

The Production Process and Methodology

For the tracks submitted, offered are my thoughts about the reference tracks. Discussion will take place around the characteristics; production and wider techniques used; how I have applied these techniques and other personal musical decisions. The reference tracks are “In My Place”, Coldplay accompanying “Last Time”, “Stay”, Hans Zimmer accompanying “Sunrise Over Earth” and “Cold Little Heart”, Michael Kiwanuka accompanying “I Will Fly”.

“Stay” by Zimmer taken from the “Interstellar” soundtrack is directed by Christopher Nolan. Both have collaborated on numerous films and are credited as producers. This music fits the genre of orchestral movie soundtracks, influenced by classical music. Since the 1980’s Zimmer has composed music for over 150 films. Early successes were in action movies including “Pirates of the Caribbean” and “Batman Begins”. “Interstellar” marks a radical departure from his previous thumping action music.

On Batman Begins we came up with a sound that spread like a virus over all his (Nolan) other movies. The driving drums and driving string figures. The first thing we said was, “let’s not do that anymore”. We wanted to widen our palette. Let’s do things we’ve never done before.

(Dickson,2014)

“Stay” is typical of the entire soundtrack, heavily influenced by the works of Strauss and Mahler.

“Interstellar, with its homages to composers such as Gustav Mahler and Richard Strauss, is enough of its own living entity, that to experience the wall of Zimmer-ian sounds is just as worth seeing the film in 70mm.”

(Biscotti,2014)

Strauss is synonymous with *space*, the opening of “Also Sprach Zarathustra” being famously used as the sunrise in “2001: A Space Odyssey” (Stanley Kubrick 1968). Mahler uses extracts from “Zarathustra” by Nietzsche in Symphony III – “*The relationship of music and language plays an integral role in Mahler’s expressive design of the third symphony, specifically in his vision of transcendence*” (Francisco,2016). Both ‘Romantic’ classical pieces employ huge ranks to obtain a significant *wall-of-sound* – both composers utilise a large orchestra, with bolstered woodwinds, brass and percussion; large choir; (significantly for Zimmer) an organ with 32-foot stops. Zimmer uses the same instrumentation to create this *wall-of-sound* and includes a piano. There is undoubted audio imagery of space in “Stay”, “Zarathustra” and Mahler’s Third. They build tension through developing orchestration, adding layers of instruments, pacing these additions and sheer volume, repeating the thematic material several times over. “Stay” develops a 4-note motif, introduced at the beginning (00:23) - a ‘theme and variation’. Central to this theme is love. Nolan did not inform Zimmer that the brief was for a space film, just the relationship between father and child.

“The director asked Zimmer to write a cosy bit of music in response to a brief fable about a father and child. Only after the composer presented Nolan with his intimate ‘love letter’ of a tune did the director reveal that this material-or, at least, musical extrapolations based on it-would have to get a crew of astronauts to another galaxy and back”.

(Lowder,2014)

Like Mahler and Strauss, Zimmer intertwines love themes with majesty.

Zimmer creates celestial sounds through instrumentation and production. An organ plays the highest and lowest notes, the first being a high C (00:10), held throughout and fitting every chord. The bass stops of Temple Church London are central to the sound and production. A 32-foot stop underpins the piece, like Strauss during “Zarathustra”, with a pedal C (01:37). Few notes begin, moving from a sparse to a vast soundscape, gradually adding instruments, harmonic content in strings and organ, tolling bells, scales ascending to stratospheric heights in violins and organ creating tense suspensions, organ passages that shimmer like stars, and octaves in blazing horns. Zimmer’s soundscape representing *gravity* is highlighted by the sheer range between the highest violins and the organ’s pedal C.

“I wrote a ginormous, very sort of Mahleresque, Straussian love theme with the notes forever reaching upwards. There’s a musical trick, if you will, whereby I was trying (to make it seem) like the notes would carry on going upwards all the time, whereas really what happens is the counterpoint to it was going downwards.”

(Lowder,2014)

Zimmer’s effects enhance the production. The first sound to appear and continue throughout, is wind, creating otherworldly effects. The soundtrack also uses a string quartet, a choir and sounds from nature.

An expansive and *space* like reverb is central. Throughout the soundtrack, climaxes suddenly stop, revealing vast reverb tails. Zimmer has clearly enhanced the Temple Church acoustics, creating an even larger *wall-of-sound*. The production is clear despite using vast numbers of musicians and effects, whilst the reverb never hinders. The balance, airy and bright, enhances the star-like quality.

“From the 17th century to the time of the telephone exchange, the pipe organ was known as the most complex man-made device ever invented. Its physical appearance reminded him of spaceship afterburners. And the airiness of the sound slipping through pipes replicates the experience of suited astronauts, where every breath is precious.”

(Kilkenny,2014)

During “Sunrise Over Earth”, I utilised Zimmer’s techniques and influences, beginning with wind sounds enforcing stellar soundscapes. The first entry is a sustained Ab (00:08), adding to the wind effect. The violin’s Ab harmonic was recorded and sampled using LFO filters and modulation to create the swirling wind effect, combining it with a synth pad. Chords in the piano are developed with a six-note violin motif (00:32) - my love theme. I used the largest organ stop on my midi instrument (a Polish Church instrument emulation) and used 16 and 8 foot stops to add to the number of octaves sounded by the pedals providing further layers. This is enhanced by shimmering violins, bells, cross rhythms in piano and organ, harmonic layering in strings, scalar lines in violins and blazing brass echoing Zarathustra’s octave leaps. “Variation” four of “Sunrise” (02:22) sees a jump in volume like in “Stay”, creating intrigue – wondering whether the *wall-of-sound* can get stronger.

When producing pipe organs, the instrument cannot be removed from its surroundings.

“Abbey Road Mobile set up a remote studio in of the side rooms of the church. It wasn’t just the organ, we had the orchestra in there as well. So we had an enormous amount of microphones placed all throughout the church. But I think the main mics were a few Neumanns, about 20 feet away. More were about 40 feet away from the main pipes. It was

great being able to really use the space. Because an organ doesn't exist outside its acoustic space, so you have to find the right space."

(Owens,2017)

I used the reverb IR recorded with my virtual instrument (by Garritan) but also employed a church like reverb with a long, bright tail, heard heard on the final note, suddenly stopping. Adding to the airy, human like quality of organs, I increased the volume of the "air" from the pipes on the midi.

"In My Place" by Coldplay, comes from their second album "A Rush of Blood to the Head" (2002). Producer Ken Nelson returned to work with Coldplay after the success of their debut album, "Parachutes" (2000). Nelson had achieved success with *Alternative Rock* and *Post-Britpop* bands like Gomez and Snow Patrol. This genre emerged in the late 1990's as a new generation of bands following the likes of Oasis and Blur, with more indie and experimental influences, with more American tinges leading to the commercial success of bands like Coldplay.

"Post-Britpop can be considered as simply an extension of the 90's music scene, with many bands in the current industry using this typically British vibe as an influence and a foundation to straddle the pop and rock airwaves simultaneously, gaining them much attention on mainstream radio."

(Evans,2020)

Lyrically, this genre focuses less on British life, tending to be introspective. *"One big demarcation between Britpop and Post-Britpop was the latter artists' willingness to clearly sing about love and loss and deliver it with appropriate melancholy and gravitas."* (Trebelzine,2018).

"In My Place" is an extension of Coldplay's "Yellow". *"It's 'Yellow' to the power of ten."* (NME,2005). Both are firmly in Post-Britpop. Accompanying Martin's introspective, lovelorn lyrics are British influenced guitars, rock drums and large production from organs and synths (in the case of "In My Place"). Melodic emphasis develops the vocals.

In both songs are rock drums. "In My Place" begins with a two-bar drum solo, with thick half opened hi-hats, reminiscent of Ride's "Dreams Burn Down" – *"the first minute of Coldplay's 2002 hit In My Place bears a striking resemblance."* (Cramp, 2014) Drums juxtapose the sweet melody and lyrics, creating melancholy. This is the same with "Yellow" - only that the intro is guitars before the rock ensemble enters. Adding to the melancholy are the tempi - 72bpm and 88bpm respectively - the slower side of rock. "In My Place" is in A major, "Yellow" is a tone up in B Major.

Both songs exhibit large production using layered guitars, organs, strings and synths. Delay is used in the main guitar theme with the delayed notes panned hard right making the soundscape vast (00:07). Buckland layers guitars, placing them different locations on the stereo field. There are sliding guitars in the bridge (01:01) and strummed chords hard panned. Guitars are the perfect accompaniment to the vocals – soft, sweet and providing interesting counterpoint to the drums. Layers of organs and synths from low to high create the soundscape synonymous with Coldplay. Martin also plays a detuned piano elsewhere - as much of the Coldplay sound as his vocals. Low strings underpin the chords, and a tambourine accentuates the rhythm. Phrases such as *"sweet harmonies"*, *"Combining bits of distorted guitar riffs and swishing percussion"*, *"indie rock inclinations"* and *"dream pop soundscapes"* describe Coldplay. (Wilson)

The vocals are intimate - there is no long reverb or delay apparent, but it is wide. This adds to the vulnerability of Martin's voice, at times out of tune and cracked, a beautiful contrast to the rock

accompaniment. The backing vocals are thirds in the chorus, bringing me to an interesting question covering both songs – where is the chorus?

“In music, a chorus is a repeated section that contains the primary musical and lyrical motifs of the song.” (MasterClass, 2020). Both have instrumentals introducing the first thematic and melodic material. Coldplay uses this again (01:26 and 2:32) after what could be argued is the bridge, positioning the instrumental as a chorus. This is imaginative writing, arguably placing the instrumental equal to the vocals.

“Last Time” is the first time I have mixed vocals, placing me out of my comfort zone. This track has similarities to “In My Place” to be within genre. For the synths, I used Dov Waterman’s advice of creating movement by opening filters (00:58); a star like quality producing swirls and rhythm. Similarly, with Hammond organs, increasing the vibrato at certain point adds harmonics and romance (01:15). I used a piano and experimented with the Coldplay detuned effect but felt this to be a pastiche, so opted for a classic piano. “Last Time” is laden with rock drums, culminating in a hemiola during the coda fill (3:44) - and there is a tambourine accentuating beats two and four. The track is 92bpm.

I opted for C major to accommodate a female voice. The backing vocals add a third higher with an additional lower third in the last chorus, emulating Martin’s vocals using reverb and delay to add width and intimacy – slap like reverbs and delays are used with longer instances of both. I learned these techniques online with Austin Hull and *“Make Pop Music”*. The remotely recorded vocals required a lengthy repair process due to hiss; Melodyne (not used for intonation in this instance), gates and compression were used with delay to soften the sound. Ideally, I would prefer less delay.

Producing guitars was the best part in conjuring up Coldplay. Into bar 3, a strummed C major is early and panned hard right, as Ken Nelson does this into his bar 3. There are single note arpeggiated guitars, strummed work and sliding fills in the bridge. The solo delay motif (00:08 and 02:15), like Coldplay’s, fits over all chords. For the guitar solo (01:53), I took inspiration from “Yellow” employing 3rds and 5ths, bent to create a heavier tone. I stay close to the Coldplay tone, using a Fender Telecaster, as Buckland favours - the guitar solo being on a Gibson Les Paul. I believe an acoustic would enhance “Last Time” and I would have used the instrument similar to “Yellow”.

The verses and choruses have only three chords conjuring the melancholy of Coldplay – how “Yellow” is composed. During the coda I take inspiration from “Yellow” changing one chord. Instead of A minor, used throughout, A major with scrunchy F’s are used adding to the sun-tinged feel (3:42).

Placing Michael Kiwanuka within one genre is difficult. His sound and style twists and turns, creating a unique journey throughout his albums – his last “Kiwanuka” (2019) winning the Mercury Prize after his first two were nominated.

“There was no music out there that I would play that really represented me. I was looking for a folk-soul, 70’s inspired artist I think that a lot of creative people create stuff because there isn’t a lot that represents them, so you have to make it yourself.”

(Bassett,2019)

“I was trying to survive in a system that wasn’t really made for me – on a pop label, making the kind of music that I make. I was called ‘soul’, because I’m black, but then my influences are so varied.”

(Smyth,2020)

Kiwanuka could be placed within multiple genres but there is retrospective feeling in his writing. *"He has always been an analogue soul in a digital world". (Lynskey,2019).*

"Cold Little Heart" opens the album "Love and Hate" (2016) and is produced by London producer Inflo and the eclectic Danger Mouse. It is an epic ten-minute song with a five-minute guitar led instrumental before vocals enter. *"I just thought it would be fun to make music like that. And it would be quite a good statement of intent."* (Weingarten,2016). This challenges commercial thinking having 70's tinges of Isaac Hayes and Funkadelic.

"This is the closest I think I've come in making an album with somebody to the type of music that made me want to make music. You know, the Pink Floyd, the Isaac Hayes, the kind of stuff that I really just love so much."

(Weingarten,2016)

Central is Kiwanuka's guitar playing having vintage tone, reminiscent of soul. The retro feel is enhanced through layers of guitars - breaking up valve-driven chords with tremolo, psychedelic fuzz solos with spring reverb and a rhythmic acoustic. The production feels big yet intimate – guitar squeaks create that *same room* feel. There are moments of just voice and acoustic guitar, then others with section strings, organ and choir. The distinct reverb sounds like a retro style plate, prominent in places, particularly on vocals. Reverb is varied and increased throughout to make distinct effects, such as the ensemble appearing to move further away (08:29). During the guitar solo, the vocal reverb increases, becoming a wash before decreasing for the next verse (06:24). The vintage feel of the Hammond organ with its swirling vibrato further contributes. A small string section provides melodic obligati – in the 1960's and 70's there were fewer strings than modern times, around six violins – providing chic sounds rather than lush: *"A true 6 violin section, which was very commonly used in many old Soul recordings."* (Big Fish Audio,2021) Tremolo strings during the introduction create a cinematic air, whilst the obligati during the choruses provide counterpoint to the vocals.

The backing vocals help the distinct retrospective flavour, with an old-fashioned analogue sound and hints of console saturation. The female singer's unison melody with shimmering vibrato is both hypnotic and psychedelic (04:27). The chordal work provides a hazy atmosphere and the opening echoed "ah's" – panned left and right – is hauntingly beautiful (00:36).

"I Will Fly" would benefit from an acoustic guitar, adding momentum and balance to the electrics. The strings would benefit from intimate moments as originally intended; lockdown meant I could not source solo strings, hence the larger production.

"I Will Fly" begins in a rubato manner akin to "Cold Little Heart", then doubles tempo in the main theme (01:21) - an organic process that felt right, the tempo (150bpm) leans to a hot, sticky, psychedelic feel. Tremolo strings interest me, so opted for an ostinato tremolo B to begin; my nod to John Barry who begins "Out of Africa" the same. The guitar theme (00:09) sets the chord progression for the main track, with open G's running throughout, providing suspensions that pull and release. This guitar was originally recorded with tremolo; however, I did not like this with the tempo - the retro tremolo now on Fender Rhodes. Guitars are panned to different areas of the stereo field whilst the overdriven guitar solo (03:00) is panned 15% to the right, making way for string countermelodies, panned 25% left. I had used a Kiwanuka-esque fuzz but opted for a tubescreamer overdrive, finding the sound fitted successfully with the strings. As a nod to Kiwanuka's guitar solo, I start mine with the same motif. The guitars were recorded with an SM57 type microphone up close

to an Orange TremLord amplifier – Orange’s take on a 50’s Fender Tweed – with valve driven spring reverb and tremolo, creating a vintage tone.

Keyed instruments come to the fore in layers. An acoustic piano playing shimmering arpeggios, a tremolo heavy Fender Rhodes, a Hammond organ creating movement and harmonics with vibrato and a synth pad in the chorus warming the middle register when distorted guitars add brighter tones.

Introducing voices into the track was challenging. A gospel choir, with a plate reverb enhancing the soul feel, is the coda’s focus. The theme is introduced by stratospheric strings during the guitar solo. Added saturation reinforces the vintage sound. Soulful solos in the final chorus add another layer, as do the solo echoed “Ah’s” during the introduction (00:19), panned left and right as Danger Mouse. No delay plug-ins here; I duplicate the track three times over decreasing the volume giving a cleaner echo.

Danger Mouse’s reverb is inspirational, and I wanted a section featuring it as a solo effect. After the guitars climax (03:28), I automate reverb increasing to a high degree adding space, width and a wild effect added to with delay, modulation and a lo-fi tape cassette effect to create distortion. During the coda, I increase the reverb gradually (whilst the tempo slows) to simulate the ensemble moving further away (05:44) – my nod to Danger Mouse.

I finish with added brass (04:51). Being a trumpet player, I appreciate brass adds retro flavour, creating a funky feel that is reminiscent of 70’s American films such as “Rocky”.

Composing and producing to differing genres and styles is an immensely enjoyable but challenging task that stretches one’s imagination and skill. My tracks successfully fill this remit whilst still being unique. I found the tracks grew organically, running down interesting avenues that were not originally intended – a testament to the inspiration I took from the reference tracks. The reference tracks do not conform to defined structures and this allowed me freedom to think outside the box, not being tied down in the composing or production process. Allowing influences to shape music is a beautiful subject to discuss and delving into a composers background brings new and deeper appreciation of their wonderful music.

Bibliography

- Bassett, J (2019) *NME*. Available at: <https://www.nme.com/features/music-interviews/michael-kiwanuka-interview-kanye-west-2563039> (Accessed: 6 April 2020)
- Big Fish Audio (2021) *Big Fish Audio*. Available at: <https://www.bigfishaudio.com/Vintage-Strings> (Accessed: 6 April 2020)
- Biscotti, S. (2014) *Soundtrack*. Available at: <https://www.soundtrack.net/album/interstellar-deluxe-edition/> (Accessed: 3 April 2020)
- Cramp, N (2014) ‘Ride: 10 of the best’, *The Guardian*, 19 November 2014. Available at: <https://www.theguardian.com/music/musicblog/2014/nov/19/ride-10-of-the-best> (Accessed: 4 April 2020)
- Dickson, E. (2014) *Collider*. Available at: <https://collider.com/hans-zimmer-interstellar-interview/> (Accessed: 3 April 2020).
- Evans, K (2020) *The Edge*. Available at: <https://www.theedgesusu.co.uk/records/2020/12/28/the-best-of-2000s-post-britpop-the-courteeners-st-jude/> (Accessed: 4 April 2020)

- Francisco, M.H. (2016) *ResearchWorks Archive*. Available at: <https://digital.lib.washington.edu/researchworks/handle/1773/36782> (Accessed: 2 April 2020)
- KilKenny, K (2014) *The Atlantic*. Available at: <https://www.theatlantic.com/entertainment/archive/2014/11/why-interstellars-organ-needs-to-be-so-loud/382619/> (Accessed: 2 April 2020)
- Lowder, J.B. (2014) *Slate*. Available at: <https://slate.com/culture/2014/11/interstellar-score-hans-zimmer-composes-music-for-the-universe-brilliantly.html> (Accessed: 2 April 2020)
- Lynskey, D (2019) 'Michael Kiwanuka: "I'm living my dream. And I was wasting it with thoughts of inferiority"', *The Guardian*, 6 October 2019. Available at: <https://www.theguardian.com/music/2019/oct/06/michael-kiwanuka-interview-love-hate-cold-little-heart> (Accessed: 6 April 2020)
- MasterClass (2020) *MasterClass*. Available at: <https://www.masterclass.com/articles/music-101-what-is-a-chorus> (Accessed: 4 April 2020)
- NME (2005) *NME*. Available at: <https://www.nme.com/reviews/reviews-nme-6591-321442> (Accessed: 4 April 2020)
- Owens, S (2017) *1 Way Swim* [blog]. Available at: <https://1wayswim.com/blog/2017/8/6/the-organ-of-interstellar-and-the-temple-church-in-london?rq=Interstellar> (Accessed: 3 April 2020)
- Smyth, D (2020) 'Michael Kiwanuka interview: "You have to be loud and proud about who you are"', *The Evening Standard*, 24 July 2020. Available at: <https://www.standard.co.uk/culture/music/michael-kiwanuka-interview-mercury-prize-a4507376.html> (Accessed: 6 April 2020)
- Trebelzine (2018) *Trebelzine*. Available at: <https://www.treblezine.com/10-essential-post-britpop-tracks/> (Accessed: 4 April 2020)
- Weingarten, C.R. (2016) *Rolling Stone*. Available at: [Michael Kiwanuka and Danger Mouse on Upcoming Psych-Soul Opus - Rolling Stone](#) (Accessed: 6 April 2020)
- Wilson, M (Date n/a) *Allmusic*. Available at: <https://www.allmusic.com/album/parachutes-mw0000101998> (Accessed: 4 April 2020)