



organised, establishes a link to the sensuous saturation we are continually under.

In a way, Matthias Kranebitter brings into the context of contemporary written music an iconoclastic critique of the values and rites inherited from – and still present in – Western classical music, with its clear, delimited context. Relying on plunderphonics – that is, the use of sampled material as a means of accessing different referential spaces – Kranebitter includes the extra-musical, the social, even the scientific, all fields in which sound is a discursive agent. The pieces on this album invite the listener to engage with the world through music and sound in its multiple spaces of signification, while also acknowledging the privileged role of music in the discursive sonic treatment of ideas.

Andrés Gutiérrez Martínez
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Eliane Radigue, *Occam Delta XV*. Quatuor Bozzini. Collection QB, CQB 2331.

Since 2011, the compositional project of Eliane Radigue (b. 1932) has been a series of pieces titled Occam; at the time of writing there are over 80 such pieces. The title is derived from Occam's razor, the principle that all else being equal, explanations and choices which are simple are likely also to be the best. The musical material for *Occam Delta XV* for string quartet is certainly minimal, though the listening experience is anything but.

This release from the Montreal-based Quatuor Bozzini, published on their own label, was recorded in the Panthéon in Paris in November 2021. A huge cathedral-like space that looks from the outside like a Greek temple, the neo-classical Panthéon is a national site of homage to great men (and a very few women) of the past. A video released alongside their album, made by Gilles Paté, offers glimpses of the building and of Foucault's famous pendulum, which is housed inside.¹ The CD features two interpretations of the quartet, both just over 35 minutes in duration, with the first being over a minute longer than the second. In the sleeve note, the first violinist, Alissa Cheung, says, 'You can't recreate the performance, it's so much about the time and the place.' Cheung rightly believes that the quartet demands 'an

extended listening mode, between meditation and hyperconsciousness'.

Like the other pieces in the Occam series, this work is not so much written for a particular medium as for a particular performer or group of performers. *Occam Delta XV* was developed through a collaborative process with Quatuor Bozzini, who are its dedicatees. Kate Molleson interviewed Radigue for her fascinating book *Sound within Sound*, and one insight she gleaned was: 'Every new piece in the Occam series begins with Radigue and a performer sitting down in her apartment and talking about water.'² In fact, the Occam Ocean works in the series are for ensemble – suggesting a larger body of water – while Occam Delta are for chamber formations, Occam River for a duo, and those simply titled Occam are for a solo instrumentalist. The quartet write in their programme note that *Occam Delta XV* (2018) 'is like jumping in a lake when you know the water might be cold. It's a question of trusting the people you're playing with.'

The experience of watching the sea, or being immersed in water, is probably the best analogue for a listening experience which is ever changing and yet eternally the same. *Occam Delta XV* consists of long sustained string lines and a constant four-part texture. This is a completely non-hierarchical work, with all four voices having equal value and making an equally important contribution. Quatuor Bozzini play without vibrato: their sound is at the same time pure and yet not in any way austere. Molleson writes that Radigue's music is all about 'perpetual transition', 'a recurring process of fade-in, fade-out, cross-fade', and links this to her musical origins as a composer of musique concrète.³ But the rich circular droning of *Occam Delta XV* never sounds electronic: the cello usually sounds more like a murmur, and the deep listening the piece prompts means that we are aware of a bow changing direction, of the friction of hair on string, of harmonics and resonances. Occasionally the ear is drawn to one or other of the voices: I found my attention shifting, creating my own path through the music. Is that a violin line ascending, the viola suddenly bringing itself to my attention? Quatuor Bozzini realise an extraordinary feat of concentration and sustained bowing, enabling us as listeners to immerse ourselves completely in the soundworld. The very

¹ A preview of this video can be found at www.youtube.com/watch?v=AfW1Wv-lz90 (accessed 1 August 2023).

² Kate Molleson, *Sound within Sound* (London: Faber, 2022), p. 267.

³ Molleson, *Sound within Sound*, p. 249.

long fade-out in the last ten minutes or so of the first performance is just one illustration of their astonishing control.

The two performances are of course different from each other: on one occasion I found the second performance rather more fragile and attenuated in the middle of the work than the first one, though I did not feel this was the case on another listen. Either this is an extremely novel type of CD where the performance actually changes each time it is played, or my personal journey through each performance was different each time I listened. Perhaps this is because the music facilitates deep reflection and provides a space for the listener to bring something of themselves to the music? Whatever your own journey through this fascinating recording will be, prepare for an immersive and time-altering experience.

Caroline Potter

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Héctor Parra, ... *limite les rêves au-delà*. Deforce, Goepfer. Passacaille Plus, PP9702.

Twenty-first-century advances in physics and astrophysics have taken us to the very limits of our understandings of the universe. Institutions, laboratories and experiments such as the Large Hadron Collider, LIGO (the Laser Gravitational-Wave Observatory, based in Louisiana and Washington state) and the global telescope array known as the Event Horizon Telescope have discovered new fundamental particles, observed gravitational waves and captured direct images of black holes. These are, by some measures, the most advanced fields of scientific knowledge, as well as some of the most exciting and imaginatively adventurous. Given music's long and illustrious relationship to the physical sciences, it is a little surprising that more composers haven't engaged in detail with these developments in their music.

One who has done so, and for more than a decade and a half, is the Catalan composer Héctor Parra. His opera *Hypermusic Prologue* of 2008–09 was set to a libretto by the theoretical physicist Lisa Randall (author of a model for five-dimensional space); *Caressant l'Horizon* for chamber orchestra (2011) considers the warping of spacetime at the event horizon of a black hole. ... *limite les rêves au-delà*, composed in collaboration with the cellist Arne Deforce and sound designer Thomas Goepfer, as well as the French physicist Jean-Pierre Luminet (with whom Parra also worked on the orchestral *Inscape*, 2018), extends such imagery

across a still larger canvas. Over an unbroken 70 minutes, cello and live electronics take us on 'a psycho-acoustic journey' (quoting the composer's liner notes) from the origins of life on Earth, through hypernovae, the merger of two black holes (a phenomenon first observed by LIGO in February 2016), the crossing of the event horizon into a different universe and, finally, a perception of ourselves as '3D holograms of an encoded reality in 2D on the surface of the far reaches of the Universe'. A lot of the imagery, much of it speculative, of course, derives from a poem by Luminet that imagines a journey through a black hole, 'L'astre qui fut lumière'.

I confess that Parra's 2001-like cosmological narrative – with its references to spaghettification and Poincaré dodecahedral space – had me reaching frequently for Wikipedia (with only limited enhancements to my understanding). More seriously, it also threatened to block my appreciation of the music itself. I do not object to metaphorical or programmatic superstructures around a musical work; indeed, many of my favourite composers are very fond of them. But the intricacy and apparent precision of Parra's programme ('Gravitational shock and merger of the two black holes, followed by an immediate burst of gravitational waves of the LIGO type' is a typical example) threatens to limit the listener's own imagination. An unfortunate and ironic outcome, given the context.

Yet the music itself is of such sumptuous and extraordinary immediacy that I was encouraged to persist, past the event horizon of the work's own supporting discourse, as it were. And here it becomes apparent that despite the specificity of the composer's descriptions, *limite les rêves* isn't intended as descriptive music. The opening section, 'Life on Earth', follows a broadly expansive trajectory, from protozoa to human language, but after this the precise correspondences are left to the listener. What we get instead are lines of force and interaction – of attraction and destruction, of approach and transgression. Thresholds, horizons, fields, tides. Forces that underpin the cosmological drama but that can equally apply to the interaction of a bow and a cello string, and to a cello and its live electronic expansion. In this respect, the three musicians create a complex system of intersecting orbits. Deforce, as one of new music's leading and most versatile cellists, brings a wealth of playing techniques and sounds to the table, but it is the role of Goepfer's electronics, which flip and roll like a particle spinning through space, that I particularly enjoyed. In the work's most surprising section – 'Approaching Black Hole and Galactic Collision' – the