

An Analysis of Breakbeat, House and Dubstep

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The stealthy revival of rave music influenced by the likes of Fantazia and The Hacienda has got artists new and old scrambling to recapture the classic sound of the 90s. Artists making this sound have become a lot more prevalent in recent years, not only in the underground music scene but also along some playlists that are now grabbing the attention of mainstream audiences. Teen Vogue stated in an article this year that “The renaissance around rave music is being spearheaded by young and mostly independent music artists. Artists like piri, Negative Gemini, Nia, jamesjamesjames, PinkPantheress, Deijhuvs, and others are helping to make this renaissance a much more global trend” (Nelson 2021). While I disagree with the statement provided that it is being spearheaded by the mentioned artists, especially when acts like Raito, Virtual Self, Lone and Jamie xx have been focusing on the sound of the rave revival from as early as 2015, “Jamie xx’s debut solo album *In Colour* is one of the most recognisable examples of the current rave revivalism” (Eade 2016). It could be better suggested that these artists have been inspired by this underground movement and taking it to commercial success using the reach of social media apps such as TikTok and Instagram.

This sudden revival of rave music in the mainstream has also brought on the attention of acts such as Calvin Harris, even going as far to create a new project titled ‘Love Regenerator’ which he’s made sure is as faithful as possible to his roots “I’ve done everything I can to make them sound like they’ve come from a 1991 time capsule. Every synth and sound used is from that time period.” (Harris, 2020). Sounds typically used in this genre tend to be sampled vocals, sampled drum breaks, acid sounds [typically from a Roland TB-303] and uplifting piano chords [Usually from a Korg M1]. All these aforementioned techniques towards production can be heard in the Love Regenerator track *Hypnagogic*.

Studying the track *Hypnagogic* you can clearly hear the techniques used even from the very beginning of the track, having the song open up with acid wobbles that builds into a sampled break from the track *Hot Pants* (Bobby Byrd 1987) which eventually builds with sampled vocals from *Don’t Make Me Wait* (Peech Boys 1982) and piano chord stabs which sound to be very similar to that of a Korg M1 piano. The acid sounds used in the intro seem as if they have been processed with various filter movements to attain that uniquely familiar motif. The vocals which come through seem to be sped up to fit the tempo of the track as well as pitch shifted by what sounds like two semitones. It also sounds like the vocal has been extended on some notes to fit the arrangement more cohesively. This is a technique which can be achieved by taking a section of the vocal

and cutting it at the point where the waveform crosses zero and stitching them together to artificially lengthen notes where more sustain is desired. The break used has been cut up and re arranged artistically to create a unique break which hits on and off the beat. It sounds to have also been pitched down a few semitones and run through a tape saturator to thicken the drums out.

The track I produced for this genre was my first attempt within it and so I thought it would be best that these methods were all executed in the production process of the track *Back 2 Me*. Since I have extensive knowledge and experience in house music I tried to apply any and extra tricks and methods in regards to sound design and mixing which could be carried over. Starting with the breaks I went about taking a drum loop from a sample pack and time stretching it to fit the tempo. Following this I ran the break through a saturator and compressor to thicken the drums out and bring all the elements in the break to a neutral level. I also added a transient shaper to the break to tighten the overall sound together. Finally I used an EQ to cut the low end of the break at around 250Hz to make space for the kick and sub but still giving it enough low end to really hear and feel the snare's in the break.

The vocal sample used luckily fit the tempo I was working at so not much editing was required to edit it on time. One thing I did decide to do as a creative decision was extend one of the sustained notes to better fill out the space on top of the piano chords. To do this I used the method of cutting the waveform at zero and extending the sustained note to my desired length. I also added a delay unit set to 1/8th notes, some reverb and finally some tape saturation to thicken the overall sound.

The piano chords in my own production were created using a Korg M1 VST and are based around similar chord stab patterns that are prevalent in a lot of tracks in this genre. Not much else was done to the chords apart from some light subtractive EQ, light saturation, delay added at 1/8th notes and some light compression. Along with the chords I also added a sub bass along the section following the bottom notes of the chord pattern. This technique was also prevalent in *Hypnagogic*.

The track features a second build up into a drop which really showcases the darker side of rave music and features rolling basses, reese sweeps and FM synth plucks which result in a satisfying juxtaposition towards the uplifting chorus. A lot of the sounds mentioned are featured in tracks like *What You Feel* by My Nu Leng and *One Step Beyond* by Raito.

I feel this is where a lot of my knowledge in sound design was beneficial as I was able to create all the sounds needed for the drop with little effort. Starting with the rolling

bass that can be heard throughout the drop, I began by taking a basic sawtooth wave and setting an LFO to modulate a low pass filter on 1/16th notes. I also went about setting the sawtooth wave on a phase sync to make sure each note triggered on the start of the waveform. I then added some saturation and compression to tighten the overall sound.

The Reese sweeps that can be heard were created by using two oscillators set to a multi sawtooth waveform and then detuned by various amounts. One oscillator was set to mid range octave while the second one was set high octave to give the sound more weight and harshness. The sound was then set to modify the pitch with an envelope to give it the pitched screech sound and finally topped with some gated reverb and compression to bring out the reverb more harshly on the sound.

The FM synth plucks were the trickiest to get right as FM synthesis can be quite fiddly at times. I started out by using an FM oscillator and adjusting the carrier and mod until the sound started to resemble the classic FM pluck sound. Once this was achieved I began to process the synth through a filter envelope with a short decay and adjusted the resonance until the sound started to obtain some vowel movement. The next task was to act on any problematic frequencies the sound presented so subtractive EQ was used to attenuate and sharpen the overall sound. The final touches on the sound came about by adding some light chorus to give it a thicker tone and heavy reverb to fill the space and lastly some compression to level out the sound as well as bring out more of the reverb in the space. The other notable sound in the drop is the square wave plucks which were achieved by using a modulation envelope to adjust the pitch of the oscillator with a sharp decay rate.

House music is a genre which is also seeing a resurgence with 90s themes and sounds with artists such as Armand Van Helden, A-Trak and Boys Noize all directing some of their more recent productions towards a 90s feel and sound. This genre of music has always had its roots set in sample culture, it doesn't take much to look back and see the influence and legacy of artists such as Armand van Helden or Daft Punk to make that connection. "House music and sampling always have, and always will, go hand-in-hand. Whether it's disco gems, soul classics or hip-hop anthems, it's part of the fabric that makes this genre so special - producers creatively borrowing a record and breathing new life into it" (Defected 2018).

This mindset towards production has always sent DJs down a path digging for that perfect sample, which is encapsulated in the song *DJs Gotta Dance More* by A-Trak and Todd Terry. When analysing the lyrics in the track "I remember back in the days, digging in the crates, looking for tracks and loops, playing records all day" (Terry 2018)

you can see this line perfectly represents the history behind the culture and its importance to the genre. A-Trak is a producer who has in the past teamed up with Armand Van Helden to create an alias called Duck Sauce. Listening to their track *aNYway* you can hear all the defining characteristics of this methodology towards production which results in a satisfying old school yet fresh house track.

Analysing the track further you can hear all the intricacies which really showcase the talent that brings a sample to life in a house track, those being pitch shifting, time stretching and manipulating anchor points in the waveform to adhere to the 4x4 structure. Using saturation, compression and EQ to skillfully brighten up the sample to modern day production levels and adding sidechain compression to really accentuate the kick. They have also added their own bassline to the track, making sure to follow the feel and groove of the sample which really blends the overall feel of the track together.

These are all techniques I used when approaching the creation of my own track *Rockin' Radio*. Even though I have been making house music for a while I have tried to stay clear of sample and loop based house due to the difficulty of searching for the perfect sample and the issues when it comes to releasing those tracks independently. So even though I feel comfortable within the house genre this is a method I have not approached before. I began by creating a playlist on Spotify of all the original tracks which have been sampled in house music. I then started to refresh the tracks on the recommended tab for the playlist and came across a track called *Rock Radio* by Gene Dunlap. I then went online to 'purchase' the track and placed the track into my digital audio workstation.

The first task in creating the track was figuring out the BPM so I used a BPM detector VST and managed to figure out the tempo sitting at around 128 beats per minute. Once this was achieved I pushed the tempo up to 130 beats per minute to give the track more bounce and really push the sampled feel. I cut out sections of the track which I felt could really work in a composition and began arranging the track. Once the arrangement was there I began to look into the sampled sections and started work on manipulating the transients in the waveform using anchor points to mold the sample to work on the grid. The track did drift off beat from the grid so I knew this was something which needed most of my attention when editing the samples.

The next process in creating the track started with mixing the sample, using a combination of subtractive EQ to cut the low end at around 200hz, slightly boosting frequencies at around 800 - 2000hz to brighten the instruments and vocals, adding some stereo imaging with ozone to give the sample more width and finally some compression to level out the overall volume and tighten it all together. Once this was

achieved and I was happy with how the sample sounded I added my own instruments to help build the track towards conforming more to the house music genre.

I began by finding a kick which had a short transient and release and then proceeded to sidechain the samples in time with the 4x4 beat as well as adding some white noise in the background subtly to fill out the space. I used a combination of classic 909 hi hats and rimshots to help fill the groove and finally added a snare roll in between the sections to break up the flow of the track, giving each section more weight when the track switches sections.

For a breakdown section I ended up using the intro sample from the beginning and cutting it up and reversing it. I added a multi saw synth with some slight phasing to add as a background element. I also switched up the kicks into a two step beat to break the repetition of the 4x4 kick pattern. To help bring the beat back in I searched online and found a cool sample of a radio presenter talking about broadcasting around the world which I added in the track and EQ'd it to give it a more handheld radio sound.

The last thing I added to the track was the bassline which was just a basic saw tooth with a medium decay on the filter envelope which was modulating as a low pass filter. I then ran this through an EQ cutting the low end at 100hz and added a sub bass on a different track to give me more control over the low end frequencies.

Dubstep has seen so many iterations and forms which over time has spawned an ungodly amount of sub genres to go along with it. It seems to be a genre which has gained attention and inspiration from every single corner of the world and pushed producers to inject their influences into the core of what makes Dubstep tick. But taking it back to its roots shows us a genre which was born from a love of dark garage beats and a willingness to experiment at halftime. "In Croydon, UK garage became a lot deeper, a lot less corny, and started to become rather menacing. The epicenter for this was a shop called Big Apple Records, where a DJ and producer named Hatcha discovered Skream and Benga" (Flatley 2012). This is where we look when studying the basics of the genre. In a 2010 Sound On Sound tutorial it was said that "Dubstep's main characteristics lie in its rhythms, bass and dark sound, with heavy use of spatial atmospherics, low-end frequencies and swing" (Jenkins 2010). So basing what we hear off this quote and comparing it to some tracks in the genre we can start to figure out what we need to lay the foundations of a Dubstep track.

Dubstep is a genre I have listened to a fair bit but have never attempted to create. That being said we can look at a track by a seasoned producer named Coki, more specifically his track called *The Creed* where we can instantly hear the dissonant

atmospheres and haunting vocals which rapidly build into unrelenting wobbly basslines that repeat throughout the track. Listening to the track it starts to become apparent that repetition is not the only key to a successful catchy track, but keeping variation and movement within the segments to keep the listener engaged in the rhythm yet still able to process the flows of the track.

Using the knowledge from the breakdown and this track as a reference I opened my digital audio workstation and set my tempo to 140bpm. The first thing I went to create for the track was the bass sounds and synths to use in the track. Using a wavetable synthesizer I processed the sound through a low pass filter which was being controlled by an LFO which then went through a comb filter which was set to a static frequency to give the sound some interesting harmonics. I wanted the sound to be minimal yet piercing so I then ran the synth through a bit crusher to exaggerate the high end on the synth. I then cut the low end of the synth using an EQ as I would replace that with a sub bass later to give me more control over the low end. The final touch on the synth was to add some reverb set to a high wet ratio with a long decay. This was to not only help fill out the space but really help support the haunting theme for the track. It was at this moment I realised the synth sound worked extremely well with sustained pitch and triplet notes and so started to work on the flow.

The kick had the low end cut at around 80hz and also a slight dip in frequency at 250hz, this gave space in the mix for more of the bass and synths which were also sidechained to the kick slightly to give it more presence when it did trigger. With all this in place the track still felt it needed something else so I decided to take a trick from a sub genre of Dubstep called Riddim. This sub genre stereotypically features basses which follow a $\frac{1}{4}$ note rhythm with variation taking place in modulating the sound as the track progresses. I took some inspiration from this style and placed a sustained $\frac{1}{4}$ synth underneath the triplet notes which helped fill that space in the mid to low range.

The next task was to fill out the space with haunting dissonant sounds and melodies. I created a reese bass which features as the intro melody as well as the main bass during a surprise middle 8 section which leads back into the main flow. The vocal samples compliment the haunting theme surrounding the track and was a creative choice to choose old film vocals which sound edited through electronic means.

Looking at the reference tracks in context along with the tracks created I feel I achieved a good balance of borrowing from the characteristics and tropes from the genres while also being able to put my own spin on the genres. If I was to criticise my own work and abilities I would definitely look into mixing a bit more as I feel it's the one thing in my skill set I wish to improve on as my knowledge in these areas leaves me guessing what to

do at times. I am also happy with how my sound design has resulted in some unique and faithful sounds which when applied to the genres results in achieving a fresh yet familiar feeling.

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