MMus Creative Practice 2018-19
MU71075B: Creative Project

DRONE MUSIC, FICTION, AND COMPOSITION AS APOCALYPSE

Varun Kapoor Kishore

A thesis submitted to the Department of Music at
Goldsmiths, University of London
in partial fulfillment of the requirements for the degree of
Master of Music.
September 10, 2019

TABLE OF CONTENTS

INTRODUCTION

> We are all philosophers here where I am, and we debate among many other things the question of where it is that we live . . . I live in the interstice yes, but I live in both the city and the city. (Miéville 2009, 312)

Literature, particularly fiction, has always been a part of my creative process in some form or another. From my first science-fantasy concept album to my work with spoken word poetry and theatre, music inspired by or based on various kinds of text has permeated my practice for many years—I have always relied on a narrative approach akin to film scoring. While this approach has its place, my goal here was to engage with text in ways that relied less on semantics and more on the *properties* of text. This led to experiments with Morse code, time signatures based on word lengths, various attempts at correlating letters to pitch—treating text as physical material rather than a "meaningful" sum of its parts. Research into the use of computer music systems for generating music from text threw up a disappointing trend—overwhelmingly, people attempt to build systems and software that analyse the emotional content of a text and create a piece of music that embodies this emotion. Hannah Davis' *TransProse,* for example, uses a database of eight emotional categories to sort through words in a novel, creating three melodies based on the overall, primary and secondary emotions of the text—these classifications depend upon the "density" of affective trigger words in the text (2014, 2-5).

One of the issues with this *emotionally resonant* approach is that it relies on conventional musical tropes (minor is "sad", major is "happy")—the resulting melodies and fragments are, ironically, devoid of any real feeling. Even in cases where research has centred around the opposite—mapping letters and vowels to musical notes *without* analysing their meaning, the conclusions seem to indicate that the semantic approach is in fact desirable. Rohit Rangarajan, who created a basic computer program to convert text to sound, ends his paper—somewhat perplexingly—with the assertion that it might be better to "use semantics to understand the sentential context and mood and generate notes accordingly . . . if a collection of sentences portrays a "somber" mood, we could

use a minor scale and a slower tempo. Or, if the sentences point to a positive "uplifting" mood, we could synthesize notes corresponding to a major scale and apply quicker tempo" (2015, 88).

It could be argued that these cases are guilty of what Adorno refers to as a "fetishism of means", warning that "the more the end subjugates the means, the more threatening becomes the means' control over the end" (1990, 232). They appear to privilege the functioning of technology over the final musical outcome. In my own work, though embracing the use of technology, I have tried instead to foreground the conceptual reasoning and musical outcomes. I believe my work now lives somewhere between the semantic and purely process-driven approaches, inhabiting the interstices between electronic drone music, improvisation, fiction (both literary and otherwise) and apocalypse.

I aim to situate the compositional process itself as apocalyptic, drawing in particular from Joanna Demers' work on drone music and thought-fictions, and using China Miéville's 2009 novel *The City & The City* as fictional and literary fodder for the music. The frameworks I have created within which to improvise/compose rely on text in different ways—the graphic scores based on Miéville's novel *The City & The City* use the geography of the story, combined with Morse code and text instructions, to provide a map for the performance; the novel lives in the music *topographically*, but the music does not attempt to score its *narrative*. The phonetic scores, on the other hand, simply use text as a proxy for sounds to be imagined and "given voice" by the performer. As will hopefully become clear, drone music is a fitting vehicle for interstitial exploration since it, too, lives in a liminal space, marking "the edge between the present and future, presence and absence, essential and incidental" (Demers 2015, 19).

CONTEXT

A BRIEF HISTORY OF DRONE

> It is exceptionally difficult to write about drone music. (Demers 2010, 93)

Tracing the lineage of drone music seems, in a sense, a Sisyphean undertaking—every time one gets close to a "definitive" version, drone rejects the attempt at subjugation. There are many possible routes through this history—beginning with the word itself.

The implications of the word "drone" are fraught with what Dean Biron calls "complications of meaning" (2015). Evolving from the Old English *dran,* a male bee, it eventually came to mean the "buzzing of bees" (Meyer 2012). Today, it evokes a plethora of associations, from the innocuous to the truly apocalyptic: remotely piloted aerial vehicles of all kinds, from mobile phone-controlled cameras to military instruments of death; the idea of monotony or boredom ("droning on and on"); a mindless adherence to routine—and a certain kind of *sound.*

In music, a "drone" refers simply to a sustained tone that serves as an anchor for melodic or harmonic movement around its axis: "the resonant drone is the pillar around which independent voices might gather, departing in flight, but returning to its fold" (Bloomberg 2015, 2). Drones in this sense (as *technique*) are integral to music from all corners of the globe, and as such are ubiquitous. Bloomberg summarises this pervasiveness as follows:

> The liturgical voices of Gregorian Chant use the drone technique, as do bagpipe music, Indian ragas, early blues music such as Mississippi Fred McDowell, Inuit, and Mongolian throat singing, Sonic Youth, John Cage, and La Monte Young; to name just a few examples. (2015, 10)

If drones can exist alongside traditional concepts of rhythm and harmony in a wide variety of musical styles, then does *drone music* as a genre of its own ostensibly consist of foregrounding this technique at the expense of "other" musical markers? Does it have any markers of its own? Is it identifiable *as* drone because of what it communicates or what it doesn't communicate? According to Joanna Demers, in drone music, "the use of stasis and noise runs counter to habitual expectations

for how elements of musical syntax interact with one another", disrupting the "sense that music functions as a language" (2010, 93). This subversion of expectations is integral to drone music. Duration is indeterminate; harmonic content, rhythmic movement, raw materials—there are no rules. Demers laments that we "lack specific terminology for conveying exactly what goes on during a drone. "Sustained" and "held for a long time" are practically our only means of communicating what drones do, even though drone activity is often more complicated than these descriptions let on" (2010, 93).

The earliest "contemporary" drone music had its roots in the minimalist classical realm—in the music of La Monte Young or Phill Niblock, for example. These composers created their works using the materials of contemporary classical music in conjunction with recording technology—acoustic string and wind instruments recorded to tape and manipulated afterward to produce drones. Since then, however, this has grown to be but a single strand of drone music—William Basinski is an example of a modern composer who has taken the tape approach to its apocalyptic extremes (his series *The Disintegration Loops* (2002) features recordings of tape loops that deteriorate every time they pass the tape head). Drone metal is another prominent subgenre, existing on the fringes of heavy metal, making full use of noise and distortion—a music Owen Coggins describes as having amplified "amplification itself" (2017, 20). There are myriad electroacoustic composers who work with field recordings as the raw material for their drone works, such as Thomas Köner, who records environmental sounds of the Arctic for this purpose, or Éliane Radigue, whose work *Biogenesis* (1974) uses recordings of her own heartbeat as well as that of her unborn child. There is also the vast domain of electronic drone music, dotted with artists such as Celer, Tim Hecker, Daniel Lopatin, Robert Henke and Kyle Bobby Dunn, to name a few.

Drone music often invites comparison with "ambient" music. The core principles of this genre can be traced back to French composer Erik Satie's concept of "furniture music"— sounds "designed to be heard but not listened to" (Shave 2016). This was music composed to exist as one of many objects in a room—the aural equivalent of a table or chair. Musician and sound designer Brian Eno,

credited with coining the term “ambient music”, defined *ambience* as “an atmosphere, or a surrounding influence: a tint”, stating his intention “to produce original pieces ostensibly (but not exclusively) for particular times and situations with a view to building up a small but versatile catalogue of environmental music suited to a wide variety of moods and atmospheres” (1978). While it is certainly true that drone music can be atmospheric, evoking (and indeed, provoking) a wide variety of moods, Eno goes on to say that the function of ambient music must be “to accommodate many levels of listening attention without enforcing one in particular; it must be as ignorable as it is interesting” (1978). To me, this thought encapsulates what I believe to be the foremost distinction between ambient and drone—drone music is overwhelmingly *impossible to ignore*. For instance, drone metal works like those of Sunn O))) and Earth or electronic drone works by artists such as Tim Hecker and Daniel Lopatin (Oneohtrix Point Never) are, as Joanna Demers puts it in the context of Satie’s decorative “wallpaper music”, anything but “shrinking wallflowers” (Lain 2016).

It is clear that drone music cannot be confined to a single subgenre. Perhaps the only definition of drone music with any merit is that it *resists* clear definition—Demers maintains that “the paucity of words we can use to describe this music makes any claims at interpretation suspect” (2015, 3). Biron goes on to say that ”musicians can flirt with dronology or embrace it fully, and sounds approximating drones can be either electronically or acoustically generated, scored or improvised, fundamental to a piece of music or form just one part of the whole” (2015). The works I have created for this portfolio tick most of these boxes—they are based around scores, yes, but the scores function as a framework for improvisation. The drones are both electronically and acoustically generated—using software instruments and electric guitar—and are certainly fundamental to the music.

FURTHER CONTEXT: PHILL NIBLOCK, ALTERNATIVE NOTATION, IMPROVISATION

I will attempt to use Phill Niblock’s work and methodology as a counterbalance to my own—my hope is to present a version of how the creation of drone music *has* been approached, while contrasting it with the approaches I have employed. There are parallels of course—Niblock uses graphic and text scores; some of his work even *sounds* eerily similar to mine (1995’s *Ten Auras*, 2006’s

Harm, for instance), though our processes and tools differ significantly. Niblock's music is assembled with painstaking precision. According to Volker Straebel:

> Niblock's approach to music composition, established in 1968, has remained basically the same until today. Long sustained sounds from acoustic string or wind instruments are recorded and assembled on multitrack tape. Rhythmic structure is avoided, while careful attention is given to frequency relation of the sounds that are present at a certain time. (2008, 227)

In later years, Niblock embraced digital recording technology; since the mid-90s, Pro Tools "has seriously changed his composition process", allowing him to manipulate recordings and try out operations on the fly (Straebel 2008, 232). Niblock is clearly using the flexibility the new technology affords him, but his process still involves meticulous planning—recording specific frequency ranges and exploiting microtonal shifts within them.

My own approach, on the other hand, is underpinned by a strong improvisatory impulse; the music is recorded in real time using a mix of software and live instrumentation. Niblock's scores were never intended for the performer—they read like precise instructions for the *assembly* of his finished pieces, often consisting of graphical and text representations of frequency ranges, sample durations and placement (Straebel 2008, 228). Niblock himself describes his process as "architectural" (Niblock 1982). In contrast, my scores are not strictly prescriptive; they simply provide a framework of limitations within which to improvise. The finished pieces are representative of the journey through the scores, "patrolling the border of possibility and impossibility that lies within them" (Anderson 2013, 131).

Virginia Anderson presents a useful three-prong analytical framework for approaching alternative musical notation. The first is based on a score's physical attributes (graphic, text, standard notation or some combination thereof) and how it is read (syntactically, pictorially or metaphorically); the second observes the manner of transmission of musical information from the score to the performer and listener; the third deals with ideas of interpretation and indeterminacy (2013, 131). Additionally, she posits that text scores in particular can be of two types: instructive, wherein the performer follows a list of instructions, or allusive—conceptual or ambiguous score, where the

meaning of the text is inferred and interpreted based on the performer's internal leanings (Anderson 2013, 132-133). This framework will prove helpful in contextualising the scores I have created for this project, their objectives and interpretation.

The logic behind using these scores as indeterminate improvisatory frameworks is captured neatly by jazz pianist Vijay Iyer:

> Where performers need scripts, improvisers need stimuli and constraints. Composing for improvisers becomes a kind of architecture: the construction of spaces that frame, enable, and contextualise human action, without overspecifying these actions. The composer becomes instead an architect of environments, a contriver of situations. (2017, 400)

Iyer's reference to "architecture" differs from Niblock's; while Niblock sees himself as an architect of the finished piece, Iyer sees the composer as building the *environment* to which the improviser adds the finishing touches. As it relates to my work, it offers a second level of meaning; my graphic scores are intended to function as maps—a literal representation of an architectural environment. Drone music lends itself spectacularly to both precision and improvisation—its built-in indeterminacy makes both approaches valid. This indeterminacy exists both at the level of creating the music and writing *about* it.

DRONE & APOCALYPSE

There seems to be something inherent in the nature of the drone that lends itself to feelings of impending apocalypse and death. The titles of numerous drone works—Éliane Radigue's *Trilogie de la mort (Trilogy of Death)* (1998), Tim Hecker's *Ravedeath, 1972* (2002), William Basinski's *The Disintegration Loops* (2002), Sunn O)))'s *Death Becomes You* (2002), to name just a few—reflect this connection. The use of drone as a harbinger of doom goes beyond this, however. Joanna Demers asserts in an interview that these associations "are implicit not only in experimental drone music . . . a lot of Hollywood soundtracks, without us really even noticing it, will employ very short drones whenever they're trying to give us a sense of dread" (Lain 2016). She is not wrong—today's film soundtracks are riddled with drone use, almost always signifying some kind of imminent threat. Hans

Zimmer, for instance, uses a threatening two-note cello drone as the theme for the Joker in *The Dark Knight* (2008). He describes his intentions using words such as “insidious”, “anarchy” and “disturbing”, wanting to “write something people would truly hate” (Hart 2008; Zimmer 2009). The result is a dissonant, persistent drone that effectively primes the viewer/listener for the inevitable destruction that is to follow.

Finally, no discussion on drone and apocalypse would be complete without serious engagement with the work of Joanna Demers, a musicologist and professor at the University of Southern California. Her writings on drone music, apocalypse and thought-fictions are integral to my research. Especially interesting is the fact that her books *Drone and Apocalypse (*2015) and *Anatomy of Thought-Fiction* (2017) are both written in experimental, fictional formats. The first takes the form of an exhibition catalogue two hundred years in the future, based on the writings and speculative artworks of a fictional 21st-century artist named Cynthia Wey. Wey is convinced the apocalypse is imminent, and uses analyses of drone works to explore these themes. This “catalogue” is published by the Center for Humanistic Study (CHS), a fictional cultural body set up in the year 2210 with the mandate to “study the discourse of the “humanities”, a collection of non-scientific disciplines such as literature, history, and philosophy that were mainstays of universities during the twentieth and the beginning of the twenty-first centuries” (Demers 2017, 2). *Anatomy of Thought-Fiction* is also envisioned as a CHS publication from the year 2214, of an unpublished manuscript written by Demers two hundred years prior. Through these works of experimental academic literature, Demers sheds light on our desire for the apocalypse and its manifestation in drone music, and why we believe what we know is untrue, often living our lives based on these fictions. Her works provide a theoretical starting point for my exploration of composition as apocalypse.

COMMENTARY

APOCALYPTIC PROCESS

Cynthia Wey, Joanna Demers' fictional proxy, sees writing as "an exercise in holding off death" (2015, 50). I would argue that this applies to composition as well; the "deaths" we are trying to stave off might include the death of creativity, the death of an idea, the death of motivation; but perhaps most significantly, the death of the process as a whole—the end of the process of composition is, in one way or another, inevitable. Yet we cannot help but be drawn to this end, be compelled to complete the work. As Wey puts it: "Prophecy should slacken our thirst for the end of the world, to find the end of the world. It does no such thing" (Demers 2015, 36). In the real world, this might be why the awareness of a phenomenon such as the climate emergency does little to change our behaviour on any meaningful level. Demers believes apocalypse to be "simultaneously terrifying and desirable" (2015, 12). I would add that this "desirability" results from an inability to fathom the true scale of the apocalypse. There is an awareness of the end, perhaps of discrete events that may or may not go on to contribute to to it, yet until the end is truly upon us we cannot know what form it will take. It terrifies us because apocalypse is "the collision of potential and kinetic energies, the force it takes to destroy coupled with the force that will never have the chance to be expended" (Demers 2015, 9-10). The same holds true, in my opinion, of the compositional process—it can indeed be a terrifying prospect, yet the end remains desirable. Often the journey from start to finish is beset by all manner of complications, difficult choices and instinct. Indeed, Demers asserts that "tragic art contains its own apocalypse, well-known in advance" (2015, 77).

I propose that as composers (or improvisers), we seem to be actively engaged in *seeking out* apocalypse. Rather than wait for the end to arrive, we devote our efforts to finding a path to it. While designed to create, the processes of composition and improvisation are inherently self-destructive, reminiscent of Derrida's conception of the autoimmune, containing "a *double bind* of threat and chance, not alternatively or by turns promise and/or threat but threat *in* the promise itself" (2005, 82 [emphasis original]). If composition is the "promise" of the composer/improviser, the fulfilment of that promise results in the end of the process. Demers speaks of apocalypse as a "threat or hope

of a revelation", literally an "unveiling" (2015, 7). Perhaps, then, the "threat" in the "promise" could be the revelation or unveiling of the composition, the apocalypse that signifies the end of the path that led to it. Drone music is an excellent vehicle for this endeavour. Drone, according to Demers, "aestheticizes doom, opening a door onto once and future catastrophes, those that are imminent and those that, once believed to be imminent, are now detours in a past that turned out otherwise" (2015, 7). This has been a running theme throughout the process of creating the drone works presented here. The idea of potentially imminent "catastrophes" that may or may not come to pass resonates strongly, for me, with the impulses and intuitions that result in the compositional or improvisational decisions we make. The interaction between "performed" sound and the sounds of the outside world (traffic, doors opening, people talking) provides an interesting contrast, a situating of drone in the physical world, where it is not the be-all and end-all of existence. Yet, throughout this incursion from the outside world, the drone persists. It absorbs these sounds, perhaps even welcomes them—I've had similar experiences listening to drone music while commuting, when the sound of a train door closing seems to be part of the music and it triggers a double-take to confirm that it was, in fact, an external sound.

Demers describes drone as "an acoustic foundation from which other sounds emerged, and to which all sounds will eventually return" (2015, 9). Marcus Boon asserts that "drones are effective because of their relationship to the void that existentialists believe surrounds human activity" (2003, 67). In this case, the human activity and the void that surrounds it seem to exist in concentric circles: the human activity of performance is surrounded by a "void" inhabited by the audience; they in turn are surrounded by the "void" of the outside world—a void evidently inhabited by the sounds of traffic. Again, through it all, the drone *persists*.

The experience of improvising in this environment is reminiscent of Rezewski's thoughts on the subject:

> The basic subject matter of improvisation is the precariousness of existence, in which anything . . . could interrupt the continuity of life at any time, The attitude of the improviser could, in this respect, be said to be tragic. (2017, 383)

What could be more tragic, in this sense, than the knowledge that at any time, everything might come to an end? In other words, is improvising anything other than apocalyptic, rife with the danger of interruption, destruction, the fear of failure? Demers says drone music "coaxes what it can out of everything to celebrate or to prepare for disaster" (2015, 41). The processes of improvising and composing themselves involve a similar preparation for the inevitable end—whether that end signals celebration, or disaster.

TOOLS: SYSTEM

The system itself consists of a software synthesizer I built in Max/MSP, electric guitar, various MIDI controllers and effects processing (using Ableton Live). The synth and effects (including bit reduction, filters, reverbs) are controlled by means of MIDI controllers mapped via Ableton.

The electric guitar is laid flat and generates sound by means of an EBow, which rests on the desired string, producing an infinite drone. Pitch can be manipulated physically on the instrument using the tuning keys or a slide; it also passes through pitch-shifting and harmonizer effects in Ableton, in addition to distortion, bit reduction, downsampling, delay and reverb. This is a simple yet powerful method that provides a palette of drone sounds that do not require one to *play* the guitar in the traditional sense.

The primary element of this system is the software synthesizer. It consists of two independent oscillators—sawtooth and square waves—each with independently controllable parameters including pitch, gain, filter cutoff, detune and modulation. There are shared delay and panning effects, but the important point is that all these parameters are interconnected—they affect each other. For instance, the square wave "detune" function might affect its pulse width, or the modulation rate of one oscillator might affect the filter resonance of the other. These relationships between parameters also change, and are in fact randomizable—this occurs via the use of "morph functions" that rewire connections when engaged. Crucially, while the user can make this happen, there is no control over the randomizing process itself, leading to unpredictable combinations that can never be exactly replicated. There is also a "chaos" button, which engages a note randomizer that generates pitches at a rate determined by the oscillators' modulation controls.

The way I designed this instrument to operate has led me to cautiously describe it as a "generative" synthesizer. I will turn to Brian Eno to elaborate upon this classification:

> One of my long-term interests has been the invention of 'machines' and 'systems' that could produce musical and visual experiences. Most often these 'machines' were more conceptual than physical; the point of them was to *make music with materials and processes I specified, but in combinations and interactions that I did not*. (Eno 1996, 330 [emphasis mine])

This is, in essence, exactly what my synthesizer does—it was built in the first instance with only the goal that its attributes react to each other over time in unpredictable ways, and that the user is only able to change the degree and intensity of this unpredictability. Eno goes on to imply that music, to be truly generative, must never repeat itself exactly, and must go on forever (Bainter 2019). My synthesizer cannot, by design, ever be set to generate exactly the same sound twice—only close approximations are possible. As for going on forever, there is no envelope function—the instrument generates continuous, sustained tones. The parallels thrown up here to the principles of drone music are obvious—extended duration, the idea of infinite sounds—and though it was not created with this in mind, this synthesizer excels as a drone instrument.

For the recordings made since, using the "map" scores, an additional element was incorporated—clips of Morse code. As detailed below, these consist of sped up Morse code representations of text from *The City & The City,* as well as rhythmic fragments. These are processed through an FFT resonator, filters and reverb—this results either in extended drone sounds or rhythms depending on which clips are used.

THOUGHT-FICTIONS AND DRONE MAPS: *BESŹELCOMA*

Joanna Demers speaks of "thought-fictions"—concepts that serve a purpose even though they are known to be untrue (2017, 11). Why believe something we know is untrue? A surprising amount of our daily existence relies upon these thought-fictions, without which reality might be laid catastrophically bare:

> We all know of examples in daily life where belief is far from monochromatic. We may for the most part believe, for instance, in the stability of the banking system, yet we may be afflicted with unspoken fears when we put hard-earned money in savings . . . Thought can certainly exist as matter-of-fact belief, but can also take the form of premises we only half-believe, or believe depending on mitigating circumstances . . . we can even believe things we simultaneously acknowledge as false. (Demers 2017, 18)

China Miéville's *The City & The City* revolves around just such a thought-fiction. Ostensibly a noir detective thriller, the book is unusual in that its premise situates the story within a fictional geography where two cities—Beszél and Ul Qoma—occupy the *same physical space*, citizens of one having to "unsee" those of the other as they go about their daily lives. The two cities live in the shadow of a mysterious entity known as Breach, used as both verb and noun—the act of breach (illegal interaction across city lines) is punishable by Breach, ostensibly an enforcing body that keeps the cities separate.

The only way to legally cross between cities is through a central border passing through a building known as Copula Hall, and requires paperwork and training—the novel's protagonist, Inspector Tyador Borlú, undergoes such training wherein he is tested on his ability to unsee Beszél, his home, and instead see Ul Qoma, the city he has grown up being conditioned to unsee. The impossibility of this situation is illustrated thus:

> If someone needed to go to a house physically next door to their own but in the neighbouring city, it was in a different road in an unfriendly power. That is what foreigners rarely understand. A Besź dweller cannot walk a few paces next door into an alter house without breach.
>
> But pass through Copula Hall and she or he might leave Besź, and at the end of the hall come back exactly (corporeally) to where they had just been, but in another country, a tourist, a marvelling visitor, to a street that shared the latitude-longitude of their own address, a street they had never visited before, whose architecture they had always unseen, to the Ul Qoman house sitting next to and a whole city away from their own building, unvisible there now they had come through, all the way across the Breach, back home. (Miéville 2009, 70)

The book is peppered with references to this impossible quotidian life in Besźel and Ul Qoma, with citizens having to “unsee”, “unhear”, “unsense” or otherwise *un-acknowledge* what is right in front of them. This is often a retroactive process—it is only when a citizen realizes they have seen or acknowledged a person or object across city lines that they quickly “unsee” it. The inference is that Breach “manifests” only when a serious infraction occurs. Miéville himself says, “You cannot train yourself to successfully and sustainedly unsee and unhear—you do them all the time, but they also fail, repeatedly, and you cheat, repeatedly, in all sorts of small ways” (2009, 325).

Miéville constructs neologisms such as *grosstopically* and *topolganger*: the former signifies areas in the cities sharing physical space but effectively existing in two different countries, and hence off-limits from each other, the latter what he refers to as “crosshatched” streets which exist in both city-states under different names. This impossible geopolitics relies upon the thought-fiction that these are two separate cities, and that should a transgression occur, the culprit will be disappeared by agents of Breach. By the end of the novel, it turns out that these so-called “avatars” of Breach are simply people who have themselves committed breach in the past—as a result of which they now have free run of both cities without consequence, while they continue to police those who maintain the fiction that is deemed “necessary” for the status quo. Borlú himself ultimately becomes part of Breach, at which point he describes his new existence thus: “My task is changed: not to uphold the law, or another law, but to maintain the skin that keeps law in place. Two laws in two places, in fact” (Miéville 2009, 311).

The cities in Mieville’s novel are surveillance states, with their citizens constantly engaged in actively seeing and “unseeing”, watched and policed by Breach. Derrida’s characterization of 9/11 as having produced a paranoid citizenry echoes the impossible and split lives of citizens in Mieville’s novel. Specifically, Derrida talks about 9/11 being projected as “an absolute "evil" whose threat, whose shadow, is spreading. Absolute evil, absolute threat, because what is at stake is . . . life on earth and elsewhere, without remainder” (Borradori 2003, 99). The world was cleaved forever—and the threat was now “absolute” and “elsewhere”, allowing the “war on terror” to begin—MIéville’s cities arose from just such a cleaving, in their distant history. The aftermath of 9/11 led to more war

and destruction and the deployment of technology, and over the subsequent two decades, a sharp rise in drone warfare. As alluded to in the *Context* section above, the apocalyptic connotations of the word "drone" are reflected in Mieville's work, drone music, and in reality. My chosen title for these pieces—*Beszélcoma*—is not just a play on the names of the two cities, but reflects the fact that citizens in Miéville's novel walk around in a veritable coma of belief in their thought-fiction in order to carry on their lives with what vestiges of normalcy might remain to them.

For Borlú, the end of this fiction of two cities is apocalyptic: his old life is over, the belief that held his world in place destroyed. He can no longer go back, and as such is doomed to his new life, serving as an avatar of Breach. This also happens to be the end of the novel—a more literal (and literary) end of fiction. Miéville's repeated use of the word "manifest" in relation to Breach takes on an eerie significance when compared to Demers' use of the same term: "the manifest is an apocalyptic device, an account undertaken when the end is at hand" (2015, 11).

It is the geography of this novel that I have used to create the scores for these drone compositions. It is essentially an exercise in *portraying the impossible*. The scale of Miéville's thought-fiction here is sometimes impossible to grasp. A seemingly simple description of the complexity of, for example, unhearing and unseeing an emergency vehicle on a crosshatched street *while making sure to step out of its way*, betrays the sheer magnitude of even the smallest interactions of life here. Similarly, drone music is perceived as maximal even though it is mostly described in minimal terms: "technical descriptions of drones take only a few words to state that one tone or chord lasts minutes or hours, leading to a rather sizeable imbalance between the minimal number of words required to describe a drone and the maximal amount of time a drone takes" (Demers 2010, 93). Drone works on an apocalyptic scale, but as with all music, the end is inevitable—the runtime of a piece is the first indicator of impending doom; we know the end is coming before it has even begun. Time thus appears to create a border, beyond which there is nothing; nothing but the Breach. As Joanna Demers says: "Maximal music is appreciable as maximal only in the presence of boundaries, when we know that the music will at some point come to an end" (2010, 92).

The boundaries between the cities are interwoven and complex, but nevertheless lend themselves to a form of graphic score—a "map", representing the geography of the cities while providing options/instructions for navigating the composition. Laid flat (**Fig. 1**), the left and right sides represent the cities, and the middle represents Copula Hall—the legal border crossing. To navigate from one side of the score to the other, the performer must pass through this crossing. Not to do so constitutes Breach, represented by the black quadrilateral on the score.

I say laid flat—if one was to fold the score over itself (**Fig. 2**), it would be a more realistic picture of the cities' geography; laying it flat simply provides a more palatable representation of the impossible. I have also applied this "folding" process to the resulting composition—the outcome is detailed below. Each side of the map contains instructions and rules for what is permissible, and the middle contains a visual representation of the sonic Morse code material that must be used to cross between sides. These fragments of Morse code—text from the novel—have been sped up so that the Morse rhythms are no longer discernible, resulting in sustained pitches or drones. While created

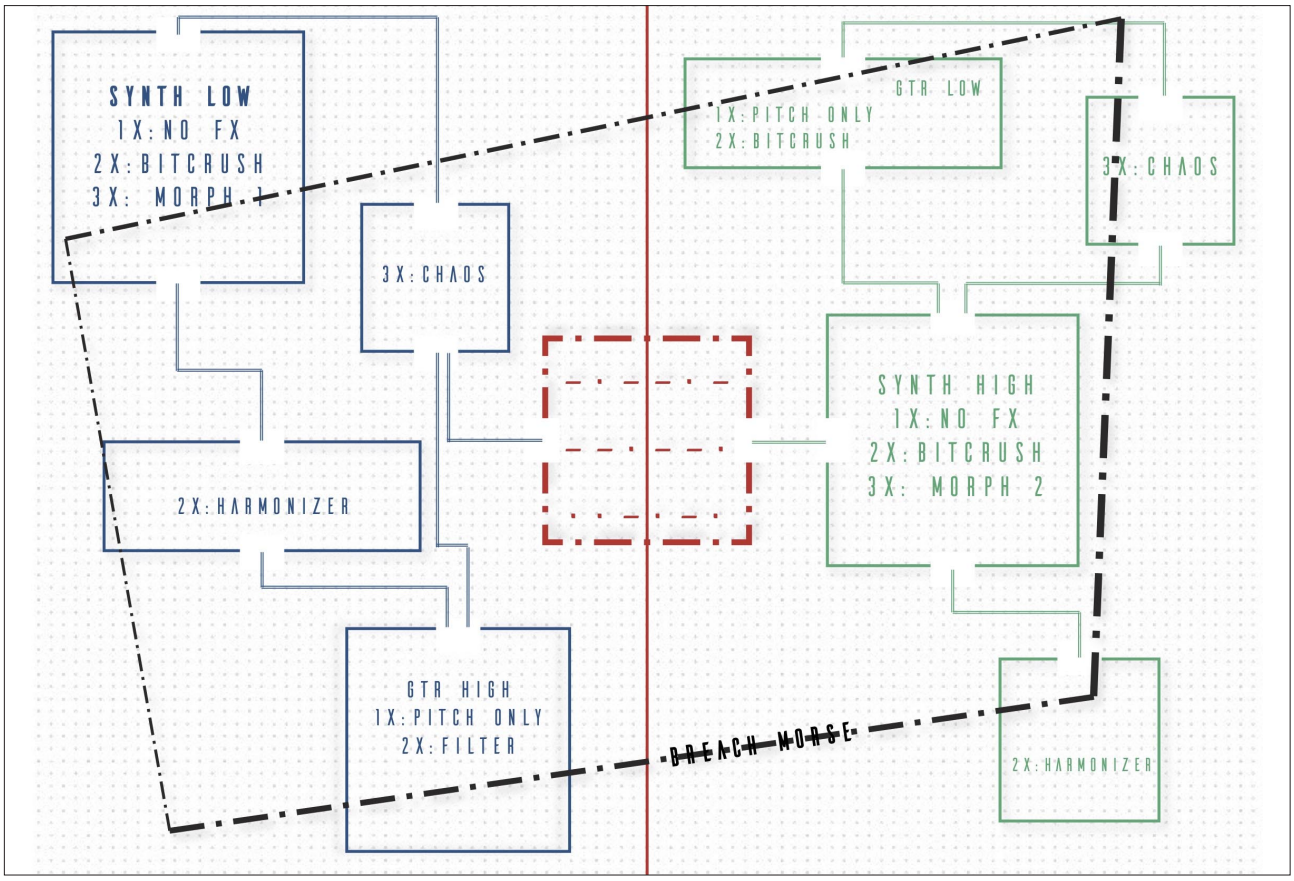

Fig. 1: *Score for 'Beszelcoma #29'*

directly from the text, these fragments are not in and of themselves recognizable as such—their sonic characteristics supersede their semantic origins.

If the performer is in Breach, by wilfully or unwittingly defying these instructions, the rules no longer apply. Breach is invoked in the form of clearly rhythmic information (Morse code fragments pertaining directly to Breach). These Morse rhythms now attempt to exert some semblance of control, to fence in the "un-time" of the drone. I would add a caveat: this score is a fiction, both in that it is based upon a fiction, but also in that it only works while the performer believes in it and follows its rules. The point at which the performer *stops* believing in the fiction of the score, they are in a state of Breach. The act of invoking this state is apocalyptic for the composition, since there is now no turning back, and the inevitable end must occur. The fiction is broken and apocalypse is nigh.

Virginia Anderson seeks to answer the question of how such a score might be read: "like a language (syntactically), like visual art (pictorially), or as literature (metaphorically)" (2013, 131). In the case of the drone map, the physical attributes of the visual components (size or line thickness,

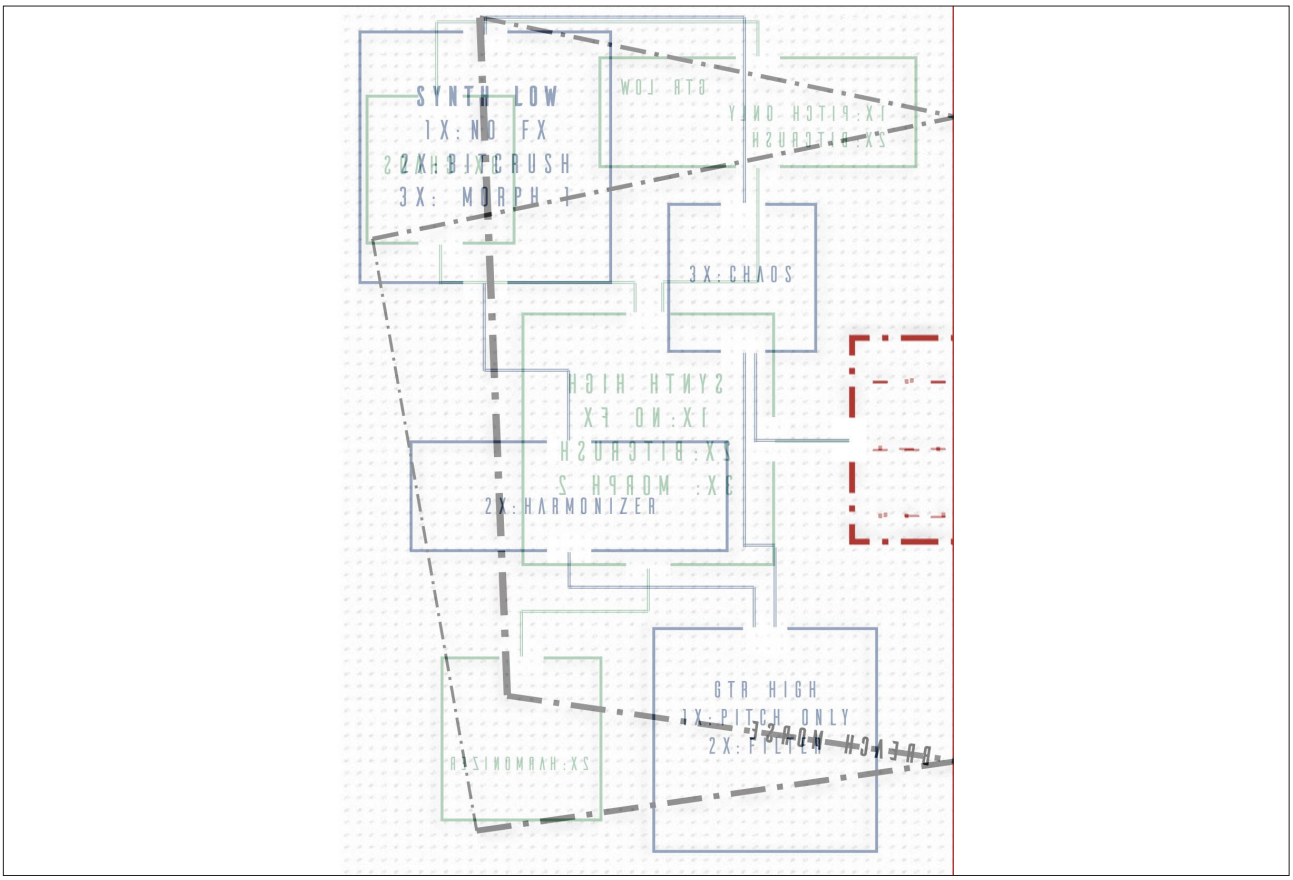

Fig. 2: *Score for 'Beszelcoma #29', folded.*

for example) do not represent or correspond to musical outcomes (pitch, dynamics, duration) in the way Anderson's "syntactic" reading would necessitate—they simply provide a navigational route though the score's topography. It is the text instructions that inform sonic output (synth low, filter, bitcrush etc). The score is an abstraction of the fictional geography of the novel, designed to be read as a representation of the *mechanics* of this geography—literally, as a map. This suggests a "pictorial" reading. According to Anderson, pictorial scores "do not have a linear relationship between score symbols and sound; the performer "plays" the score the way a viewer "reads" an artwork" (2013, 132). There are many ways to navigate the drone map—one can begin in either "city", with any of the permitted elements and stay for as long as needed before making one's way through the middle to the other side.

As regards interpretation and indeterminacy, the map, while providing explicit (and implicit) instructions, does not specify any limitations in terms of duration, timbre or direction of "travel". As Anderson states, the "performance possibilities of a piece in alternative notation thus include both what is stated and what is not stated in the score" (2013, 138)—what is explicitly permitted is not necessarily an accurate reflection of what is possible or impossible in terms of the final outcome. This opens up opportunities for exploration well-suited to drone music, because of its emphasis on duration:

> There is something about a sound that does not shift, something about the experience of a sound heard for an extended duration that nags at consciousness, interrupts the pleasure it takes in the infinite variety of notes, combinations and changes. (Boon 2003, 61)

Extended duration is integral to drone music. Ordinarily, the "runtime" of a piece of music is the first clue about its end—we know that no matter what, the end will arrive as prescribed. With drone music, runtime could be anywhere from a few minutes to several hours. The sense of an ending becomes more muddled the longer one has to wait—we fool ourselves into believing the piece will go on forever. According to Joanna Demers: "Drone music is a music for when the markers of time such as clocks, metronomes, alarms have stopped" (2015, 9). I have explored this suspension of time in two ways—first, reaching the end of the score as quickly as possible; second, using no preconceived

time limit. The second method enables the "habitation" of the soundworld; settling-in to a particular sound, section or mood before moving on. For instance, in realising the map-score, one might perform the equivalent of going for a quick walk from one city to another and back or, at the other end of the spectrum, spending a day exploring a part of one city before crossing over. In the first case, the sense of impending apocalypse is heightened, in the form of anxiety—the goal is to seek the fastest way to the end. With the drone maps, this sprint through the cities took around thirteen minutes to cross over and back three times before invoking Breach (*Beszelcoma #13)*. The second approach resulted in a twenty-nine minute piece (*Beszelcoma #29).*

Curiously enough, while objectively thirteen minutes is not "short" (Tim Hecker's drone works routinely have runtimes between two and seven minutes), there is a sense of urgency about the desire to "complete" the tasks required. The first "crossing"—where we hear the Morse drones for the first time—in *Beszelcoma #13* begins just shy of the two-minute mark, and the crossing back occurs just after the five-minute mark. In *Beszelcoma #29*, the five-minute mark is when the *first* crossing begins—the return crossing doesn't begin until thirteen minutes in, by which time *Beszelcoma #13* has ended.

The instructions on the score specify "high" and "low" frequency ranges for the synthesizer and guitar drones. The space between these extremes might function as an embodiment of the gulf between these cities—the liminal spaces born of physically minimal but metaphorically maximal distances. The first five minutes of *Beszelcoma #29* explore this gulf before surrendering to the strangeness of the Morse drones that signify the border crossing. These crossings get closer together as the piece progresses, building in urgency until the end. The beating patterns around the 3:54 mark in *Beszelcoma #13* are caused by the synth's detune effect, and are reminiscent of those in Phill Niblock's music. In the context of *The City & The City*, these random patterns seem to be skirting around the edges of the regimented Morse code rhythms of Breach still to come; citizens attempting to "cheat" Breach. A similar effect can be heard around 10:42—this is the synth's "chaos" function.

Beszelcoma #14 and *Beszelcoma #7* were both created from *Beszelcoma #29*, which is purely an exploration of the score's topography as "laid flat". This follows the process of crossing over and

back in order to access certain possibilities (such as using the bit reduction/downsampling effect heard from 15:00 onward). *Beszelcoma #14* is represented by the map shown in **Fig. 3**.

This is not a "score" to be performed, but functions as an impression of the *finished* piece—each of the three "crossings" are represented as overlays. What this means for the composition is that instead of maintaining the "flat", linear back-and-forth motion, every version of each part of the map plays at once. In other words, if the left of the map is Beszel and the right is Ul Qoma, instead of hearing movement from one city to the other and back three times, we hear *all three* instances of being in one of the cites at *the same time*. This means the piece begins with the 1st, 2nd and 3rd "visits" to one city, then all six "border crossings", then all three visits to the other city before ending with Breach.

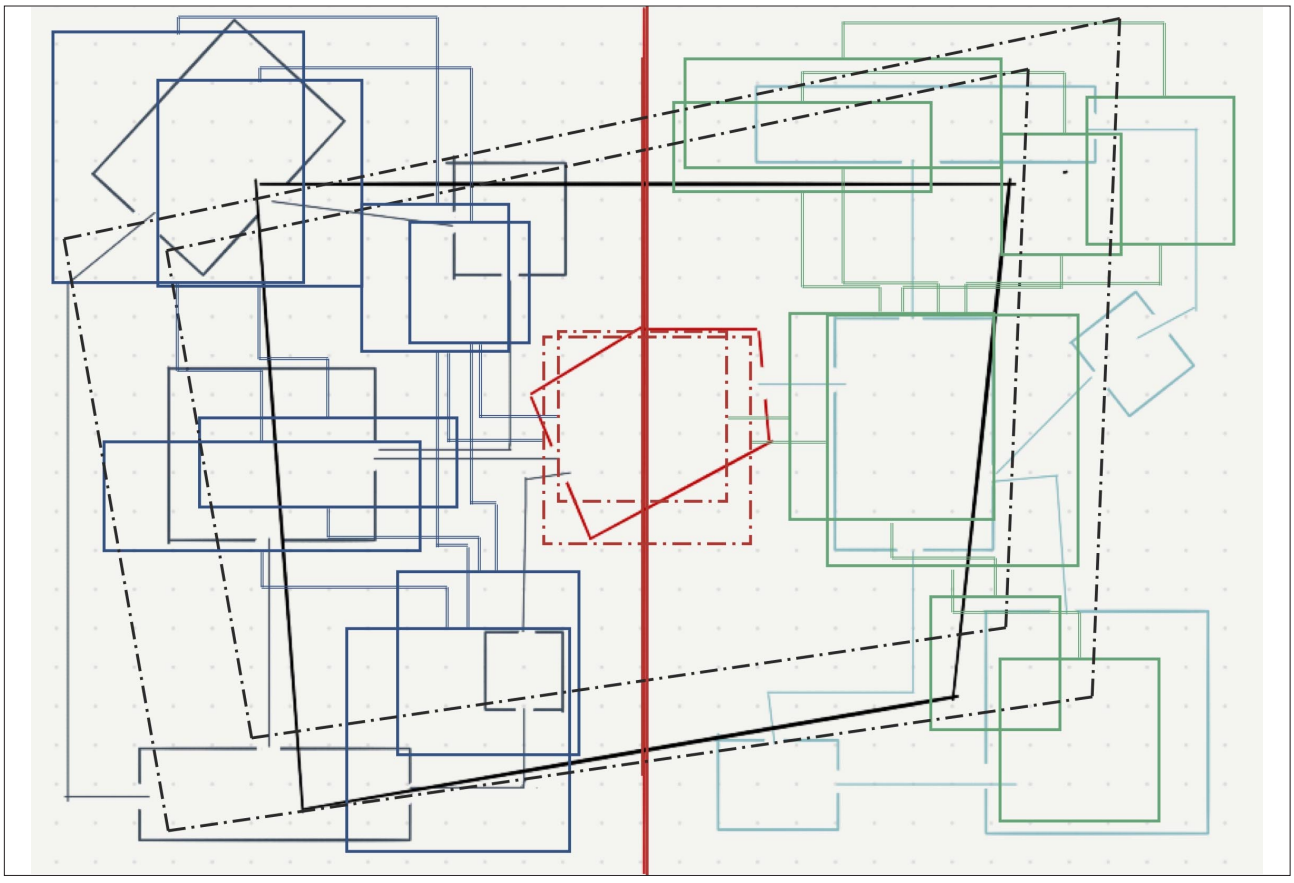

Fig. 3: *Map for 'Beszelcoma #14'*

Fig. 4: *Map for 'Beszelcoma #7' (folded)*

Beszelcoma #7 takes this overlay representation and *folds it over* (**Fig. 4**), to provide an aural analogue of the true, impossibly interconnected physical geography of the cities. Now we hear every visit to each city, every border crossing *and* Breach, all at once. If *Beszelcoma #29* represents the possible journey of a single life in these cities, then *Beszelcoma #7* perhaps represents *all* journeys of *all* lives. We hear the Breach rhythms less than halfway in—they are less significant of the *end* here than they are simply a fact of life to be dealt with. The end, when it arrives, is subdued—an exhausted, almost anticlimactic apocalypse.

PHONETIC TEXT SCORES FOR DRONE MUSIC: *DRONETICS*

The drone map is the first framework I created for this project. The second is a text score intended to provide phonetic prompts for a drone performance. The idea for this initially came from Charlie Blake's essay *Dronoclasm*:

> Flakes of music falling now like
>
> snow onto the vitrified earth,
>
> settling on the withered branches,
>
> scattering across the glassy waters, forming membranes—extending . . .
>
> Sssssssssssssssssssssssssssssss…….
>
> Mmmmmmmmmmmmmmmm…….
>
> Ngngngngngngngngngngngn……. (2017, 12)

Blake urges the reader to "imagine this sonic spectralism as an image or a scent or a taste" (2017, 12). Why not imagine these fragments as the basis for a drone score? It is ostensibly a simple idea, but interpreting a phonetic representation of sound presents its own challenges. Blake begins his essay with the following thought: "The laws of physics are like music notation—things that are real and important provided we do not take them too seriously" (2017, 10). In the case of my phonetic score, this seems particularly apt. "How does sense emerge from its opposite?", asks Blake (2017, 11). Can something that is on the surface almost nonsensical—a collection of vocalised "drone" sounds written as language—lead to a meaningful piece of work?

These phonetic scores are of two kinds. The first (*Dronetics #1)* consists simply of eight lines of text, each of which is a phonetic representation of a possible drone sound (**Fig. 5**). These sounds are in some cases inspired by Blake's (*gngngngngn, bmmmmmm)* and the rest are of my own invention. The score is to be read left to right, top to bottom. More than one line can be audible at once, and there is no limit on duration.

The second consists of a 6x6 square grid, with each row containing phonetic text (*Dronetics #2)*. The grid can be read in any direction, and for any size of square (**Fig. 6**). For instance, one might treat it as a regular block of text, as in the first score; however, one might also select a smaller square within the grid and read it left to right, bottom to top, or diagonally—as desired. This results in more

Fig. 5: *Text score for 'Dronetics #1'*

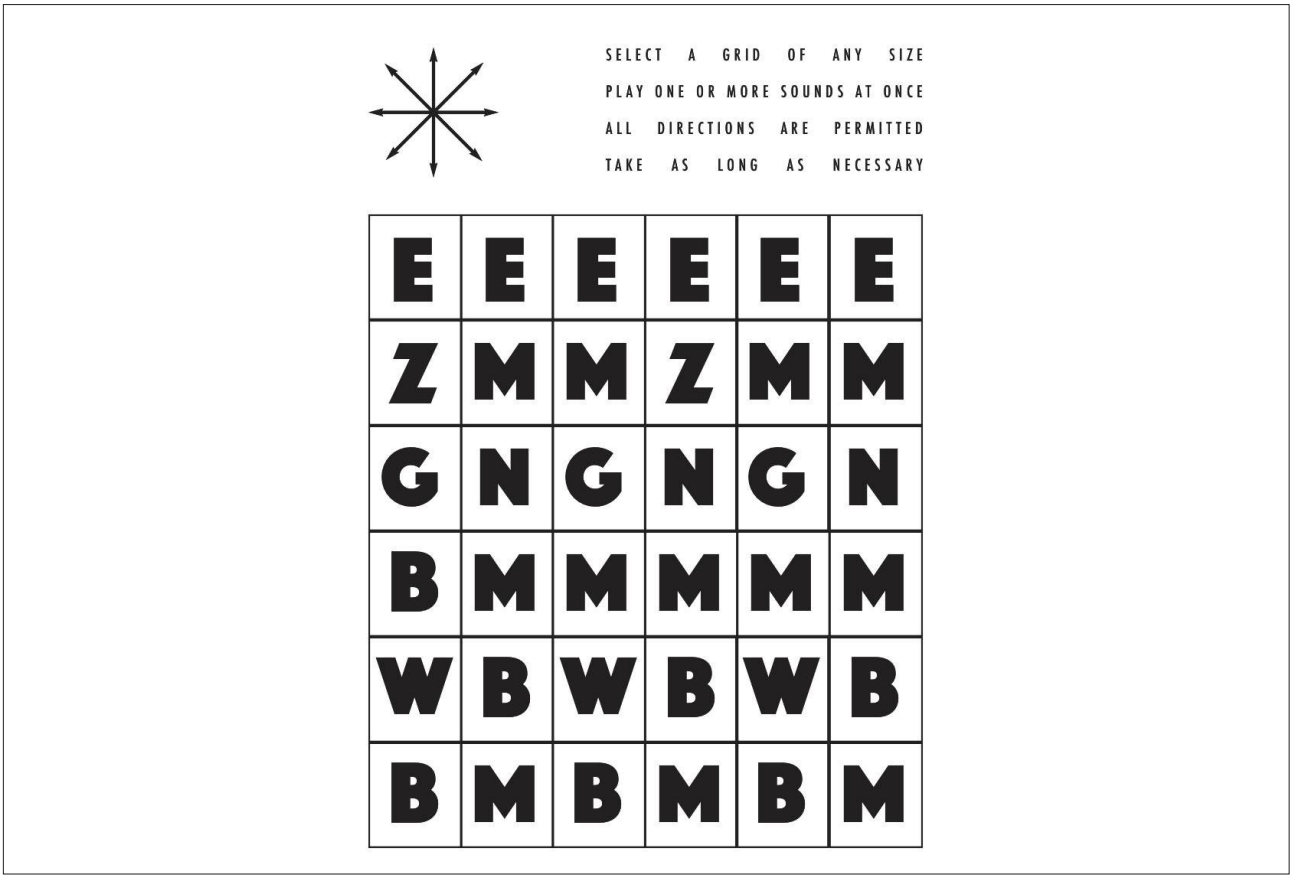

Fig. 6: *Text score for 'Dronetics #2'*

complex combinations of letters, requiring more imagination and higher levels of abstraction to interpret and perform. Again, there is no durational limit.

I would argue that to read the text-sounds as one would read words requires an acceptance of the linguistic syntax involved in creating these fragments. The next step is to mentally or imaginatively translate these text-sound-words into word-sounds, before interpreting an approximation or abstraction of those sounds through an instrument or sound source. To co-opt the traditional use of the term "sight-reading", I will refer to this process as *sound-reading*. Here, the transmission of musical information to the performer (Anderson's second approach) is not as straightforward as it is in the drone map, where the instructions explicitly specify, for example, high and low frequency registers. In this case, the process of sound-reading translates the written information into a goal for sound creation that the performer subsequently aims to reach.

Anderson divides text scores into two types: instruction scores and allusive scores. Instruction scores "resemble recipes or instructions"—the performer "reads the instructions and follows them to achieve a performance" (Anderson 2013, 132). Allusive scores consist of texts that are meant to "inspire" rather than instruct—they are open to interpretation and indeterminacy to a greater degree. I believe my phonetic scores, though largely instruction-based, allow for a degree of the allusive due to the abstraction process (sound-reading) mentioned above.

Anderson states that music is "a different kind of communication than language" (2013, 137). Adorno expands on this idea, asserting that music's "similarity to language points to its innermost nature, but also toward something vague" (1993, 401). My phonetic scores seem to imply this question in reverse: it is in this instance language and its similarities to sound that point to this "vagueness"—one performer's interpretation of *"zzzzzzzz"* is likely to differ from that of another. This indeterminacy of sounds that the text represents is crucial, potentially providing for a wide range of outcomes. Adorno says that music "aims at an intention-less language, but it does not separate itself once and for all from signifying language, as if there were different realms" (1993, 402). I would argue that in this case, it is *language* that aims at *intention-less music*, signifying only a *set of possibilities* for results that will *never* be exactly replicable or truly representative; approximations, at best.

In *Dronetics #1*, the first several minutes are given over to the exploration of the first three lines. The *neeeeeee* sound acts as an anchor throughout the first half, finally disappearing shy of the 9 minute mark, after the *gngngngn* begins. At 10:30, we hear an approximation of the *zhhhhhhh* sound beginning to take shape. The *wbwbwbwb* begins slowly, the *zzzzzzzzz* following soon after. Around 13 minutes in, the *wbwbwbwb* returns. At 14:32, the *zzzzzzzz* enters again, leading eventually to the final *waaoow*—the most "voice-like" approximation yet. The building tension is accentuated by bursts of distortion until it fades out.

There is, in the attempt to "sound-read" these phonetic fragments, an inherent unattainability. Some are easier to approximate (*bmmmm* or *wbwbwb)*, yet many are close to impossible to translate *recognizably*. For instance, diagonal combinations in the grid score might consist of *ezgbwb* or *znmbb*—this leads to further abstraction of the perceived possibilities of sounding them voicelessly. In *Dronetics #2*, the figure that repeats from 8:35-9:20 is an attempt at the diagonal *znmbb,* over a bed of *bmmmm* and *gngngn*—the diagonal is far less recognizable, if at all. Similarly, there are attempts around 16:35-16:45 at the vertical *ezgbwb.* There is a sense of futility that pervades the process; a sense that as one gets closer to the end, the less clear the path ahead becomes. In this particular case, the end was truly apocalyptic—I attempted to engage the "chaos" function on the synthesizer and the software overloaded, resulting in a sudden clip bathed in reverb that effectively cut short my path to any "planned" ending.

CONCLUSION

A few reflections, then. For the moment, the drone maps are specific to my own system; as such, I am familiar with their mechanics—this is why the text instructions on the scores do not provide anything but a parameter-specific framework for my own use. I could create maps with different parameter limitations/combinations to the ones used here, based on the same system or an evolved version—I've included an unlabeled alternate version in the *Appendices* folder as a possible template for this eventuality. The phonetic scores contain simple text instructions that could, theoretically, be followed by anyone—the outcome would depend on the nature and limitations of their instrument

(or voice). What I wish to illustrate, however, is that the sheer volume of material I have been able to generate from these *single* instances of a myriad of potential choices available to me, serves to drive home the point that drone music *thrives in a state of excess*. In terms not only of pure duration, but also of *scale* and *power*. It is easy to believe in the fiction of its permanence. Drone is the sound of death, and death is an ending—but death is also (as far as we know), forever. If composing and improvising are ways of seeking out apocalypse, then the end must be the death of process. And if that death results in drone, then, perhaps, drone is forever.

Returning to the China Miéville quote I began this text with, one could just as easily replace the word "philosophers" with "composers" or "improvisers"—the heft of these words would remain unchanged. We inhabit a realm of endless possibility, stretching forever in all directions, and we find our own paths to our own apocalypses, never knowing for certain how it will end, but desiring the end all the same. We live in the interstice, yes—we live in the drone.

REFERENCE LIST

Adorno, Theodor. W. 1990. “Musik und Technik”. In *Klangfiguren. Musikalische Schriften I, edited by* Rolf Tiedemann. Frankfurt am Main: Suhrkamp.

———. 1993. “Music, Language and Composition.” Translated by Susan Gillespie. *The Musical Quarterly* 77 (3): 401-414. http://www.jstor.org/stable/742388.

Anderson, Virginia. 2013. “The Beginning of Happiness: Approaching Scores in Graphic and Text Notation.” In *Sound & Score: Essays on Sound, Score and Notation*, edited by Paulo de Assis, William Brooks and Kathleen Coessens, 130-142. Leuven: Leuven University Press.

Bainter, Alex. 2019. “Introduction to Generative Music.” *Medium*, January 26, 2019. https://medium.com/@metalex9/introduction-to-generative-music-91e00e4dba11.

Biron, Dean. 2015. “The Democratic Drone”. *Overland*, October 20, 2015. https://overland.org.au/2015/10/the-democratic-drone/.

Blake, Charlie. 2017. “Dronoclasm: or the Swarming of Angels in Endless Night.“ In *Sustain//Decay: A Philosophical Investigation of Drone Music and Mysticism*, edited by Owen Coggins and James Harris, 10-14. California: Void Front Press.

Bloomberg, Ramon. 2015. “Dancing to a Tune: the Drone as Political and Historical Assemblage.” *Culture Machine* 16: 1-24. http://files.cargocollective.com/17190/Dancing-to-the-tune-Bloomberg.pdf.

Boon, Marcus. 2002. “The Eternal Drone.” In *Undercurrents: The Hidden Wiring of Modern Music*, edited by Rob Young, 59-70. London: Continuum.

Borradori, Giovanna. 2003. *Philosophy in a Time of Terror: Dialogues with Jürgen Habermas and Jacques Derrida*. Chicago: University of Chicago Press.

Coggins, Owen. 2017. “Unstable Metaphors for the Inaccessible: Mysticism, Blackletter, Drone Metal.” In *Sustain//Decay: A Philosophical Investigation of Drone Music and Mysticism*, edited by Owen Coggins and James Harris, 15-27. California: Void Front Press.

Davis, Hannah, and Saif M. Mohammed. 2014. “Generating Music from Literature.” *Proceedings of the 3rd Workshop on Computational Linguistics for Literature* (April): 1-10. doi:10.3115/v1/W14-0901.

Demers, Joanna. 2010. *Listening through the Noise: the Aesthetics of Experimental Electronic Music*. Oxford: Oxford University Press.

———. 2011. “On Meaninglessness.” *Journal of Popular Music Studies* 23 (2): 195–99. doi:10.1111/j.1533-1598.2011.01280.x.

———. 2015. *Drone and Apocalypse: An Exhibit Catalog for the End of the World*. Winchester: Zero Books.

———. 2017. *Anatomy of Thought-Fiction: CHS Report, April 2214*. Winchester: Zero Books.

Derrida, Jacques. 2005.*Rogues: Two Essays on Reason.* California: Stanford University Press.

Eno, Brian. 1978. Liner notes for *Ambient 1*: *Music for Airports.* LP. PVC 7908.

———. 1996. *A Year With Swollen Appendices*. London: Faber and Faber.

Hart, Hugh. 2008. “Creepy Joker Music Explained on Dark Knight DVD.” *Wired*, December 9, 2008. https://www.wired.com/2008/12/creepy-joker-mu/.

Iyer, Vijay. 2017. “Improvisation: Terms and Conditions” In *Audio Culture: Readings in Modern Music*, edited by Christoph Cox and Daniel Warner, 399-402. 2nd ed. New York: Bloomsbury..

Lain, Douglas. 2016. “Zero Squared #51: Drone and Apocalypse.” January 6, 2016. In *Zero Squared,* produced by Douglas Lain. MP3 audio, 52:34. http://douglaslain.net/zero-squared-51-drone-and-apocalypse/.

Meyer, Robinson. 2012. “The History of Drone Music Culminates in ‘Now That’s What I Call Drone’.” *The Atlantic,* July 26, 2012. https://www.theatlantic.com/technology/archive/2012/07/the-history-of-drone-music-culminates-in-now-thats-what-i-call-drone/260330/.

Miéville, China. 2009. *The City & The City*. New York: Ballantine Books.

Niblock, P. 1982. Liner notes for *Nothin to look at just a record*. LP. India Navigation IN-3026.

Rangarajan, Rohit. 2015. “Generating Music from Natural Language Text.” *Tenth InternationalConference on Digital Information Management* (October): 85-88. doi:10.1109/ICDIM.2015.7381853.

Rezewski, Frederic. 2017. “Little Bangs: A Nihilist Theory of Improvisation” In *Audio Culture: Readings in Modern Music*, edited by Christoph Cox and Daniel Warner, 379-384. 2nd ed. New York: Bloomsbury.

Shave, Nick. 2016. “Erik Satie: Prepare yourself…” *The Guardian*, June 25, 2016. https://www.theguardian.com/music/2016/jun/25/erik-satie-vexations-furniture-music.

Straebel, Volker. 2008. “Technological implications of Phill Niblock’s drone music, derived from analytical observations of selected works for cello and string quartet on tape.” *Organised Sound* 13(3): 225–235. doi:10.1017/S1355771808000320.

Zimmer, Hans and James Newton Howard. Interview with Jason Bentley. *Morning Becomes Eclectic*. KCRW, January 7, 2009.

DISCOGRAPHY

Basinski, William. 2002. *The Disintegration Loops.* 2062, compact disc.

Celer. 2010. *Salvaged Violets.* Infraction, MP3 audio.

———. 2008. *The Everything and the Nothing.* Infraction, MP3 audio.

Dunn, Kyle Bobby. 2011. *Ways of Meaning.* Desire Path Recordings, MP3 audio.

Earth. 1993. *Earth 2: Special Low Frequency Version.* Sub Pop, MP3 audio.

Hecker, Tim. 2011. *Ravedeath, 1972*. Kranky, LP.

———. 2013. *Virgins.* Kranky, MP3 audio.

Henke, Robert. 2004. *Signal to Noise.* Imbalance Computer Music, MP3 audio.

Niblock, Phill. 1995. "Ten Auras." Track 3 on *A Young Person's Guide To Phill Niblock.* Blast First, MP3 audio.

———. 2003. *Touch Food*. Touch, MP3 audio.

———. 2006. "Harm". Track 3 on *Touch Three*. Touch, MP3 audio.

Oneohtrix Point Never. 2013. *R Plus Seven.* Warp Records, LP.

Radigue, Éliane. 1974. *Biogenesis.* Metamkine, compact disc.

———. 1998. *Trilogie de la mort.* Experimental Intermedia Foundation, compact disc.

Sunn O))). 2002. "Death Becomes You." Track 2 on *Flight of the Behemoth.* Southern Lord, MP3 audio.

———. 2019. *Life Metal*. Southern Lord, MP3 audio.

Zimmer, Hans, and James Newton Howard. 2008. "Why So Serious?"Track 1 on *The Dark Knight (Original Motion Picture Soundtrack).* Warner Sunset Records, MP3 audio.

APPENDICES

TRACK LIST

These tracks can be found here: https://bit.ly/34Czymj

1. *BESŹELCOMA #13*

2. *BESŹELCOMA #29*

3. *BESŹELCOMA #14*

4. *BESŹELCOMA #7*

5. *DRONETICS #1*

6. *DRONETICS #2*