Lo-fi Today

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This article investigates two current incarnations of 'lo-fi' music and questions the extent to which these subgenres are actually low in fidelity. In essence, mainstream 'hi-fi' productions use similar effects, such as filtering to sound like a radio or adding noise to sound like a vinyl record. To understand lo-fi today, this article explores music by a lo-fi hiphop producer and a lo-fi ambient producer, drawing upon the analytical methods of Alan Moore and Dennis Smalley. First to be discussed is Glimlip, one of the many anonymous producers behind the popular Lofi Girl YouTube streams. The next discussed is Amulets, an ambient musician known for using hacked and looped cassette tapes. Analyses of their music demonstrate a level of care in production that goes against the idea that lo-fi is primitive or naive.

1. INTRODUCTION

French music label Lofi Girl (called Chilled Cow until March 2021) gained popularity for hosting monthslong YouTube streams of 'lofi hip-hop beats to relax/study to' (Lofi Girl, n.d.). The streams feature a looped animation of a girl with headphones doing her homework while her cat gazes out of a window. Some videos feature variations – the girl sits on her balcony at night, lies passed out on her bed and so on. The musical selections likewise consist of variations within a narrow scope: typically, sparse beats hovering between 60 and 80 bpm, overlaid with distant piano and guitar riffs.

These tracks are not as 'lo-fi' as first appears. Although imbued with signifiers of low fidelity, such as the noise of dust on vinyl records, the music is constructed with care. It begins clean and 'hi-fi', and is then *made lo-fi*. In lo-fi ambient music, artists foreground the noise of vinyl or tape by using actual vintage equipment. A popular artist in this style is Randall Taylor, who produces music under the name Amulets. As Amulets, Taylor has gained a following by posting numerous videos of his hacked and looped cassette tapes.

Far too many recordings have been labelled 'lo-fi' to list here, and they span genres from acoustic folk to electronica. Recent histories of lo-fi as a practice include Harper (2014) and Jones (2014), with lo-fi hip hop explored in detail by Winston and Saywood (2019) and Vouloumanos (2019). This article attempts to understand lo-fi as currently practised, by focusing

on two subgenres: hip hop and ambient. Both celebrate a 'chill' aesthetic that invites listening for study and contemplation. Fans of these genres use the term 'lo-fi' loosely – they may judge the audio quality as 'low', yet enjoy listening because of this very quality. The genre name 'lofi' (without hyphen) is characterised by low energy and density as much as it is characterised by audio quality. Since much of the scholarly work on lo-fi has taken a broad view of aesthetics and reception, this article will take a closer look at two representative artists. Section 2 develops a framework for understanding lo-fi, where production values that counter prevailing standards (such as the inclusion of noise) bring meaning to listeners. Sections 3 and 4 analyse representative tracks by lo-fi hip-hop producer Glimlip and lo-fi ambient producer Amulets. The final section discusses these artists in relation to Jones's (2014) categories of meaning in lo-fi: empowerment, experimentation, communality, honesty and nonchalance.

2. HI- AND LO-FI

Loudspeaker engineer H. A. Hartley claims to have coined the term 'high fidelity' in 1927 (Hartley 1958: 200). By the mid-twentieth century, the concept of audio fidelity was well established, with home listening systems commonly referred to as 'hi-fis'. It is generally accepted that a recording is 'faithful' when it transparently reproduces an original sound (Glasgow 2007; Hales 2017). In practice, a recording may be deemed 'high' in fidelity if the recording is sufficiently clear and balanced, even when the original sounds are severely manipulated. A recording can be 'low' in fidelity for a number of reasons (basically anything not 'high fidelity'). Examples include recordings shrouded in mechanical noise and those where the microphones are too far away from the musicians. The term 'low fidelity' began to emerge as early as the 1950s, 'probably because the inversion of "hi-fi" was so easily suggested and its meaning so clear' (Harper 2014: 7). Harper continues, 'sound quality is not inherently or objectively poor or good - lo-fi or hi-fi - (at least not within popular music discourse), but must be constructed as poor through its relation to any given technical and technological milieu' (ibid.: 11-12). For example, cassette tapes were not considered lo-fi in

Organised Sound 27(1): 32-40 © The Author(s), 2022. Published by Cambridge University Press. doi:10.1017/S1355771822000188 This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited. the 1980s – 'is it live or Memorex' and Maxell's 'blown away guy' campaigns claimed high fidelity. Following developments in digital recording, cassettes were considered lo-fi by the 2000s (ibid.: 13).

2.1. Meaning through production values

According to Jones, lo-fi music argues that 'musical meaning [isn't] found necessarily in the content of musical expression, but in the means through which it [is] expressed - namely, through its production values' (Jones 2014: 57). A hiss-clouded four-track cassette means something different than a clean, processed digital production. For example, reggae evolved in two directions in the 1970s - music aimed at an international audience, such as Bob Marley and Peter Tosh, and dub music aimed at the local Jamaican audience. The former was recorded at higher end studios, cleaned up and 'professionalised', while dub featured inconsistent mixing and seemingly incoherent elements (Veal 2013: 4-6). Using one-of-a-kind test pressings (dubplates), dub engineers made significant alterations and additions, such as equalisation to emphasise the bass guitar, samples of other recordings, new vocals ('toasting' or rapping), and dense echo and reverb. Where reggae songs used traditional production techniques and structures, dub reduced songs 'to shadow and suggestion', using recordings as the basis for creativity with limited equipment - early examples of the 'remix' (Sullivan 2014: 8). This genre is defined by the low fidelity to its sound sources, and its aesthetics and processes continue to reverberate in other genres, from the Bristol sound in the 1990s to dubstep in the mid-2000s to the lo-fi hip hop of the late 2010s.

Another example of meaning created through production values is underground/indie hip hop. This branch of hip hop eschews the glossy production of more commercial offerings in favour of continuing the practice of sampling records – 'hip-hop's original, and therefore, most authentic medium' (Harrison 2006: 287). Sampling vinyl records highlights the inherent crackle from dust, as well as the media's degradation (the grooves worn out through use, which are less able to reproduce high frequencies). Hip-hop producers who sample old records are obviously too numerous to name, but J Dilla (1974-2006) has been cited as a direct influence on modern lofi hip hop (Voulamanos 2019; Winston and Saywood 2019), because he favoured this worn-out sound with slow tempos and off-kilter beats. The lo-fi hip hop of today, created mainly in the digital domain, attempts to recreate this 'authentic' sound by rolling off high frequencies and introducing sampled or digitally created 'dust'.

Link (2001) and Hegarty (2007: 181–4), note a trend of adding this kind of lo-fi noise to recordings in 1990s

alternative rock in reaction to ever-cleaner digital recordings. Adding 'transduction noise' such as tape hiss and vinyl dust, or emulating the limited frequency range of transistor radios, serves as 'an attempt by some popular music to reclaim and document an important aspect of its own history by transcribing [transduction noise] directly into its products' (Link 2001: 36). At one time, such noise was inescapable – one could not listen to music without encountering it. Adding this noise reclaims earlier ways not only of producing music, but also of listening to it.

The appeal of equipment noise and why it is still included (or artificially added) to recordings is what Epstein calls 'material fragility' - where 'the object or instrument used in sound production is damaged in such a way that it can no longer successfully carry out its function as sound-maker' (Epstein 2017: 42). Material fragility, whether recorded from fragile media or simulated, adds a melancholic subtext to recordings. It gives the impression that this may be the last time these sounds will be heard. 'We listen to digital sound files', Adkins writes, 'but enter a deceit that the music is fragile - either because it is made with equipment prone to failure, or for other reasons' (Adkins 2019: 126). Adkins notes that ambient artists such as Taylor Deupree (founder of the 12k label) mix with a higher noise floor than average, allowing noise from analogue equipment to not only provide 'a faux patina of age' but, more importantly, a 'timbral or textural constant' (ibid.: 130) - in a sense, 'atmosphere'.

2.2. Lo-fi listeners

The 'atmosphere' or 'mood' created by lo-fi artists, exploiting the fragility of equipment, is one of nostalgia or contemplation. Winston and Saywood describe lo-fi hip hop as 'characterized by a contradictory and simultaneous relationship with both a hyper-specific real past, and a vague imagined one, and that listeners and producers of the genre make meaning through a dialectical and self-conscious engagement with both' (Winston and Saywood 2019: 48). The related genre of Vaporwave has seen significant attention in media scholarship because of the connection to a vague imagined past. Authors have written about its relation to memory and nostalgia (Glitsos 2018; Ballam-Cross 2021), its societal and economic critiques (or lack thereof) (McLeod 2018; Nowak and Whelan 2018), and the role of the internet in its proliferation (Born and Haworth 2017). As noted by Glitsos, 'what makes vaporwave most distinctive is perhaps the community of artists and listeners who use the same platforms on which the music is exchanged to discuss the "meanings" of the music itself' (Glitsos 2018: 102).

Lo-fi hip hop has a similar community of fans who interact via chat on the very YouTube streams that popularised the style. Most listeners of lo-fi hip hop are university students, and their comments demonstrate profound interest in relaxation and emotional exploration (Winston and Saywood 2019: 41). As a soundtrack for study and relaxation, the genre serves the purpose of ambient music as defined by Brian Eno – to be 'as ignorable as it is interesting' (Eno 2004: 97). Wang coded a number of lo-fi hip-hop track titles into the categories 'lazy/tired', 'beginning/end of time period' and 'relationships' (Wang 2020: 17). The titles reflect a university student's preoccupations rather well. The 'vague imagined past' listeners yearn for may simply be one before the stress of exams, the start of a new year, or a romantic breakup.

As for ambient music, in Szabo's (2015) study of the genre's fans, respondents shared that they also enjoy the invitation to think or explore emotions. Fans appreciate the blank-slate impersonality of the artists, which allow them to concentrate on the music (Szabo 2015: 24-29). In other words, unlike popular artists, many ambient musicians shun the limelight, allowing only minimal information and photography to circulate. This is the case with many lo-fi hip-hop producers as well - pseudonyms, no photos, no bios - all in the service of making nearly unidentifiable background music. It has been questioned how authentic some of those artists might be, with Spotify accused of paying producers to create generic music for mood-based playlists (Raymond 2017). Yet there is also an entire subculture of producers in these genres releasing music on sites such as SoundCloud and Bandcamp. Szabo discovered a third of his respondents were ambient producers themselves (2015: 352), and these sites provide a place for unknown musicians to post, share and comment on each other's music. Aside from the community aspect, these sites, with rabbit holes of links and hashtags, provide places for listeners to become absorbed in sound.

The following sections analyse music from lo-fi hiphop producer Glimlip and lo-fi ambient producer Amulets, using them as examples for interpreting these genres. The analyses draw upon Smalley's (1997) concepts of gestural surrogacy and spectral space, along with traditional harmonic analysis and Moore's (2012) concept of textural layers. Gestural surrogacy concerns the relationship between sound and source - where we 'decode the human activity' behind the sounds (Smalley 1997: 112). Musical performance typically occupies second-order gestural surrogacy. First-order surrogacy includes non-musical sounds where you can still detect human action (footsteps). Third-order and remote surrogacy include sounds where you might imagine a physical gesture, or where 'any human action behind the sound disappears' (ibid.: 112). Moore's textural layers for pop music include the explicit beat layer, functional bass layer, melodic layer and harmonic filler layer (Moore 2012: 19–21). For the genres in question, we might even add a 'spectral filler' layer, since some elements have indeterminate pitch or consist of wide-band noise.

3. LO-FI HIP HOP PRODUCER GLIMLIP

For an analysis of lo-fi hip hop, an example producer can be chosen almost arbitrarily. Dutch composer Glimlip seems fitting enough, as he is blessed with two consecutive tracks on Lofi Girl's 2020 Lazy Sunday compilation. Glimlip, like most lo-fi hip-hop producers, avoids revealing biographical information on the web, but it appears that he is young and based in Amsterdam. He maintains an Instagram profile with over 10,000 followers, on which he posts short clips of himself playing keyboards, guitars and drum pads. These clips appear to be rehearsals or sketches for more complete tracks. If there is a question of authenticity, it is answered here - he performs much of his music, rather than relying on samples. Glimpses of Ableton Live in the background confirm that the recordings are digital. High fidelity when they begin, the recordings are made more crude through the addition of noise and reduction of high frequencies. Glimlip's visual style on Instagram reflects this artificial degradation. He uses filters which add grain and change the colour saturation of videos so they resemble footage recorded on low-fidelity media such as VHS and Super 8 film.

3.1. 'Floating Away'

The first of Glimlip's tracks on Lazy Sunday is 'Floating Away', a 3-minute track made in collaboration with another anonymous producer, Yasper (Glimlip x Yasper 2020). Set at an easy-going 80 bpm, this track is built around a chord progression and melody played on a 'clean' electric guitar (Figure 1). The progression is I–IV–vi–V in G major, but the tonic is consistently in first inversion, giving a somewhat melancholy and unmoored quality (hence, floating away?). Within this repetitive context, the producers create structure by adding and subtracting elements (Figure 2). These can be parsed into Moore's (2012) textural layers. For example, the bass and percussion layers are present in the two longer sections, creating what can be heard as the 'verses'. This contrasts with the introduction and 'breakdown', which feature the guitar riff alone (melodic and harmonic layers) for the first phrase, adding distant piano arpeggios (expanded harmonic layer) in the second phrase. The second verse features a variation on the first verse, by adding a staccato palm-muted guitar that repeats a single note (percussive layer).



Figure 1. 'Floating Away' main guitar riff (transcribed by the author).

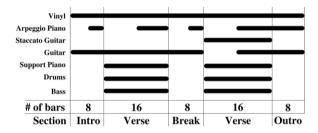


Figure 2. Form of 'Floating Away' as articulated by instrumentation.

The spectral frame, created by filtering as much as the choice of instruments, also contributes to the articulation of form. Notably, the 'breakdown' is marked by filtering – the same guitar progression continues playing, but this time Glimlip applies a highpass filter to give it an 'old record/radio' sound. A muffled piano (run through a lowpass filter with a roll-off around 800 Hz) supports the main guitar riff in both verses. It constitutes the harmonic layer alone in the first phrase of verse 2. This happens to be the one moment where the guitar riff is absent, making this section sound very close and focused (somewhat dead, even), before expanding outward (spectrally and stereophonically) with the return of the brighter guitar and arpeggiopiano tracks.

Space is articulated in seemingly nonchalant ways. The main guitar riff is centred in the stereo field, with 'vinyl static' initially filling the sides. The piano arpeggio figure that enters next is heavily but naturalistically reverberated. This likewise widens the stereo field, and adds distance behind the guitar. The drums and bass, treated very dry and perhaps unnaturally 'close', ground the centre. The repeating staccato guitar notes in the second verse are doubletracked and hard-panned to fill out the stereo plane – this is especially noticeable because they are a little off-time!

The final snare hits at the end of each verse are reverberated, in a way that is obviously artificial, but functional as climaxes. This is an example of Sterne's (2015) concept of 'detachable echo'. The modern trend of treating sounds without reverberation as the standard – that is, sounds without a sense of space or location – means that reverberation is a tool for creativity (Sterne 2015: 111–12). The drums could have been treated with reverb the entire time, but Glimlip

uses the effect sparingly to add resonance and mark structure.

The tracks feature second-order gestural surrogacy, since the majority of the elements are common musical instruments. The vinyl static noise is a first-order surrogacy – a recognisable sound, but one without a musical gesture. In some popular music tracks (Beck's 'Where It's At' comes to mind), you can hear the 'needle drop' before the vinyl sound begins. In those cases you can imagine a DJ playing the record. On this track, the noise begins at the very onset – *you* drop the 'needle'.

Aside from some rhythmic issues that could be tightened (and were likely left as-is on purpose), the song is not as 'amateur' as might be implied by the lo-fi label. Overall, the track is stratified and balanced, with clear spectral space made for the bass, percussion, melodic and harmonic layers. There is little masking or distortion that would make the music unintelligible. In addition to Moore's standard textural layers, the continual vinyl noise adds a 'spectral filler' layer. This creates textural interest and contributes some mid-high frequency information. The noise, along with the general roll-off of high frequencies, are the main signifiers of age, fragility, or 'warmth', which makes the track sound unobtrusive and inviting for late-night study sessions.

4. LO-FI AMBIENT PRODUCER AMULETS

Like lo-fi hip hop, lo-fi ambient music has found attention through YouTube. A recent exemplar of this style is Randall Taylor, a prolific musician recording under the name Amulets. Taylor, born in Okinawa in 1985 and based in Portland, Oregon, USA, holds a BA in Media Studies from the University of Buffalo and has been producing music under the Amulets moniker since 2013. Amulets is known for ambient drone music made with electric guitar, effects pedals and, especially, cassette tapes. This section will explore Taylor's work (from here referred to as Amulets), focusing on his album *Between Distant and Remote* (Amulets 2019a).

Amulets's use of cassette tapes appeals to other DIY music practitioners and listeners seeking nostalgia and kitsch. Demers (2017) cautions against a view that cassette tapes are seeing a 'revival', as they never completely fell out of use. However, the cassette was 'one of the first commercial media that more or less encouraged hacking' (ibid.: 114) and was 'one of the first sound recording media conceived and marketed with consumer participation, even creation, in mind' (ibid.: 111). Amulets's use of cassettes feels familiar and accessible. His popular YouTube and Instagram videos showcase the tapes and other gear, which he



Figure 3. 'Flat lay' arrangement in Amulets' video Fringe (Infinite Possibilities).

arranges in 'flat lay' or 'knolling' style shots on a white table.

Amulets follows a classic approach to creating ambient music. According to Siepmann, 'The original setup for the production of ambient music was the delay-line system: an assemblage of tape recorders, filters, and tone generators arranged in a variety of orderings and pairings, each rendering slight variations in tempo, texture, timbre, and harmonic variability' (Siepmann 2010: 179). Composers using these systems, such as Brian Eno, act as a 'guiding hand' to the technology, while letting the equipment dictate the surface materials. In a typical piece, 'Eno and others are able to generate sounds that appear to emerge from nothingness, slowly twist and bend in their resonance, and decay into oblivion' (ibid.: 179). Amulets's videos provide insight into his guiding hand as well as the specific means for producing sounds (Figure 3).

4.1. Between Distant and Remote

Released in late 2019, Between Distant and Remote is Amulets's first album to be pressed on vinyl. It is remarkably prescient of the COVID-19 pandemic. As the artist writes, the tracks '[explore] narratives of longing, dislocation, and rediscovery'. The tracks are rather digestible in length, falling between 4 and 7 minutes, in contrast to the longer forms favoured by many ambient/drone artists. The tracks unfold in similar shapes, in terms of both dynamics and spectral range. Amulets's compositions tend to begin with sparse material, build to a saturated section two-thirds the way through, then fade or remove material so the energy subsides. It is a common shape for a solo performance like this - after all, it is difficult to play guitar while starting several tape machines and effects at once. Setting multiple elements in motion is a gesture of building. It feels natural to follow that impulse and widen the dynamic and spectral range along with

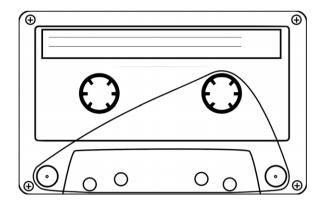


Figure 4. A cassette tape loop.

increasing the density of elements. Likewise, it feels natural to create an arc gesture, gradually removing elements to return to the starting point.

The greatest sense of change in these pieces comes from spectrum and texture. Harmonically, each track remains rooted in one modal area. Some alternate between two chords, favouring a i–VI motion in 'North Coast, Falling', 'No Signal' and 'Like Warm Air (We Rose)', and a I–IV motion in 'Song Lake'. Other tracks meander among chords and elude firm confirmation. The harmonic ambiguity reflects the instrumental ambiguity. After all, we know we hear guitar, and we know from seeing Amulets's visuals that we hear tape loops. Yet tape loops can contain any sound, and those sounds, when run through effects processing, can dissolve and distort. Describing the pieces' instrumentation requires imaginative naming (such as 'music box' and 'ghost tape').

4.1.1 'Where the Land Meets the Sea'

To further illustrate Amulets's compositional style, this section discusses a specific track, 'Where the Land Meets the Sea' (track 3 on Between Distant and Remote). It begins with a repeating gesture of two instruments obscured by heavy tape hiss ('ghost tape' in Figure 6). The gesture is approximately 5 seconds, which is the length of a basic cassette tape loop (about 22 cm fits around the reels and capstans, as shown in Figure 4). The higher instrument, with an open, flute-like sound, plays a sighing B-A pattern. The lower instrument, with a more nasal, oboe-like sound, plays a C[#] between these notes. After three iterations, Amulets introduces soft guitar chords (I-V-vi-IV in A), which are lowpassed (likely from the guitar's tone knob) and on which he uses a volume pedal to create swells. This pattern sounds looped as well, though at approximately 28 seconds it is likely repeated by a looper pedal rather than cassette.

The 'ghost tape' and 'warm guitar' provide the backbone for the piece. Over this, Amulets plays long

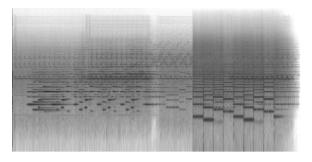


Figure 5. Spectrogram of 'Where the Land Meets the Sea'.

tones with a tremolo effect on the guitar. This improvisatory material remains in the key, though not necessarily lining up with the underlying harmonies. At around 2:35, he introduces a 'music box' sound, treated with delay and reverb, that also plays an improvisatory diatonic melody. Both the 'tremolo guitar' and 'music box' appear *not* to be looped, and their melodies lack clear contours. With each note 'subsumed in collective activity' as Smalley (1997: 114) might say, these elements are present for texture rather than traditional melodic functions.

'Where the Land Meets the Sea' diverges from Amulets's standard unfolding/receding shape. In this track, we have something of an arc until the 3:35 mark, where a powerful distorted guitar invades the texture, without warning. It is almost as if the track is about to end, when this extended coda begins (intriguingly, Amulets has an earlier music video version of this piece, which does not include the coda (Amulets 2019b). The overall formal strategy remains - start quiet and sparse, build to a place of saturation, then return. The proportions are uneven, however. The power guitar enters at approximately the golden ratio, and other entrances are staggered at intuitive points in time. Spectrally, the piece begins in a narrow mid-range with the ghost tape, adding elements below (warm guitar) and above (music box), then reaching full saturation with the power guitar. In the final 20 seconds, most elements fade out and the spectral frame narrows to the ghost tape. Figure 5 is a spectrogram of 'Where the Land Meets the Sea'; Figure 6 depicts the piece's formal structure.

In terms of Moore's textural layers, the warm guitar most obviously fills the harmonic layer, although the tremolo guitar, playing long tones, arguably sits there as well. The power guitar, only introduced two-thirds of the way through the piece, functions as the bass layer. The ghost tape is a little ambiguous. Containing three pitches (B–A, with a C[#] below), it implies harmony. Is a two-note motion sufficient to be called a 'melody'? Perhaps. The music box, the most likely to sound like a melodic layer, is improvised and non-repeating, creating more of a texture and implication of harmony. Even with just two notes, the ghost tape is the more memorable and hummable element, making it the true melodic layer.

'Where the Land Meets the Sea' features a mix of second-order gestural surrogacy in the guitar playing, and third-order or remote surrogacy in the sounds emanating from the tapes. What blurs this line, here and in Amulets's oeuvre in general, is that he demonstrates his performance process quite clearly in his videos. In a way, the fact that you are hearing *a tape loop* is more important than the audible gestures. The production decision to use tapes, rather than looping hi-fi samples in software, adds the 'patina of age', nostalgia and a sense of the 'guiding hand' at work.

Amulets knows the emotional power that secondorder gestures can bring to these abstract textures. In the final track, 'Like Warm Air (We Rose)', he makes a striking and poetic choice: strumming an acoustic guitar. Coming at the literal last minute of a 40-minute album, this moment sounds introspective and lonely because of the minor-key harmony. Yet, since the strumming is a recognisable performative gesture, the piece ends in a hopeful manner. The transparent recording (with some reverb added) means the strumming can be a clear and unpretentious signal of connection with the listener.

5. DISCUSSION

The production values of lo-fi music, in its various incarnations, convey five common types of meaning: empowerment, experimentation, communality, honesty and nonchalance (Jones 2014: 36–7). This final section discusses these intertwined meanings in relation to Glimlip and Amulets.

5.1. Empowerment

The theme of empowerment is important for lo-fi and other outsider art. By using lo-fi methods, an outsider can create music with the materials and means available to them. They may lack formal training but nonetheless have strong intuitive senses. Recognition of their work, even in a peer group, can feel empowering. Dub producers, as mentioned earlier, created unique music primarily for local Jamaican audiences. Since reggae had become commercialized, dub was a way for these producers to make something unique with the equipment and media on hand. Today, the ubiquity of computers and audio software, along with free sites to share music, has empowered numerous musicians in all genres.

5.2. Experimentation

By experimenting, one acknowledges a risk that something will not work – either the technology, or the

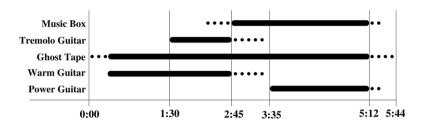


Figure 6. Form and instrumentation of 'Where the Land Meets the Sea'.

artistic statement. Can 'old' techniques (such as tape loops) be experimental? They might be, to the individual doing the experiment. William Basinski's *Disintegration Loops* did not feature a new technique, but his personal discovery of tapes gradually disintegrating led to an intriguing result. Amulets's music may not break new ground technically, but he does it well, and it will be unique for new listeners. His work also fits in the much larger DIY/Maker community (as explored by Collins 2009, Flood 2016 and Richards 2017, among others). This community values, obviously, doing things oneself, learning along the way, and sometimes (but not always!) a homegrown, unpolished sensibility.

5.3. Communality

Fans of lo-fi hip hop certainly feel communality; the comment sections on lo-fi YouTube streams have been noted as 'uncharacteristically friendly' (Alemoru 2018, as cited in Winston and Saywood 2019). More study remains to be done about the producers themselves and how they interact. For lo-fi ambient producers such as Amulets, coming from the DIY community means an intrinsic kindship with other makers. Part of his popularity, along with Hainbach and a handful of similar artists, is his active presence on social media. In addition to posting their work, these artists provide tutorials for hacking equipment and creating tape loops. Listener comments demonstrate this relationship with other creators. On Amulets's album-length YouTube video Fringe (Infinite Possibilities) (Amulets 2019c), five commenters wrote posts relating to the music as fellow artists, and another five sought advice. The other comments are affirmations, with the word 'Beautiful' used eight times, 'inspired' or 'inspirational' used four times, and words such as 'good', 'great', 'amazing' and 'masterpiece' each used three to four times. While 'masterpiece' might attest to popularity or quality of the music, the other words allude to what listeners are seeking - beautiful and inspirational music.

5.4. Honesty

Lo-fi can be seen as 'honest' because it sounds off-thecuff or immediate. Its charm comes from the roughness at the edges. Lo-fi hip hop such as that produced by Glimlip may not be completely 'authentic' since digital effects are used to simulate vinyl and other low-quality sound sources. Yet in his Instagram videos, one can see the musician enjoying himself while sharing well-made yet unassuming compositions in his chosen style. Amulets is more open about his process, participating in several interviews available online (Morris 2019; Faughn 2020; Millett 2020). These interviews, along with the documentary short *Tape Wizard* (Amulets 2021) show Amulets as a humble and honest creator. He creates what he likes and hopes his experiments will resonate with listeners.

5.5. Nonchalance

Honesty and nonchalance are two sides of the same coin - an acknowledgement of limitations, and a dismissal that these limits matter (a similar attitude is the virtue of 'ineptitude' in punk, as discussed by Hegarty (2007: 89–101)). Glimlip inserts imperfections such as vinyl noise and overdone compression to his mixes. The initial effect may be one of nonchalance (he does not 'bother' to reduce noise on his samples, he does not 'know' proper compression settings). On closer listening, it is clear that these are deliberate style choices. It is clear from his Instagram feed that Glimlip has the ability to record instruments with modern software, only adding effects to make the sound quality 'poor'. This is a staged nonchalance, which is not to imply that the music is bad, only that it simulates music usually made through lo-fi means.

Amulets better illustrates nonchalance, in a Cagean sense of letting objects do what they do. The tape loops contain detuned warbles because the tape is not quite tight enough on the spools. There are audible hiccups as the splice points. The high frequencies are rolled off because the media is decaying, or because it is played back at reduced speeds. These side effects, part of the nature of the equipment, become interesting texture surrounding the otherwise simple musical materials. While the nonchalance is still somewhat staged, the inclusion of *real* mechanical imperfections is closer to this spirit.

5.6. But how lo?

If lo-fi implies amateur production that is 'less good' than prevailing standards, just how lo-fi are these artists' tracks? Despite containing tropes such as vinyl and tape noise, rolled off high frequencies and smothering reverb, the tracks are not poorly produced. The mixes are balanced. The compositions show intuitive understanding of structure. If the ideal for audio is transparent reproduction of an original performance, then these fail as much as any mainstream pop tune. If the ideal is to present musical materials in a compelling way, then lo-fi effects enhance the experience. This makes the recordings ultimately faithful to the musical intent of the artists.

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