

### Commentary for *Backwards/Forwards*

*'A map of the world that does not include Utopia is not worth even glancing at, for it leaves out the one country at which Humanity is always landing. And when Humanity lands there, it looks out, and, seeing a better country, sets sail. Progress is the realisation of Utopias.'*<sup>1</sup> – **Oscar Wilde, 1891**

*'Where did the future go? For much of the twentieth century, the future held sway over our dreams. On the horizons of the political left a vast assortment of emancipatory visions gathered, often springing from the conjunction of popular political power and the liberating potential of technology. From predictions of new worlds of leisure, to Soviet-era cosmic communism, to afro-futurist celebrations of the synthetic and diasporic nature of black culture, to post-gender dreams of radical feminism, the popular imagination of the left envisaged societies vastly superior to anything we dream of today.'*<sup>2</sup> – **Nick Srnicek and Alex Williams, 2015**

In *Inventing the Future*, Srnicek and Williams make the case that, in our current climate, politics, culture and technology have distanced themselves from utopian thinking, and instead exist in a stasis where progress is limited to improvements made to the iPhone year on year, and the Overton window offers no view of anything beyond neoliberalism. In order to move forwards, they suggest we should learn from the utopian futures of the past. Much as proponents of the Renaissance looked back to the Classics, by accepting that there are certain ways in which society has regressed since the hegemony of neoliberalism, we can begin to look to modernism to see what might have been lost along the way; the main victim of neoliberalism and postmodernism has been the utopian future. Whilst today's science fictions are almost exclusively dystopian, those of modernism were more often utopian.

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<sup>1</sup> Wilde, Oscar, "The Soul of Man Under Socialism" *Fortnightly* 49.340 (1891), pp. 292-319, p. 318.

<sup>2</sup> Nick Srnicek and Alex Williams, *Inventing The Future*, (London: Verso, 2015), p. 1.

*Backwards* samples pieces of music expressing utopian ideals as the sole sonic source material for *Backwards*, taking samples from the Afrofuturism of Sun Ra, late Coltrane, and Parliament, the cosmic synth music of Tangerine Dream, Laurie Spiegel, Terry Riley and The Space Lady, a clip taken from an sci-fi children's show, *The Clangers*, extracts from John Cage's *Diary* and Christian Wolff's *Changing The System*, and John Lennon's *Imagine*.<sup>3</sup>

Hauntology is the concept that all the utopias promised in modernism are now lost or dead futures that haunt us. This manifests itself musically through contemporary use of retro-futuristic aesthetics in technology used such as in Daniel Lopatin's<sup>4</sup> frequent use of the Juno-60,<sup>5</sup> in Burial's use of vinyl crackle<sup>6</sup> and William Basinski's use of damaged tape,<sup>7</sup> or in the samples used and the way these samples are processed, to distort them into ghostly manipulations of their original sound source. Lopatin's *Eccojams vol. 1* (2010) and Burial's *Untrue* (2007),<sup>5</sup> sample from pop music much as John Oswald would but this ghostly treatment then obscures the samples and so separates this music from the usual sphere of Plunderphonics.

Haunting is repetitive, supposedly a ghost, not at rest, will be stuck in a loop indefinitely, or until some resolution is found to release it. With hauntology, these ghosts are not souls but utopias, and ghostly images of these utopias are looping. In *Backwards* the samples are all looped, and the structure built from layering these loops into an increasingly polyphonic collage. Some loops in *Backwards*, those from *Synthesize Me*, the *Clangers* soundtrack, and one of the layers of *Imagine*, are all looped in a straight-forward way whilst being pitched/slowed down. This *Imagine* sample is spliced from multiple points in the song, to process the meanings into a concise statement, ("Imagine there's no countries, no

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<sup>3</sup> See appendix 1 for a full list of samples.

<sup>4</sup> In music released as Oneohtrix Point Never

<sup>5</sup> Jordan Redaelli, *Electric Independence with Oneohtrix Point Never* (video interview with Lopatin), Vice, [first published 16/11/2010], available on Youtube, <<https://www.youtube.com/watch?v=E0RAmNU5Es8&t=>>, [posted 20/08/2017, accessed 06/05/18].

<sup>6</sup> Burial, *Untrue*, [HDBLP002], (London: Hyperdub, 2016, reissued to include interludes previously only present on CDs, first released 2007).

<sup>7</sup> Simon Reynolds, *Retromania: Pop Culture's Addiction to its Own Past*, (New York: Faber and Faber, 2011), pp. 335-336.

possessions, and no religion too. You may say I'm a dreamer, but I'm not the only one.") this is a statement as much from Lennon as from myself as I have selectively chosen the utopias within the song most relevant to my own agenda, and included the second sentence as a statement on utopianism as a whole – it is a note to the listener that these utopian ideas are not to be dismissed however farfetched they may sound). A second loop taken from *Imagine* is created through granular synthesis with an LFO controlling the play position oscillating around the section that repeats, a grainy and stutter sound results. The Parliament loop similarly oscillates around the phrase: 'give the people what they want'. Other loops are granular through deliberate exploitation of the long grain length used in Ableton's tempo matching *warp* function. The tempo detected from the Cage sample was close to the master tempo so it has been doubled so that playback is at half speed, but rather than a clean *Paulstretch*-like warp or simply pitching the sample down, Ableton's warp makes the phrase sound stuttered, whole words are repeated, giving a sort of inbuilt beat-repeat function. Elsewhere, beat repeat plugins are also used to mildly break up the repetitive nature of the loops. All of these glitchy elements and granular timbres aim to give the loops a ghostly quality, furthered by mostly not cutting loops on the beat. All of the loops are lathered in heavy effects processing to further distort the original source for a ghostly effect. On many tracks, resonators bringing out certain frequencies in the samples are used to reinforce a tonal centre (also achieved by mostly pitching tonal samples to the same key) which also serve to give vocals and other distinctive features a smeared effect. With the Cage sample, resonators are used instead to give the speech a bell-like ringing at times. On the same track there is heavy use of Ableton's inbuilt 'vocoder' module to convolute Cage's voice with white noise. Both the resonator and convolution effects are modulated using Max for Live based LFOs to control the mix. Whilst the noise convolution is randomized by the LFO, over time is automated to become less and less mixed, such that to begin with Cage is unrecognizable and his words incoherent through a monstrous, raspy and

percussive voice, but gradually he is unmasked to reveal his distinctive voice, punctuating through the mix like the cocktail-party effect for those to whom it is familiar. Besides purely functional compressors, gains and limiters, the compressors on the Clangers loops have a very low threshold, in order to bring the ghostly background noise of the loops to the foreground. Most tracks are slathered in chorus, delay and reverb to further the haunted effect, but also as an intended furthering of another intention of *Backwards*, to some extent to parody the stock features of sample-based hauntological music, vaporwave. The looping and the slowing (especially of the *Imagine* sample) are also intended in this way. In a 2010 interview, Daniel Lopatin describes his *Eccojams*, a proto-vaporwave project, as ‘the practice of [...] grabbing a phrase from a track, slowing it down, and putting a load of echo on it’.<sup>8</sup> *Backwards* acts as a continuation of this tradition as well as a comment on it, as we shall see, this comment comes not from *Backwards* as a stand-alone movement, but from its place in *Backwards/Forwards* as a whole.

Where *Backwards* represents the act of looking backwards to find lost utopian ideas, *Forwards* represents the act of “updating” these ideas and attempting to develop and realize them into social change. Each sample is transcribed (see appendix 2), and then “updated”. Each of these repeating samples we shall call, in its translated form, a riff, and (just as in *Backwards*) each riff represents a utopian idea. The question of how to “update” these riffs or “ideas” is perhaps the core aesthetic decision for this composition.

Firstly, the riffs are translated to be played through digital synthesis. The synthesizer is still considered to be the instrument of the future; it is a technical progression from acoustic instruments in its expansive versatility. However, the resurgence in popularity of analogue synthesizers is more hauntological, propelled by nostalgia for those flaws of analogue synthesis

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<sup>8</sup> Redaelli, 5:20.

that give them their personality, fetishizing imperfection and valuing nostalgia over characteristics that make digital synthesis using the likes of Max superior (affordability, customizability, flexibility, portability, and so on). Digital synthesis, then, is regarded, within the context of this piece, as the “utopian” option. A move towards utopia is a move towards perfection and undoubtedly, the functions used in oscillators generated by computers are precise mathematical functions, whereas analogue circuitry gives imperfect square waves and the like.

Secondly, the riffs have been transposed into a form of just intonation, with the use of perfect harmonic intervals. My max patch simply multiplies the fundamental by the MIDI note to generate the frequency, so that moving up the MIDI keyboard is moving up the harmonics in steps, rather than having a finite scale repeating around the octave. Applying my motivation for the use of digital synthesis, the pursuit of “perfection”, the use of “pure”, perfect harmonic intervals is a logical decision in the treatment of pitch material, but besides this, can be explained by distinctions between what is “western”, “human”, and “universal”. “Western” music uses twelve-tone equal temperament (12-TET) almost exclusively. As a result of colonialism and neo-colonial globalization, this Eurocentric tuning system is continuing to be standardized worldwide, helped by the inflexibility of MIDI controlled synthesizers and DAWs. The threat of Eurocentric tuning swallowing up the hundreds of other tuning systems used by different cultures is very real. Avoiding the use of 12-TET is a statement of intent to fight this risk of Eurocentric homogeneity threatening music. In her book *Postcolonial Readings of Music in World Literature*, C.F. Bushnell writes: ‘developing alternatives, that is, coming to think of non-standard tones as “in tune,” requires unseating norms that for all their sonic perceptibility operate as silent assumptions. Trauma disturbs these entrenched norms and the habitual practice of Western music, facilitating a transition into new aural and social

possibilities.’<sup>9</sup> The transition away from standardized western tuning opening new ‘social possibilities’ is a key motivation in this piece; if we are open to new ‘social possibilities’, dreams of utopian societies may seem more achievable.

In *Forwards*, this transition is gradual. Rather than “update” the melodies found in the riffs to use all of the harmonics to start with, a subset of the harmonic series is chosen that approximates western scales, whilst less familiar-sounding intervals such as harmonic 7<sup>th</sup>s are avoided. Without significantly challenging our notion of temperament; the move to the harmonics is a step towards the perfection and anti-colonialism of the full set of harmonics. This mono-tonality also helps the riffs to blend into harmonious counterpoint. Gradually, as they come to include harmonics outside the subset, the music becomes less western in tonality, and more “universal”. By the end of this piece the tonal language not only does not depend on western expectations, nor even on human logarithmic hearing. The harmonic series (distinguished from scales that rely on octave equivalence, such as those found at the *start* of *Forwards*) is the fundamental *a priori* foundation of tonality, and so, by using it, a sonic language is established that goes beyond our own species and planet into the realm of space-age sci-fi, a further utopian idea built into the treatment of the other utopian “ideas” or riffs.

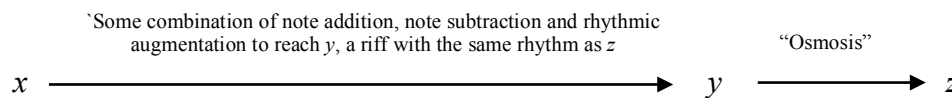
By the end of *Forwards*; all the riffs that started as distinct have merged into one melody played in unison. The process of moving to a sonic consensus incrementally uses techniques such as note addition and subtraction as well a technique for melodic metamorphosis that I call *osmosis*: where two melodies of the same rhythm are composed (a start point, *x*, and an end point, *y*) and each time *x* repeats, it swaps one more of its notes for the note in the same rhythmic place in *y*, so that gradually *x* becomes *y*. In fig. 1, I have given



Fig. 1: example of “osmosis” technique

<sup>9</sup> Cameron Fae Bushnell, *Postcolonial Readings of Music in World Literature: Turning Empire on its Ear*, (New York: Routledge, 2013), p. 133.

a simplified example using a four note melody, but in *Forwards*, the melodies are longer and so the process is far more gradual. There is a little artistic freedom in the way that the transition from each starting riff to the eventual riff is achieved, but generally they follow a process algorithm as follows; let us call the opening riff  $x$  the eventual riff  $z$ .



*Fig. 2: generalised method for developing the riffs*

Note that  $x$  and  $y$  would be in the western version of the harmonically pure tonality, such that the less familiar harmonic intervals are gradually introduced during the transition from  $y$  to  $z$ . This may seem to suggest that there is some set linear way to move from the resuscitation of utopian ideas to unifying these ideas to create a utopian society. There is not, but – just as there are numerous ways to metamorphose from riff  $x$  to riff  $z$ , there are numerous ways to reach Utopia. One is not definitively better than another but a clear, methodical path of one possibility is no doubt a guide that will make it more achievable.

On one hand, *Backwards/Forwards* is an attempt at expressing, in a musical form, an algorithm for moving towards a utopian society: look to and meditate on the utopian futures of the past, make some attempt to “update” these ideas, and aim to unify these multiple utopias into one vision – utopias that are post-colonial, post-race, post-gender, post-work, post-capitalist, post-war, post-religion, even utopian dreams of a galactic society, all of these can merge under a few mutual goals: the pursuit of equality, peace, and knowledge.

On the other hand, *Backwards/Forwards* is a comment on hauntology, making the claim that hauntology is stuck in a loop mourning the futures past in a sort of inward looking gloom typical of postmodernist art, rather than making some attempt, however futile, at taking those utopian ideas forward.

**Bibliography**

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Derrida, Jacques, *Specters of Marx*, (Trans. Peggy Kamuf), (New York: Routledge, 1994).

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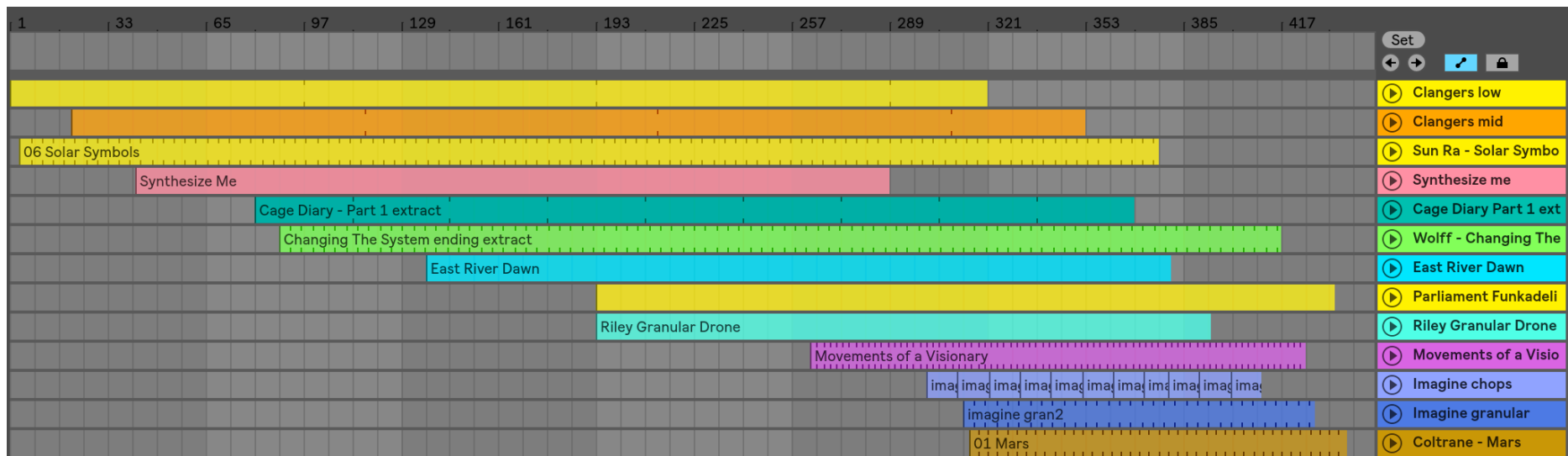


**Appendix 1: Samples**

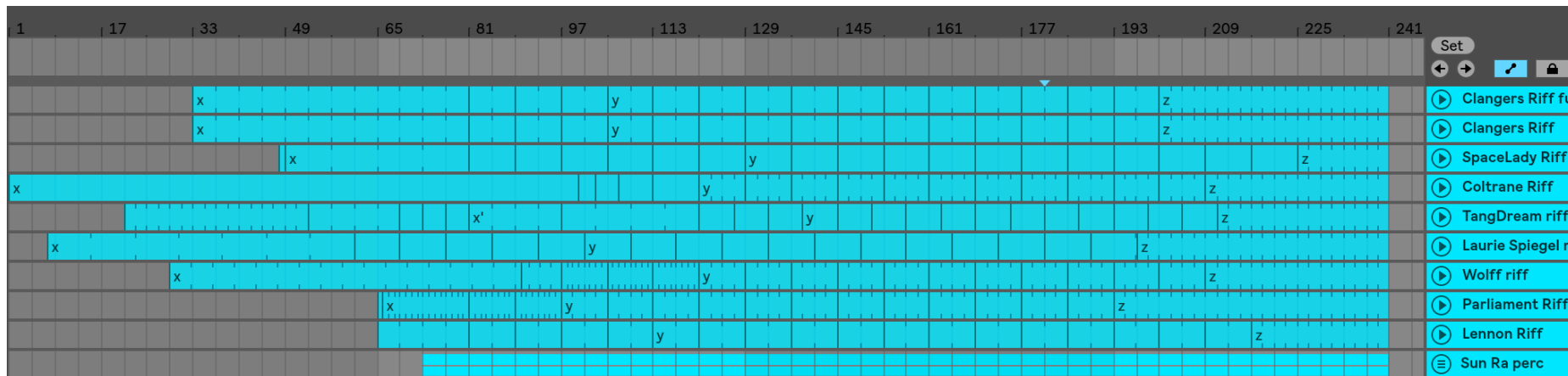
Artist	Song	Sample Description	Looping	Effects
Vernon Elliott	Clangers: S1: E4 (Layer 1)	Melody little clanger makes from the music notes discovered in the iron chicken's egg	Pitched down 3 octaves (so 12x slower)	Compressor, Limiter, Resonator, Chorus, Echo, Reverb, LPF, EQ
Vernon Elliott	Clangers: S1: E4 (Layer 2)	As above	Pitched down 2 octaves (so 4x slower)	Compressor, Limiter, Resonator, Chorus, Echo, Reverb, Beat Repeat, Auto-Pan
Sun Ra	Solar Symbols	Bell-like percussion	At original pitch and speed	Auto-Pan, Echo, Reverb, HPF (filters out all audible frequencies by the end)
The Space Lady	Synthesize Me	Chorus: "Synthesize me, hypnotize me, humanise me, energize me"	Pitched down a third (so lightly slower)	Resonators, Ping Pong Delay, Chorus, Reverb, LPF, Auto-Pan
John Cage	Diary Part 1	Quoting Fuller: "Advertisements are all good; the news is all bad. But how we receive bad news can change: we're glad hear unemployment's increasing soon all that will be required of us will be one hour of work per year, Fuller."	Warped to half the speed with Ableton's inbuilt timestretching, deliberately glitchy because it has long grain length	Echo, Reverb, Vocoder (Convolutor), Corpus (Resonator), Beat Repeat, Max for Live LFOs controlling Vocoder and Corpus
Christian Wolff	Changing The System	A short phrase of vocals and percussion	Pitched down a tritone (so significantly slower)	Compressor, Resonator, Echo, LPF
Laurie Spiegel	East River Dawn	Synthesized arpeggio-like melody	Pitched down a sixth (so significantly slower)	Echo, Reverb, LPF
Parliament	Supergroovalisticprosifunkstication	Chorus extract: "Give the people what they want"	Granular synthesis with saw LFO modulating play position	LPF, Compressor
Terry Riley	A Rainbow Over Curved Air	Taken from throughout the track	Granular manipulation to create drone layer no modulation except jitter	Compressor
Tangerine Dream	Moments of a Visionary	A warbling synth arpeggio	Pitched up a third (so slightly faster)	LPF
John Lennon	Imagine (Layer 1)	Chopped up to make "Imagine there's no countries, no possessions, and no religion too. You may say I'm a dreamer, but I'm not the only one."	Pitched down a fifth (so significantly slower)	Echo
John Lennon	Imagine (Layer 2)	High note in the first chorus "ah ha ah"	Granular synthesis with triangle LFO modulating play position	Reverb
John Coltrane	Mars	From one of the more repetitive strains of a saxophone solo	At original pitch and speed	Echo, EQ, Reverb

### Appendix 2: Ableton Live Screenshots

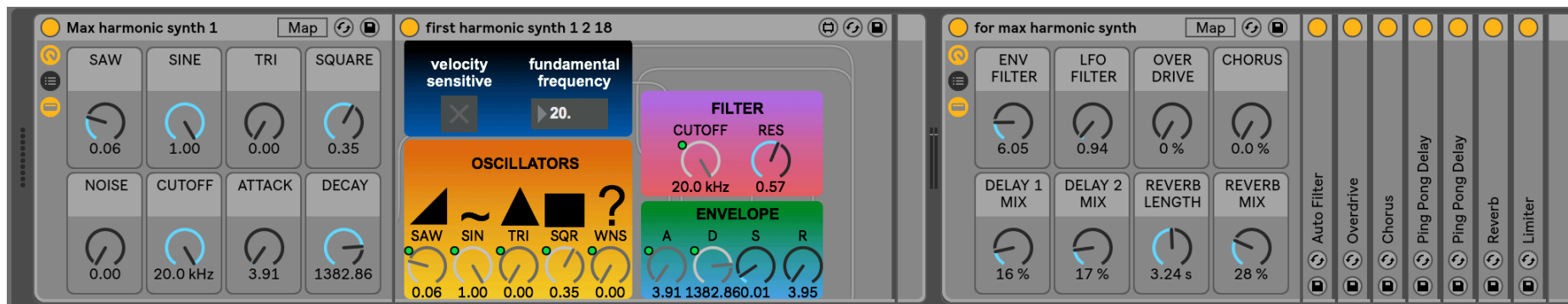
Arrangement view of Backwards, showing the structure of loops. Note that some tracks don't show loops but very long MIDI notes triggering VST samplers or granular synthesizers in Kontakt and Reaktor.



Arrangement view of *Forwards*, showing the structure and development of each riff, where x,y,z are the previously explained stages of the melodic development. Note that the Sun Ra percussion rhythm is made with two tracks of the same Max synth using white noise (with low pass and high pass filters respectively).



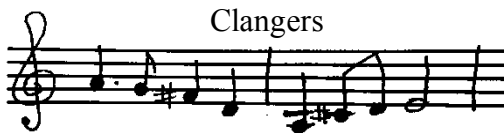
Presentation mode outer most part of my Max for Live harmonic synthesizer used in *Forwards*, and its integration with Ableton's instrument rack and effects rack, used as it makes it easier to automate parameters.



### Appendix 3: Transcription and Transposition

Transcriptions in 12-TET of the riffs taken from *Backwards* for use in *Forwards*. Note a few simplifications: the Clangers sample is transcribed in its original not pitched down register; a key melody from Lennon's *Imagine* is used as it is more distinctive than the chopped up loop used in *Backwards*; the extract sampled from Coltrane's solo is in very free time, the transcription imagines that it has been molded onto a steady semi-demi-quaver pulse.

Clangers

Musical notation for Clangers, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody consists of eighth and quarter notes.

Tangerine Dream

Musical notation for Tangerine Dream, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody features four groups of triplets of eighth notes.

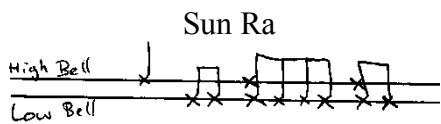
Parliament

Musical notation for Parliament, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody features three groups of triplets of eighth notes.

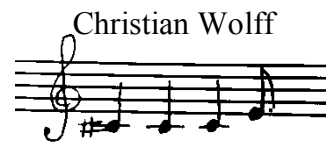
John Coltrane

Musical notation for John Coltrane, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody consists of quarter notes and a final measure with a 'x16' marking.

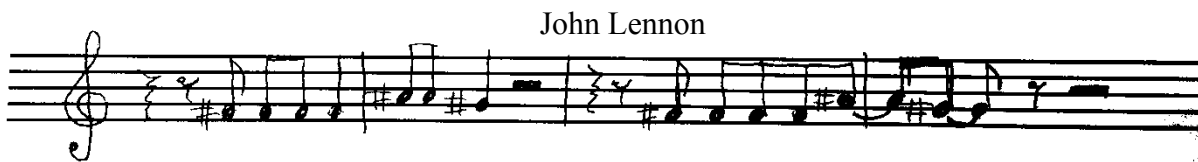
Sun Ra

Musical notation for Sun Ra, showing two staves. The top staff is labeled 'High Bell' and the bottom staff is labeled 'Low Bell'. The notation includes rhythmic markings and 'x' symbols.

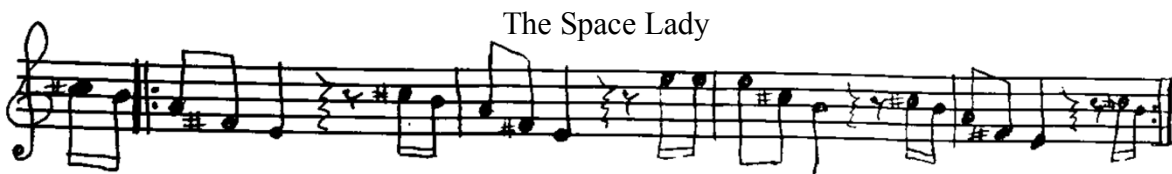
Christian Wolff

Musical notation for Christian Wolff, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody consists of quarter notes.

John Lennon

Musical notation for John Lennon, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody consists of quarter and eighth notes.

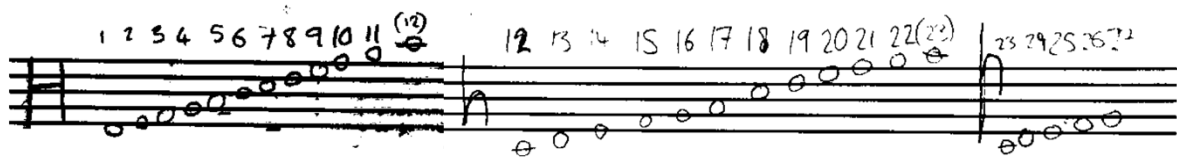
The Space Lady

Musical notation for The Space Lady, a single staff in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The melody consists of quarter and eighth notes.

Laurie Spiegel

Musical notation for Laurie Spiegel, consisting of two staves. The top staff is in treble clef with a 4/4 time signature, and the bottom staff is in bass clef with a 5/8 time signature. The notation includes eighth and quarter notes.

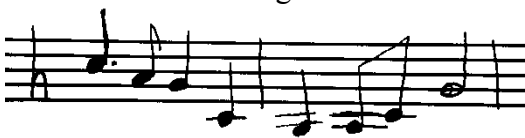
The melodic riffs are then transposed into a similar melody that uses only the harmonics. In order to write them out I have defined some new clefs for notating in the harmonic series:



**NB 1** Some riffs (Wolff and Spiegel) defy common time bar lines which makes for a more intricate structure with ever shifting patterns, however, as the riffs move towards unison  $z$ , these are adjusted to be in time, as the utopias become one.

**NB 2** These are the closest translations to Harmonics, but some have been adjusted afterwards to fit the mode used at the start of *Forwards*.

Clangers



Tangerine Dream



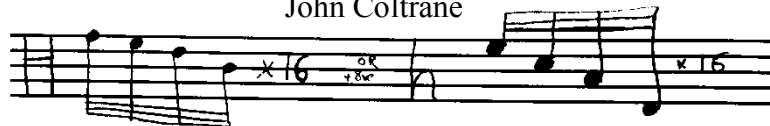
Parliament



Christian Wolff



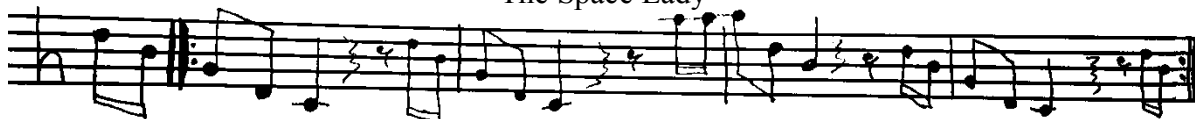
John Coltrane



John Lennon



The Space Lady



Laurie Spiegel

