right sound for the piece "(Youtube.com, 2019)

"L&S: Do you remember which amp and guitar you used?"

BS: The amp was my old Fender Twin and the guitar was the Gibson 335 that Nancy gave me (Derrer, 2008 lost and sound.com)"

As well as guitar and vocals I have added bass, drums and a keyboard to bring the track into the modern day. I used one guitar on this track also recorded through a fender twin amp plugin combined with my jackhammer tremolo pedal and crybaby wah. I felt this is the entire track needed and I wanted to recreate the iconic guitar sound from "Bang, Bang ".

"l&S: Why did you decide to record it with just one guitar?"

BS: It was just as if the song called for it. More than one instrument would have been too many."

(Derrer, 2008 lost and sound.com)

The Arrangement:

There is no set arrangement to the track but the arrangement and structure is as follows Intro: Verse, Chorus, Verse , Chorus , Verse, Chorus, Verse Chorus.

My Track My Mind follows the same loose arrangement: Intro, Verse , Chorus , Verse , Chorus , Verse, Chorus, Verse. To conform with in the style and genre or the reference.

Billy Strange: There was no arrangement. I just played what I thought was appropriate and Nancy liked the way it was sounding, so we recorded it. (Derrer, 2008 lost and sound.com)

Mix (EQ and level balances):

When recording my track I decided to only record the kick snare and overheads using Cole microphones in the blumlein stereo pair see fig 7. As they gave the sound I wanted and have this microphone technique has been widely used through the genre by such artists as the Beatles.

The vocal sits on top penetrating the mix at 2-4Khz EQ of the importance of getting the recording right at the source, choice of microphone and vocal pre amp are key to getting the right vocal in this case I choose to use a Neumann u87 microphone and a LA11176 compressor and both are great at capturing and enhancing the emotion, warmth and tone of a female vocal.

"It can't be said often enough that good mix begins at the recording stage and its millions times better to get things right at the source rather try and fix it in the mix" (Soundonsound.com, 2019)

Use of effects with in Bang, Bang, there are several effects being most noticeable is the tremolo effect on the guitar , *L&S: What kind of sound effect did you use on the guitar?*

BS: I used a tremolo effect. There is a small box that creates it, made by Vox, I believe. (Derrer, 2008 lost and sound.com) Reverb on the vocals

With in my Track :

I have used two types of reverb one long and one short, a longer reverb to create a sense of space and shorter reverb to thicken the vocal line." *You always want to use at least two reverbs in your tracks one long and short and only use these reverbs on the vocals and nothing else "(Englund, 2019)*

A tremolo effect on the guitars , delay, and compression.

House

The tracks I have referenced for House are “Faithless’ Insomnia and Baby D’s Let Me Be Your Fantasy” as both are very stylistic of the genre.

House first started in the UK from 1986 onwards evolving from disco and later became the predecessor to EDM. Following on from the success of the Northern Soul Scene.

“House first charted in the UK in Wolverhampton following on from the success of the Northern Soul scene. The record generally credited as the first house hit in the UK was Farley “Jackmaster” Funk’s “Love Can’t Turn Around”, which reached #10 in the UK singles chart in September 1986.” (En.wikipedia.org, 2019)

Even modern day House Music still contains the signature features of House from the 80s including: Deep Baselines , “Richards’ approach to house focuses on the deep bass lines. Nicknamed the UK’s “Godfather of House”,(En.wikipedia.org, 2019) My track includes three separate bass lines: a sub bass sub-100hz, mid bass 100-300hz and a higher bass 300-2khz the reason I did this is to have more control of the bass frequencies and can chose how to effect them differently. For example I have chosen to split the headroom on the sub and my kick equally to allow each of them to cut through the mix.

“The most critical sub-100Hz conflict in modern mixes is that between bass and kick drum: their low frequencies are normally responsible for the lion’s share of the mix bus’s output level, and therefore present the primary headroom bottleneck at mixdown and mastering. The engineer’s task is to divide the available headroom appropriately between these two main LF sources.” (Soundonsound.com, 2019)

After a solid low end from the kick and snare, a clear chorus is one of the most important aspects of House Music according to Sister Bliss from Faithless.

“Having a clear chorus gives the listener something to remember and to dance too” (Bliss, 2019)

The chorus within my track rises with the chord progression to create a build and sense of progression with in the track.

Sampling is also used within the house style either taking a whole sampling and placing it into the track and manually editing or placing the sample into a sampler to trigger it.

“Many of the early hits were based on sample montage, and unlike the US soulful vocals, in UK house, rap was often used for vocals (far more than in the US),^[citation needed] and humor and wit was an important element.” (En.wikipedia.org, 2019)

The list of instrumentation with in house is almost endless including electric guitar, bass, drums, vocals , shakers, saxophone , cow bells , cymbals , synths and a sampler or drum pads. Several of these feature in my track including, synths, samplers, drum machines , cymbals and a shaker.

“ledm.com lists the top 5 instruments as electric guitar, drum machine and pads, a sampler, saxophone, synth”(ledm.com, 2019)

A typical house song arrangement *"Arrangement is all about anticipation. You can listen to a record you've never heard before, and still instinctively feel when certain things are going to happen, because the music gives you clues. So getting that right is the key."* (Tate, sound on sound 2019)

I have used "Baby D Let Me Be Your Fantasy" (Lyrics.com, 2019) as a guide for my songs structure see fig5.

So my arrangement is as follows at a tempo of 124BPM: Intro, Verse, Pre, Chorus, Verse, Pre, Chorus, middle 8, Chorus and Outro. The transition between each part is vital as it allows a chance for the producer to demonstrate their skills as well as telling the listener what is going to happen next. You can see a clear example of this in my track when the Intro changes into the verse, starting with just notch filter over the start of the track with a gradual fade in before a vocal break followed by the verse. I did this to create a sense of direction and to show where the track is going to go next.

Mixing (EQ and level balances):

With in house music you have to have a perfect low end from sub-100hz onwards, with the war of low end the kick drum usually always wins, as it has to cut through the mix and provide the backbone of the mix. Often accompanied with a higher above 100hz bass line as the bass provides the energy and feel for the track.

With hi-hats it's about making them sound tight, with a sharp attack. I used the waves Transient Designer it to bring in the attack, so it trims the start points so you can make things sound really clipped. Which makes the drums sound very tight and really stick out in the mix

"In the battle for low-end between kick and bass, let the kick win. The kick drum is the heart of house music; it holds down the groove and signifies the genre. The bass, on the other hand, provides energy. Putting the bass in a higher register (starting at say, 100 Hz) allows you to get a more percussive, funky, or aggressive sound." (iZotope, 2019)

A great way to create separation with in a mix is by the use of pan by panning vocal harmonies from low to high starting out hard left and hard right and bringing them in by a quarter turn at time gives width and depth to your vocal there for making sit on top of the mix.

Automation is vital with in the mix as it gives you more flexibility and complex capabilities with in a mix that you wouldn't be able to do. With in my mix I have used automation to trigger samples, adjust filters, remove vocal breaths see fig 5 for my vocal automation to edit the breaths I did this to create a clearer and

more intermit vocals by changing volume levels to articulate certain phrases louder or quieter to add emphasis to what is being said in the lyrics.

"One of the best sound design tools that we've got available to us is mix automation. Most engineers automate controls like filter cutoff and track level, but syncing up a few more parameters will produce a more lively sound experience." (iZotope, 2019)

Vocals have to be clear and prominent in the mix and at the centre of the listener's attention my track reflects this by sitting at the for front of the mix. *"vocals have to sit very forward in the mix as lets be honest its all people care about"*(Bliss, 2019)

The use of effects in with in house music:

The most common effect is the use side chaining and compression Side chaining creates the pumping feeling with in house. With in my track I have side chained the bass and vocals to two different silent kicks. The bass linked to the main kick drum, which creates dynamic space. With the vocals being side chained to give them a gated and chopped up sound.

Another common sidechaining is used is in electronic dance music (EDM) where there's heavy kick and bass. Often, producers will put sidechain compression on the bass of an EDM track and have it triggered by the kick. This reduces any muddiness that might happen from having too much low frequency sound when the kick and bass play simultaneously. (Sageaudio.com, 2019)

Other effects used include reverb, tremolo, filtering with notches which you can hear at the start of my track, bit crushing which I have applied to the high hat which is apparent in Insomnia just after the line " I cant get No Sleep ". As well as the use of delay on the vocal which I have used in my track with in the cut up vocal.

" I tend to use short reverbs on hi-hats, generally, but I tend to use quite a long reverb on crashes and things, I like it lingering. If it's in a breakdown and I just want the crash floating off into the distance I'll use automation to switch on the delay or turn up the send level." (Soundonsound.com, 2019)

My favourite effect has to be the use of white Noise on a snare which I used on my snare in my track "With You" as a high end snare pulled back in the mix with a reverb so that it just cut through in the mix.

What a lot of people do in house to create snare sounds is to get white noise and compress it really heavily, even using the Logic compressor, so it cuts in with a heavy attack and then cuts out. It makes a blisteringly sharp clap noise, and that

works really well. You can put that in stereo and put a nice reverb on that.
(Soundonsound.com, 2019)

I have used the plug little altar boy to create a robotic and cut up vocal sound which you can hear in the verses of my track behind the lead vocal. I did this to create a unique sound to my track. See fig 6

Conclusion:

The three chosen reference tracks are good examples of each genre is peaking Commercially over the last ten years. Some may argue my given examples don't represent the given genre correctly. But I believe I've shown that each reference track has contains the key elements with classic tracks of it's genre, and hence Can be considered a classic of the genre.

All of my reference tracks were produced by the best producers in their given genre.

It's worth noting that the Prodigy were of the founders of their style music with the reference track fire starter and their Album " Fat of the Land " holding the record for first number 1 album of EDM to reach America.

My references were chosen for their production techniques , new way of thinking and a real insight to the production and creation of music in their genre. The fact I was able to ask Sister Bliss questions about the production of House music and gain insight from one of the founders of the genre gives real credit to the reference and so much useful information about how to make these hits across these different genres.

Each genre has been equally successful; each genre has had mega-hits consisting of only verses and a repeated hook, and there is enough structural and variety to create hits to suggest that song structure is not particularly important to hit-making and that there is much to be learned about why we like the music we like and why certain songs become hits.

Appendix:

Fig1 Multiple Drum Layers the red is the high hat topper , Pink my Snare and Yellow my Kick samples.

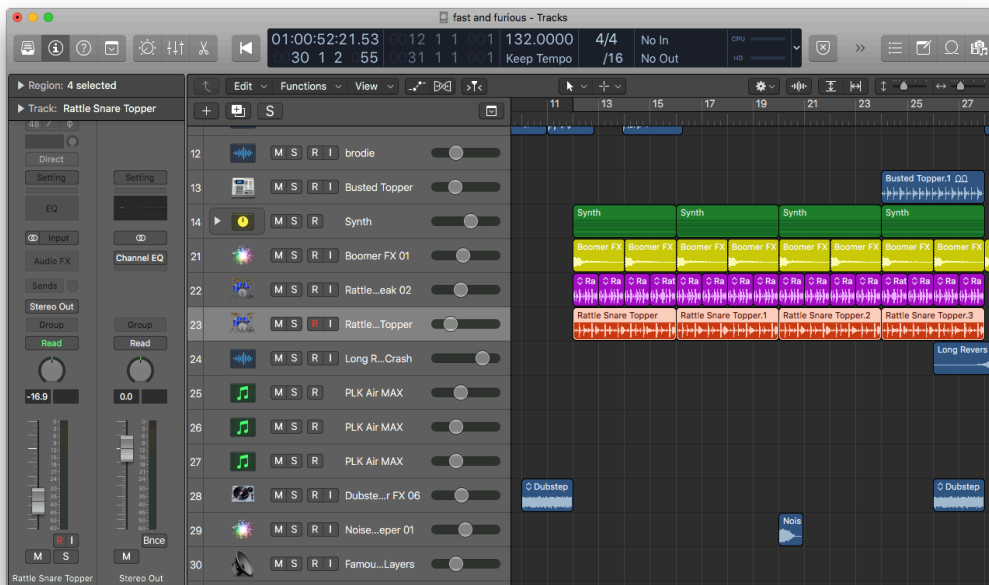


Fig2. Manly EQ on Synths



Fig 3. Pitch shifting Vocals



Fig5. Baby D Let me Be your fantasy structure:

Intro:

Let me be your fantasy
Let me be your fantasy
Let me be your fantasy

Verse:

I'll take you up to the highest heights
Let's spread our wings and fly away
Surround you with love that's pure delight
Release your spirits, set you free

Pre:

Come and feel my energy

Let's be as one in soul and mind
I'll fill your world with ecstasy
Touch all your dreams deep down inside

Chorus:

Let me be your fantasy
Let me be your fantasy
Let me be your fantasy
Let me be your fantasy
Let me be your fantasy

Verse:

Let me touch your dreams
Just spread your wings and fly away
Come take a trip to my wonderland
Let's spread our wings and fly away
Oceans of love flow through your hands
See visions, colors everyday

Pre:

Let me feel your warm embrace
Release the colors in your mind
I'll put a smile upon your face
I've got what it takes to make you mine

Chorus:

Let me be your fantasy
Let me be your fantasy, yeah, yeah
Let me be your fantasy
I'll take you higher, yeah, yeah
Let me be your fantasy
Underground is where

Outro:

We wanna go moving
How's the crowd?

Chorus:

Let me be your fantasy
Let me be your fantasy
Let me be your fantasy

Fig5. Automation on Vocals



Fig 6. Little Alter Boy

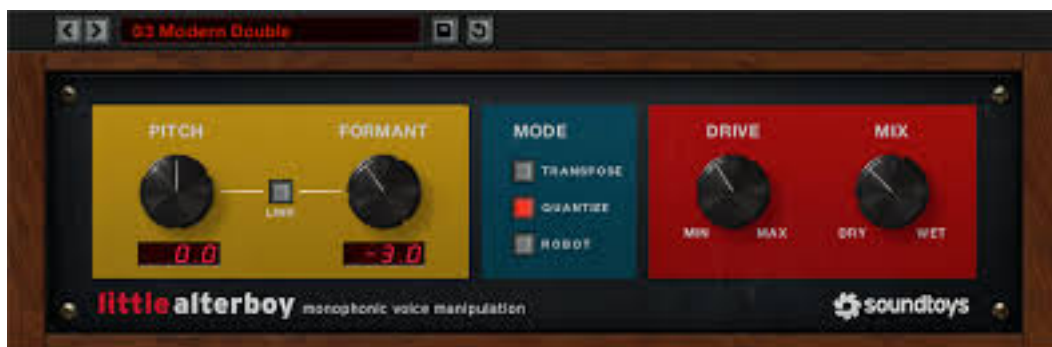
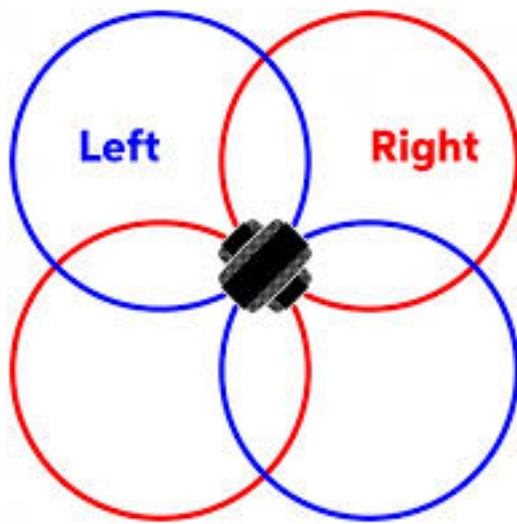


Fig7. Bumlein Stereo pair



Bibliography

<https://www.izotope.com/en/learn/5-popular-music-production-techniques-and-how-to-create-them.html> (visited on 18.11.19)

<https://prezi.com/bywcvsq1t1h/pop-rock/> **Annessa Ismail**

People, V., Generation, M., McLellan, N., Howlett, L., Ape, V., Utero, I. and Albin, S. (2019). *The Prodigy's 'Voodoo People' - Discover the Sample Source*. [online] WhoSampled. Available at: <https://www.whosampled.com/sample/505/The-Prodigy-Voodoo-People-Nirvana-Very-Ape/> [Accessed 27 Nov. 2019].

Soundonsound.com. (2004). *The Prodigy*. [online] Available at: <https://www.soundonsound.com/people/the-prodigy> [Accessed 27 Nov. 2019].

Soundonsound.com. (2008). *Pendulum*. [online] Available at: <https://www.soundonsound.com/people/pendulum> [Accessed 27 Nov. 2019].

<https://nancysinatra.com>. (2019). *Zayn Samples Nancy & Billy's "Bang Bang"*. [online] Available at: <https://nancysinatra.com/blog/2018/12/zayn-samples-nancy-billys-bang-bang/comment-page-1/> [Accessed 28 Nov. 2019].

Derrer, J. (2008). *Guitarist Billy Strange Talks About Nancy Sinatra's 'Bang Bang'*. [online] Lost & Sound. Available at: <https://lostandsound.wordpress.com/2008/06/06/guitarist-billy-strange-talks-about-nancy-sinatra%E2%80%99s-bang-bang%E2%80%99/> [Accessed 28 Nov. 2019].

Encyclopedia Britannica. (2019). *Electronic dance music*. [online] Available at: <https://www.britannica.com/art/electronic-dance-music> [Accessed 9 Dec. 2019].

Bbc.co.uk. (2019). *BBC - Music - Review of The Prodigy - Music For The Jilted Generation*. [online] Available at: <https://www.bbc.co.uk/music/reviews/2bvr/> [Accessed 9 Dec. 2019].

En.wikipedia.org. (2019). *House music*. [online] Available at: https://en.wikipedia.org/wiki/House_music#UK:_1986%E2%80%93early_1990s [Accessed 13 Dec. 2019].

Bliss, S. (2019). *Song Writing Circle*. Interview

Soundonsound.com. (2019). *Mixing Bass*. [online] Available at: <https://www.soundonsound.com/techniques/mixing-bass> [Accessed 13 Dec. 2019].

Lyrics.com. (2019). *Let Me Be Your Fantasy Lyrics*. [online] Available at: <https://www.lyrics.com/lyric/5336879/Back+to+the+Old+Skool%2C+Vol.+2/Let+Me+Be+Your+Fantasy> [Accessed 13 Dec. 2019].

ledm.com. (2019). *Top 5 Instruments in Dance Music*. [online] Available at: <https://iedm.com/blogs/onblast-edm-blog/top-5-instrumentals-in-dance-music> [Accessed 13 Dec. 2019].

Tate, D. (2019). *Secrets Of House & Trance*. [online] Soundonsound.com. Available at: <https://www.soundonsound.com/techniques/secrets-house-trance> [Accessed 14 Dec. 2019].

iZotope. (2019). *9 Tips for Producing and Mixing House Music*. [online] Available at: <https://www.izotope.com/en/learn/9-tips-for-producing-and-mixing-house-music.html> [Accessed 14 Dec. 2019].

Soundonsound.com. (2019). *Secrets Of House & Trance*. [online] Available at: <https://www.soundonsound.com/techniques/secrets-house-trance> [Accessed 14 Dec. 2019].
Sageaudio.com. (2019). *What is Sidechaining?*. [online] Available at: <https://www.sageaudio.com/blog/pre-mastering-tips/sidechaining.php> [Accessed 14 Dec. 2019].

Youtube.com. (2019). *YouTube*. [online] Available at: <https://www.youtube.com/watch?v=p-bjzshzdqM> [Accessed 14 Dec. 2019].

Soundonsound.com. (2019). *Mixing Essentials*. [online] Available at: <https://www.soundonsound.com/techniques/mixing-essentials> [Accessed 14 Dec. 2019].

Englund, Y. (2019).