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An Analytical Study of the Sound Design and Production Techniques of IDM Artists

By
ROBERT STEVENS

A MUSICAL STYLE PAPER

Submitted in partial fulfillment of the requirements for the degree of
Master of Music in Commercial Composition
in the School of Music
of the College of Visual and Performing Arts
Belmont University

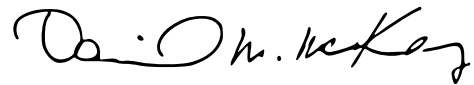
NASHVILLE, TENNESSEE

May 2024

Submitted by Robert Stevens in partial fulfillment of the requirements for the degree of Master of Music in Commercial Music (composition focus).

Accepted on behalf of the Graduate Faculty of the School of Music by the Mentoring Committee:

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Introduction

Electronic music has reinvented the way musicians and listeners understand fundamental concepts of music like “sound” and “instrument.” The genre has dramatically shifted the production of music for the film and television industries, which primarily feature music that combines electronic and acoustic elements for hybrid scores and soundtracks. Electronic musicians are constantly pushing the boundaries of timbre and sound design in both commercial and classical settings. Creating electronic music is the activity I am most passionate about, and as such understanding the music I am inspired by from a technical standpoint is paramount. Artists from the genre IDM have influenced a lot of the contemporary music I take influence from, so understanding their techniques and approaches would better inform my understanding of contemporary electronic music.

This Style Paper is formatted under the following sections: Introduction, Chapter 1 (“research chapter”), Chapter 2 (“analytical program notes chapter”), and Conclusion. In Chapter 1, I will begin with a more comprehensive history of the genre IDM. Afterward, I will discuss broad overarching approaches to sound design/production and composition. These overarching themes will serve as points of influence/emulation for my compositions. In Chapter 2, I will analyze two of my compositions in detail and show how I tried to incorporate the “overarching approaches” I gleaned from analysis of IDM artists into my own work. The Appendix contains production notes on my compositions.

Chapter 1

IDM is electronic music of an experimental nature that is made for home listening rather than dancing at a club. The genre occurred from the early 1990s to early 2000s in the U.K. The term encompasses many genres, but the first genre associated with the term is Ambient Techno. Ambient Techno arose initially as a response to the dance-oriented acid house popular in the U.K. in the late 1980s (Reynolds 2012, 156-57). It combined acid house with the ambient music of artists like Brian Eno and Tangerine Dream—it was experimental dance music. The term IDM came from two historical events: Warp Record’s *Artificial Intelligence* series of compilation albums and the “IDM Mailing List.” The original *Artificial Intelligence* compilation album was a collection of Ambient Techno tracks made by various artists all signed to Warp. The intention was that you could “sit down and listen to it like you would a Kraftwerk or Pink Floyd album” (Reynolds 1999, 183). In 1993, Alan Michael Parry created a mailing list to discuss “Intelligent Dance Music” released on Warp and Rephlex Records. The “intelligent” part of IDM came from Warp’s *Artificial Intelligence* series (Alan Michael Parry, alt.rave message to mailing list, August 8, 1993).

As the term IDM grew in popularity, Warp Records latched on to said popularity and began marketing its premier electronic artists as IDM. The three biggest artists of IDM to emerge from the label are Aphex Twin, Autechre, and Boards of Canada. Each artist makes music stylistically dissimilar from each other; the only elements that

connect the three are the desire to push the boundaries of music production/sound design and a proclivity for “beats” and percussively-oriented music. While the genre started in the U.K., by the late 1990s the genre had crossed the Atlantic into North America with scenes in Chicago and Miami and labels like Drop Beat, Isophlux, Suction, Schematic, and Cytrax.

IDM was viewed as a term that was exclusionary and denigrated electronic music that was not “smart” enough to be associated with the genre (Allmusic 2023). As a result, the genre label died off in the mid to late 2000s. The term had pushback from both fans and the artists affiliated with the genre. In the words of Aphex Twin, “I just think it's really funny to have terms like that. It's basically saying ‘this is intelligent and everything else is stupid.’ It's really nasty to everyone else's music. (laughs) It makes me laugh, things like that. I don't use names. I just say that I like something or I don't” (Perfect Sound Forever 1997). In addition to opposition to the term, the genre eventually formed conventions that sterilized the music. According to Thaddeus Hermann (owner of electronic music label City Centre Offices), by the third wave of IDM artists (starting around 2004), the genre firmed established conventions of “processed beats and experimental sounds maybe made more accessible with some warm melodies.” (Winfield 2007). While this characteristic is observable in most major IDM artists, it became a crutch that was over-standardized.

The three primary subgenres of IDM are Ambient Techno, Drill n’ Bass, and Downtempo. Drill n’ Bass is “a spastic form of breakbeat that relied on powerful audio software and patient programming to warp old midtempo beats and breaks into a frenzied, experimental potpourri of low-attention-span electronic music” (Allmusic

2023). Downtempo is “a broad genre of electronic music characterized by an atmospheric sound and a slow-paced beat. The genre has birthed many subgenres, including trip-hop (downtempo based heavily in Bristol-area sound), lo-fi (music that emphasizes recording-based imperfections), and chillhop (relaxing hip hop)” (Allmusic 2023).

Historically, IDM had a tremendous impact on sound design and production in electronic music and ultimately pop music as a whole. The genre had an impact on commercial artists of the time, in particular Radiohead and Bjork. Radiohead’s albums *Kid A/Amnesiac* were very influenced by the Warp catalogue, specifically by Aphex Twin and Autechre (Yorke 2000). This influence can be heard on the tracks “Idioteque” and “Like Spinning Plates.” On the album *Vespertine*, Bjork enlisted the IDM duo Matmos to help her with the production of the “microbeats” on the record (Gestsdóttir 2003). This influence can be heard on the tracks “It’s Not Up to You” and “An Echo a Stain.” Long term, IDM has been very influential in the incorporation of sound design and more experimental electronics into contemporary popular music. This can be seen in the subgenre “Hyperpop” and the sound design-oriented approach to production many famous producers have adopted as exemplified by FINNEAS’s work on the album *When We Fall Asleep, Where Do We Go?*, Arca’s record *Kick i*, and SOPHIE’s debut album *Oil Of Every Pearl’s Un-Insides*.

Before discussing and analyzing the music on the recording project proper, I will present an analysis of IDM music and determine broad overarching approaches to sound design/production and composition. My understanding of said musical aspects has been forged from an analysis of techniques used by IDM artists based on transcription of both

pitch content (traditional part writing) and sound design (timbre assigned to a part). With the elements of the music that are more textural/experimental, a literal transcription of the music is oftentimes impossible so in those cases, “emulation” would be a more appropriate term.

In terms of overarching approaches, the single most potent technique in the realm of sound design that most IDM artists use is the notion of “resampling.” Resampling refers to the capacity to record audio, process/manipulate that audio via samplers and audio effects, and re-record those changes into an audio file again. This is a process that can occur ad infinitum. The general workflow of IDM artists (and experimental electronic artists in general) is to record sound design sessions in which one generates interesting timbres from a hardware or software synthesizer by altering parameters on a patch created on that synth in real time. Think of it as a sound design “jam session” of sorts. The recording of that sound design session is then used as compositional material, cut up/chopped/processed/sampled, and sequenced in a variety of ways. The electronic “glitches” heard in the music of Aphex Twin, Boards of Canada, and Autechre are created and sequenced using this general workflow. Sound design sessions are generated with Subtractive, FM, Wavetable, and Modular Synthesis and the results of those sessions are sequenced and processed through samplers and granular synthesizers.

In terms of composition, there is often a textural contrast between the indefinitely-pitched percussive portions of the music and the pitch-based melodic components. Especially in the more breakbeat-oriented music of Aphex Twin, Venetian Snare, and Squarepusher, the melodic material is more rhythmically simple. Sustained diatonic melodies move slowly with larger rhythmic values in a repetitive fashion. This is

texturally contrasted with the percussive portions of the music being very dense, primarily using smaller rhythmic durations, and having a highly-varied character. Rhythmically, much of IDM develops rhythmic vocabulary from earlier breakbeat-oriented genres. These are all subgenres of electronic music that would sample drum breaks from soul/funk tracks from the 1960s to 1970s and manipulate/chop them using various techniques.

I will now provide analysis on a few key tracks starting with the Aphex Twin track “Vordhosbn” from their album *Drukqs*. The source type for this track is primarily electronic with synthesis being the dominant technique for sound production (some of the snares are sampled from breakbeats). The wide variety of techniques employed creates a chaotic texture that is constantly shifting in timbral quality. In terms of spatialization, the drums have been spread out across the stereo image with the melodic content primarily in the center. The drums are very dry and upfront, whereas the melodic content has been drenched in reverb/delay and sits behind the drums.

The glitches surrounding the main drum break use a variety of techniques. Overall, they fall into the “resampling” workflow outlined previously. Aphex most likely had a sound design session in which he recorded himself twisting knobs on a patch using one of his hardware synthesizers. He then took the results of that session and fashioned a wide variety of percussive sounds by shaping the amplitude/pitch envelopes of a very small portion/chop from said session. This could have been done through either a sampler or audio editing software on the DAW/Tracker he used for the making of *Drukqs*. These sounds were then sequenced into timbrally-shifting drum patterns in which different audio manipulation/audio effect processes are at times applied to each “hit” or individual

sound within the said pattern. The sounds heard at 0:14, 0:16, 0:53, and 1:58 are referred to as “stutter” effects. They are typically created by setting an arpeggiator at such a high rate (1/64, 1/96) that rhythm becomes pitch. They can also be created through time-stretching as well. Reversing is a technique that can be heard on the bass from 1:39-1:41, 1:45-1:47, and on the snare from 1:14-1:28 (directly preceding the snare hit that has a delay on it). Stuttering, time stretching, and reversing are all processes applied to audio that are typical and idiomatic of IDM drum/glitch programming.

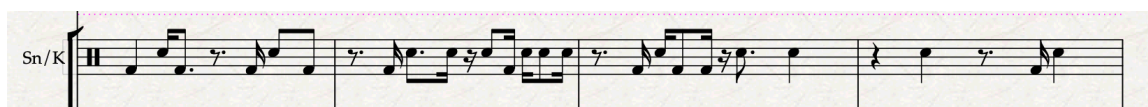
Example 1.1. Vordhosbn Score: Textural Contrast m. 35-38

The image shows a musical score for four measures (35-38). The top staff is labeled 'Melody 2' and contains a melodic line with notes and rests, including a slur over the first three measures and a triplet of notes in the fourth. The second staff is labeled 'Accompaniment' and shows a bass line with notes and rests. The third staff is labeled 'Snare / Kick' and shows a complex drum pattern with various note values and rests. The fourth staff is labeled 'Sidestick' and shows a pattern of eighth notes and rests. The fifth staff is labeled 'Miscellaneous' and shows a pattern of eighth notes and rests, with labels 'really distorted', 'snare stutter', and 'glitch' placed above specific notes. The score is numbered 35, 36, 37, and 38 at the bottom of each measure.

The textural contrast illustrated in Example 1.1 between melody and rhythm typically found in IDM is illustrated on this track strongly. Harmonically simple (basic waveforms, sine, saw, triangle, etc.) leads with relatively smooth amplitude envelopes float over the track and primarily use sustains. This calm texture floats on top of a bed of aggressive breakbeats with very sharp amplitude envelopes being interrupted by harmonically-saturated metallic glitches.

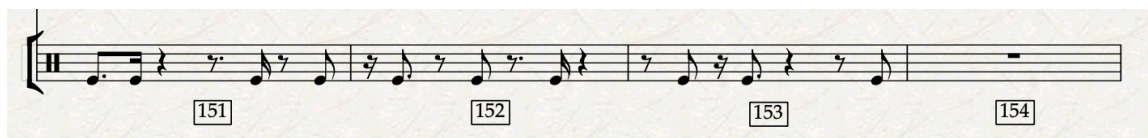
Rhythm is one of the central focuses of “Vordhosbn.” Stylistically, the rhythmic content of this track would be classified as belonging to jungle, drum and bass, and breakbeat. Even though the drums on “Vordhosbn” are primarily created from drum machines/synthesis, the rhythmic content is very much a product of the cutting-up breakbeats approach found in these genres.

Example 1.2. Vordhosbn Score: Kick/Snare Patterns m. 28-31



The snare patterns usually center around beats two and four with the kick patterns centering around one and three. However, the kick/snare patterns utilize lots of rhythmic displacement to obscure and vary this basic backbeat. For instance, in m. 28 of Example 1.2. the kicks are displaced by three sixteenth notes in beats one and three.

Example 1.3. Vordhosbn Score: Kick Pattern m. 151-154



The kick drum pattern in Example 1.3. that begins on m. 147 and ends at m. 169 (3:28-4:04) contains the most interesting use of hemiola and syncopation in “Vordhosbn.” The pattern uses every part of the sixteenth note subdivision and creates interesting groupings of 16th notes. The sixteenths are grouped by three, eight, three, three, five, five, seven, three, nine, two for the four-measure kick drum pattern. One can notice that odd-numbered groupings (eight out of ten) significantly outweigh the presence

of even-numbered groupings. This creates a hemiola effect since odd-numbered groupings undermine the even-numbered structuring of the most commonly used subdivisions. While three (dotted eighth note) is the most common way of creating a hemiola, the use of grouping the sixteenth notes in fives, sevens, and nines gives the technique more variety and obscures the pulse even further.

I will now analyze a second track, Autechre's "Bine" from the album *Confield*. Bine has the same big-picture resampling workflow as "Vordhosbn" but approaches it from a very different perspective. Whereas "Vordhosbn" approaches resampling from a more pointillistic perspective where very small portions of the session are being "percussified," in "Bine" larger portions of samples are being "rubatofied." The workflow of a track like "Bine" would likely go like this: Rubato/free time gestures are created through a combination of performing phrases using a MIDI controller with free time and modulating various parameters (pitch, filter, amplitude, mod amounts for FM SYNC PWM, etc.) with modulation sources (LFOs, Envelopes) that use free rates (unsynced to bpm, measured in Hz) and are cross modulated (modulating a parameter of a modulator with another modulator, LFOing the rate parameter on a separate LFO). These rubato gestures are then recorded to audio and chopped up into larger portions to create gestures with different accelerando/ritardando patterns that can be triggered individually using a sampler in slice mode (key triggers different portions of a sample instead of pitch shifting one sample). From here, patterns played on the sampler can be resampled to form even more complex patterns. Audio effects plug-ins like TimeShaper can be used to modulate the playback speed of a sample to throw even more rubato into the gesture. Throughout the track, there is a similar textural binary found in "Vordhosbn."

These rhythmic, indefinitely pitched, rubato gestures are incredibly dense and fill up a lot of space in the musical texture. In contrast, the elements of the music that are definitely pitched are very sustained and rhythmically sparse. They do not vary in pitch often and act as the perfect contrast to the highly varied nature of the rubato gestures.

Chapter 2

In this chapter, I will analyze some of my own pieces and show how the techniques described in Chapter 1 have been incorporated into my compositional process. In the track “Cyclopean Gate,” I used several “glitch sessions” and sequenced said glitches to create crazy percussive patterns. The process is relatively the same for each pattern, but I will discuss a few throughout the piece in detail. From 5:28 to 5:38, the primary glitches heard in the musical texture are resampled from a Bass Station 2. The Bass Station 2 is a monophonic synthesizer that has the capacity for ring modulation, sync, and oscillator filter modulation. I started with a sound design session that primarily contained long sustained tones (pictured in Figure 2.1.) with significant fluctuations in timbre by modulating a variety of parameters.

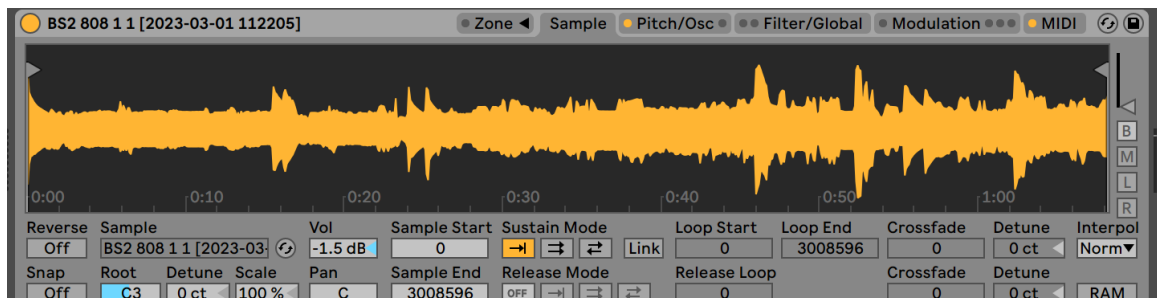


Figure 2.1. Bass Station 2 Resample: Simplifier

Next, this session was recorded into Ableton and dropped into a “simpler” (a sampler within Ableton that can only process one sample at a time as opposed to a multi-sampler). I then grabbed a MIDI effect called “velocity.” The device allows you to control the

velocity values of the MIDI data you are sending simpler. Velocity is a MIDI value that typically represents the volume of a MIDI note. I used the MIDI effect to randomize the velocity, and then (as seen in Figure 2.2.) went to the modulation matrix in simpler and routed the velocity to affect the sample offset. This means that every time I used a MIDI controller to trigger the simpler, I would be randomly playing a different portion of the “glitch session.”

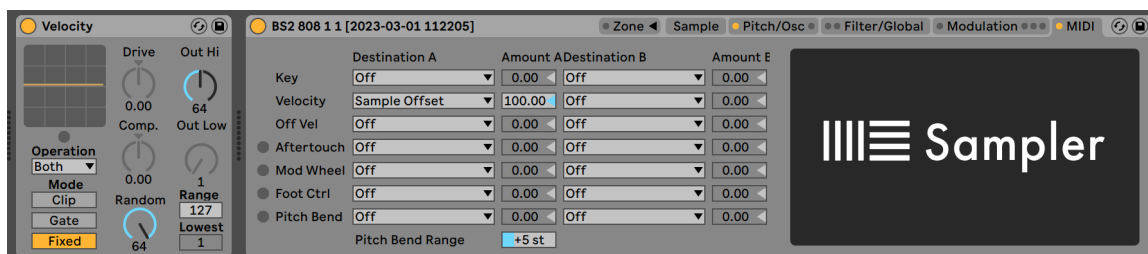


Figure 2.2. Bass Station 2 Resample: Velocity/Sample Offset

After that, I navigated to the amplitude envelope (controls volume shaping) and adjusted the settings to yield a more percussive sound (extremely short attack, quick decay) with an additional pitch envelope mirroring the settings of the amplitude envelope to give more of a “click” or “knock” at the beginning of the sound. From a sequencing perspective, after I had all of the sound design dialed in, I created a pattern that related to the kick/snare part of the breakbeat in a call/response fashion. The next “resampling” example from “Cyclopean Gate” occurs at the very end of the track from 6:40 to 7:10. This bomb is the result of a similar process but with a dramatically different result.

First, I created an instrument rack (many virtual instruments are grouped together in the same track and can be triggered simultaneously by the same MIDI controller) of orchestral instruments spanning the entirety of the range of my EWI (electronic wind instrument, basically a saxophone MIDI controller). Next, I altered the pitch mapping of

the instrument rack so that each virtual instrument could only be triggered by a handful of notes (as seen in Figure 2.3.). That means that when I would play a few notes in one octave, I would be playing an oboe but once I switched to the next octave, I would be playing a trumpet (etc.). After setting up this device, I recorded myself improvising some extremely angular/hocket-y passages that jumped from octave to octave in a sporadic, musically-irrational fashion.

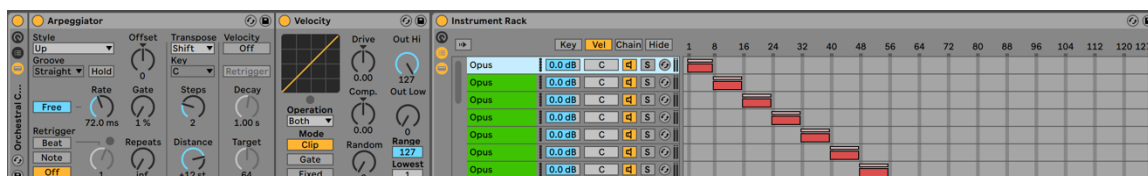


Figure 2.3. Orchestral Instrument Rack Resample

Once I converted these jam sessions to audio, I placed them inside a granular synthesizer called Granulator 2. Granular synthesis allows you to take a sample and break it up into tiny fragments called grains (ergo granular). In one layer of the bomb, I had the grain size (which is measured in frequency) at a low value with the spray (a parameter that randomizes file position in a manner similar to sample offset) turned up. The second layer had the grain size turned up significantly high with minimal spray with the granular synthesizer reading through the sample (the parameter scan reads through the entire sample from left to right with just one MIDI note, playback speed can be adjusted to create time-stretching effects) at 2000%, speed for extreme granular time-stretching effects.

The textural contrast in “Cyclopean Gate” mirrors the textural contrast of “Vordhosbn” significantly. Formally, “Cyclopean Gate” alternates between ambient sections and breakbeat sections. The breakbeat sections mirror the textural contrast found

in “Vordhosbn.” Texturally-dense percussive elements provide a dazzling array of sixteenth notes, while the melodic elements utilize larger subdivisions. In the first breakbeat section of “Cyclopean Gate” (2:04 to 3:23), the drums are comprised of a synthesized kick/snare and a wide array of synthesized auxiliary percussion (sidestick, rimshots, claves, and other “clicky” sounds) from Battery 4 (a virtual drum machine commonly used). The clicky sounds are sequenced in a hocket-like fashion in which all the sounds are passed around a hi-hat pattern that has been written in tandem with the kick/snare pattern. This pattern contributes a continuous sixteenth-note pulse with the accents syncopating this pulse in several ways. In contrast, the definitely pitched portion of the texture supplies the music with a pad and sustained melody which is homophonically related. The pad is comprised of strings from the EastWest sample library and emulations of a couple of vintage synthesizers (Juno-6 [early 80s polyphonic synthesizer] and a mellotron [analog sampler from the 60s]). The bass is audio recorded from the Bass Station 2. The harmony and melody exclusively use half notes/whole notes, which allow the harmony/melody to be differentiated from the percussive elements of the texture. This textural formula is used in some capacity in all the breakbeat sections within “Cyclopean Gate.”

The harmony of “Cyclopean Gate” is very inspired by Boards of Canada. In the music of Boards of Canada, a wide variety of modal techniques can be heard. In the track “1969,” the bass notes of the four-chord sequence are G#, E, F#, C#. This is a relatively common minor pentatonic sequence of notes that could be voiced diatonically (G#m, E, F#m, C#m) and sound very commonplace and uninspired. However, BoC takes this fairly simple bassline and alters it by making every chord a minor triad yielding G#m Em F#m

C#m. This logic is similar to modal borrowing but instead of borrowing a sonority from the parallel minor/major, the same sonority/chord voice is planned through a scale/mode. This simple yet effective approach to modal harmony can also be heard on the track “Tears From The Compound Eye.” In the track, two chord progressions whose roots are sequences of plagal cadence (G \flat D \flat A \flat E \flat , E \flat B \flat F C) are again changed by “planning” a sonority through the sequence of bass notes. This type of thinking results in the chords G \flat D \flat A \flat E \flat , and E \flat m B \flat m C m F m.

The image shows a musical score for a synth line in 4/4 time. The chords are labeled above the staff: Abm7, Ebm7, Fm7, Cm7, Ab/Db, Eb/Ab, Bb/Eb, and F/Bb. The bass line consists of a sequence of notes: Ab, Eb, F, C, Ab, Eb, Bb, F.

Figure 2.4. Cyclopean Gate Progression

For “Cyclopean Gate,” the primary chord progression (Figure 2.4.) uses this formula. For the first four chords, the bass notes form an F minor pentatonic pattern (A \flat E \flat F C). This relatively simple minor pentatonic pattern is then embellished by planning minor seventh sonorities with the E \flat being held in the top voice for some oblique motion. The next four bass notes are derived from “Tears From The Compound Eye” with similar plagal cadence sequence sort of thinking. However, in this instance, a slash chord is being planned instead of a simple triad. A \flat /D \flat could be thought of as a derivative of a major ninth chord but since the third is missing, the chord has more of a suspended sensibility to it. Overall, the chord roots could be seen as being taken from A \flat major, but all of the chord planning and modal vocabulary hides this pitch center pretty significantly. Next, I

will discuss the breakbeat samples on “Cyclopean Gate” and the various processes that were used to chop and manipulate them.

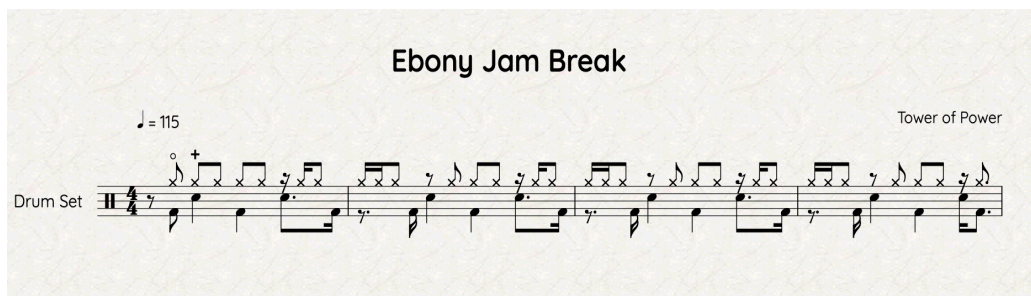


Figure 2.5. Ebony Jam Break Score

In the second half of “Cyclopean Gate,” I begin to sequence the drums around a breakbeat (Figure 2.5.). This drum break comes from the Tower of Power song “Ebony Jam” and has an original BPM of 115. “Cyclopean Gate’s” tempo sits at 170BPM for most of the track, but with Ableton’s time-stretching algorithm “Beats,” the drum break can be played at 170BPM with no problems. The drum break has been chopped/manipulated in a variety of ways.

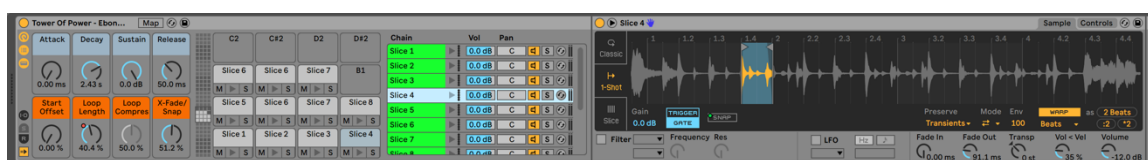


Figure 2.6. Ebony Jam Break Chops in Simpler

First, the break has been split into two different samplers. In the first sampler, the drum break has been chopped based on quarter notes and half notes (Figure 2.6.). The break is about four measures, so this resulted in eleven chops. When the sampler triggers a portion of the break, this means that it will play a portion of the sample and not just an individual

note. This allows the composer to retain the original timing and feel of the break while also being able to elaborate on the material with rhythmic variations. The second sampler has been chopped based on transients, which means that a key will only trigger one “note” of the drum break. This allows me the ability to sequence moments of very specific kick/snare patterns that might not be able to be executed from the larger break chops.

The following variations of the break are less practical and used more for sound effects. The first one is simply a “repitch” of the break. This version uses the pitch-shifting algorithm that mimics what happens when a tape is sped up. When producers first started to use drum breaks, they sped them up the old-fashioned way so the pitch would rise with the increase in tempo. These breaks have a certain “sound” to them and there were moments in “Cyclopean Gate” (5:41, 5:51) where I wanted that effect. I then created a couple of samplers that were dedicated to the “stutter” effect. Stutters are generated by taking a small portion of a sample and repeating it very quickly. I had one sampler assigned to stutter snare samples and another assigned to stuttering larger portions of the break. In addition, these stutters were often pitch-shifted in a variety of ways (steps, lines, automation curves) to give them more sound design intrigue. Lastly, I used a turntable effect to create some gestures from the original break. A turntable effect allows for the manipulation of the playback speed of a sample both forwards and backward (reversing the sample). All of these different variations of the break are sequenced together to create a drum part that feels both human and is constantly changing timbre and character. Synthesized kicks/snare are layered on top of the drum breaks to give the kick/snare more punch and weight.

The actual sequencing of the drum breaks was approached in a very improvisational fashion. First, I would improvise a passage of drums either by themselves or surrounding pitch-based material I had already composed. Next, I would go through the improvised passage and make tweaks/edits to my improvisation that could sound better. After the initial layer had been finalized, I would go through the improvisation and cut out certain portions that would sound interesting if they were accented by something other than the chopped break. After this was completed, I would fill those gaps in with the more “SFX” resamples of the drum break or glitches from sound design sessions. Once these moments had been sufficiently varied and the sound was sufficiently track stacked/layered, I would then compose pitch-based material surrounding the break if necessary.

Overall, “Cyclopean Gate” was born from an intense study of the drum sequencing techniques Aphex Twin uses in his music. This study specifically centered around the track “Vordhosbn” and from that analysis, I incorporated his approaches to sequencing glitches and drum breaks.

The next track I will analyze has more of a programmatic bent to it. Whereas “Cyclopean Gate” is absolute in nature (no extra-musical meaning), “Devil’s Cast A Misshapen Sky” is programmatic. DCAMS extensively samples dialogue from the 1973 film *The Wicker Man* starring Edward Woodward and Christopher Lee. *The Wicker Man* follows Sergeant Neil Howie as he journeys to the Scottish island of Summerisle to investigate the disappearance of a young girl named Rowan Morrison. As soon as Sergeant Howie steps off the seaplane, it is very clear that the island has abandoned Christianity and now practices a form of Celtic Paganism. The conversation sampled in

DCAMS is between Howie and Lord Summerisle concerning Rowan Morrison, a pagan ritual a group of schoolchildren were participating in, and the lack of Christianity's presence on the island. The IDM inspiration for creating programmatic songs from samples is primarily from Boards of Canada. BoC has references via samples to Satanism, numerology, and the cult leader David Koresh scattered throughout the 2002 album *Geogaddi*. It is a very dark record as a result; I wanted to capture that darkness through the use of *The Wicker Man* dialogue.

The Intro of DCAMS features a full recitation of the dialogue that is sampled throughout the track. As the dialogue continues, the music gradually creeps in. The overall form to DCAMS is Intro, Ch 1, PC 1, Ch 2, PC 2, CH 3, Outro. A snippet from the dialogue that particularly concerns the pagan ritual the schoolchildren were performing returns in PC 1. In the scene with the ritual, the girls are singing a folkish melody about sexual reproduction. Right before CH 2, the sergeant says "What could they be learning jumping over bonfires?" The music immediately cuts to the second chorus with the girl's song recontextualized to sound satanic and dark.

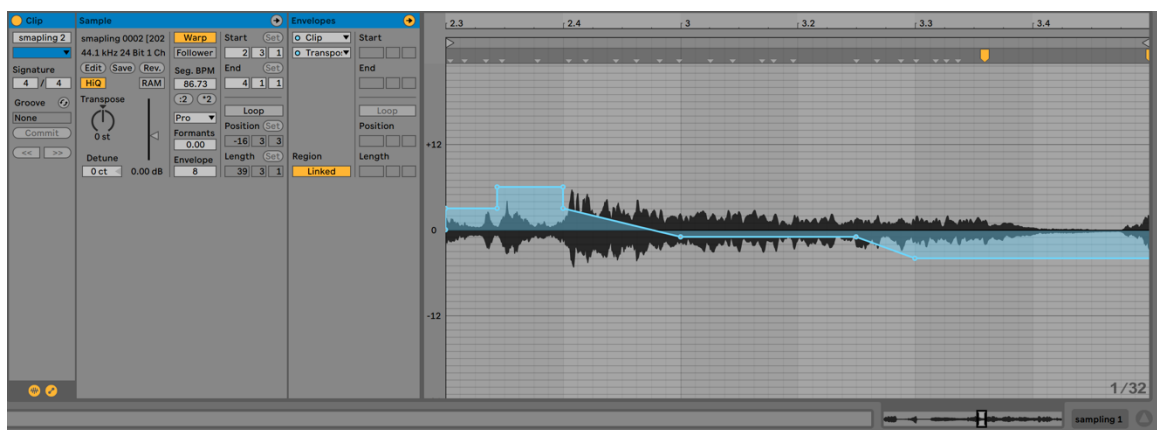


Figure 2.7. Sample Editor Window

The melody itself was altered to fit the chorus harmony/rhythm by adjusting the pitches of the audio file utilizing the sample editor window (Figure 2.7.). This process was done intuitively by soloing the melody and bass/chords and adjusting the pitches in the sample editor window until they “felt right.” Copies of the melody were transposed by half step to chromatically surround the melody above/below and create a scary tone cluster. The final line of the dialogue, “And what of the true god, whose glory churches and monasteries have been built on these islands for generations past, now sir what of him?” recapitulates in PC 2 from the end of the intro. This time, however, the portions “what of the true god...now sir what of him?” portions of the dialogue repeat and form a hook that occurs throughout the final chorus. This final chorus is consonant (as opposed to the previous two) and the second half features the schoolchildren’s melody but presented in a consonant/diatonic manner to create a structural resolution.

Conclusion

In conclusion, my research on IDM, my transcriptions/analyses of the techniques used by IDM artists, and my attempts to incorporate them into my own work/compositions have been very fruitful for me. My transcriptions/analyses of IDM techniques have significantly expanded my sound design vocabulary and have given me the confidence to make music that takes influence from artists I look up to and aspire to be. In regard to this document's potential benefit to other composers, sound design is significant to all facets of contemporary music. Modern composition (especially commercial) in the realm of film/TV/commercials heavily uses electro-acoustic aesthetics. An understanding of sound design (as shown through the work of IDM artists) will be beneficial to anybody trying to make commercially viable music in the twenty-first century.

Appendix

“Devils Cast a Misshapen Sky”

Drums were comprised of a break from a sample pack I have, the break was entitled “bighat,” break was layered with one-shots from the VI “Battery 4.” Bass was a combination of Arturia’s Prophet-5 and Minimoog emulations and Ableton’s Operator. Voices were sampled from the movie *The Wicker Man*. The chords were a combination of “Augmented Voices” from Arturia and “Ondes” from Spitfire LABS. Strings were sampled from Crumb’s “Black Angels” and Ambience was sampled from Penderecki’s “Threnody for the Victims of Hiroshima.” FabFilter’s “Pro Q-3,” “Pro C-2,” “Pro R,” and “Pro L-2” were used for processing.

“Cyclopean Gate”

Drums were comprised of Battery 4 one-shots and a break from Tower of Power’s “Ebony Jam (part 2).” The strings were all from EastWest’s “Symphonic Strings.” Bass was a combination of “Serum” and the hardware synth “Bass Station 2.” Pads were a combination of Arturia’s emulations of a Juno-6, Mellotron, and Prophet V. Leads were all Juno-6s. Voices were taken from ABC’s first television broadcast. Processing was handled by Izotope’s Neutron suite of mixing plugins (EQ, Compression, Saturation, Limiter).

“Foaming and Raving”

Drums are all from “Battery 4” the bass is from the softsynth “Vital.” Pads are a combination of Arturia’s DX7 emulation, Vital, and Omnisphere. SFX was from “PhasePlant.” Processing was handled by FabFilter’s “Pro Q-3,” “Pro C-2,” “Pro R,” and “Pro L-2.”

“Beware an Inviting Smile”

Bass is a combination of Omnisphere and Serum. Drums are a sampled break from Miles Davis’s “Freedom Jazz Dance” and a drum loop entitled “beat-1” from a sample pack. These are layered with Battery 4 One-Shots. A Stratocaster was used for the guitars, recorded using a DI into my Apollo Twin X interface, and processed through “Guitar Rig 6.” Chords are a combination of Arturia’s Jupiter-8, Prophet-V, and Synclavier emulations. SFX was created using “PhasePlant.” Processing is the same as the previous track.

“Fly the American Way”

Chords are a combination of Omnisphere and Operator. Drum samples are from the tracks “Hot Pants” by 20th Century and “Only Shallow” by My Bloody Valentine. Layered with Battery-4 One Shots. Airline samples are taken from a variety of American Airlines commercials from the late 1960s to early 1970s. Lead is a combination of Omnisphere and Arturia’s emulations of a Solina and Mellotron. SFX was created using “PhasePlant.” A Stratocaster was used for the guitars, recorded using a DI into my Apollo Twin X interface and processed through “Guitar Rig 6.”

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