

At the Threshold of the Underworld: Deep Time, Music, and Ecstatic Truth

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Abstract

The article engages with filmmaker Werner Herzog's theory of ecstatic truth to explore how music can open a pathway into a reckoning with deep time. Coined by John McPhee, deep time refers to vast geological scales of time. The discussion is focused on Lawrence English and Lea Bertucci's 2023 experimental ambient album *Chthonic*. Herzog's theory of ecstatic truth refers to moments that transcend logic and reason, entering a realm of imagination. *Chthonic* simultaneously refers to the mythological realm of the underworld and the subterranean world studied by geologists. The combination of field recordings and instrumental performances, along with the song titles, album title, and cover image alludes to an imaginative world that blends mythology and geology. This combination creates the conditions for a reckoning with an ecstatic truth about the story of our planet and an imaginative understanding of deep time.

KEYWORDS: Ambient music; experimental music; deep time; ecstatic truth; geology; mythology

Introduction

If you stand at the edge of the Grand Canyon in Arizona and look down to the bottom of the vast ravine, you can see rocks that are 1.8 billion years old. While it took a mere five million years for the Colorado River to carve out these massive canyons, the rocks themselves were formed eons before shifting tectonic plates caused the Colorado Plateau to rise and sit on the Western Shelf of North America. Standing at the edge of this canyon offers a glimpse into the scale of time required to create such a stunning landscape.

But such numbers remain abstract, disconnected from the months, years, decades, and centuries of human history. To conceptualise the earth a billion years

ago is so foreign to our ordinary perception of the passage of time that it pushes our minds into the realm of the imagination. Our imagining can be informed by geological data, but it remains a mental exercise to picture the formation of a place like the Grand Canyon. To imagine time on this expansive scale is to enter what John McPhee describes as “deep time”. Deep time refers to the timescales required for the formation of mountain ranges, river valleys, oceans, and canyons. It draws on the findings of geology but integrates the data into an imaginative description of ceaseless change on our planet.

Such truths about geological eras are, as Henry Gee writes in his book on deep time, not “readily comprehensible to minds used to thinking in terms of days, weeks, and years – decades at most” (2000: 3). We need other ways of understanding these geological processes to help move beyond our conventional scale of time. Works of art provide one pathway to open other ways of perceiving. An encounter with a work of art can spark the imagination, helping to pull us out of customary ways of thinking and feeling about the world and our relationship to it, including our understanding of the passage of time. These encounters allow us to stand outside our habitual mode of thinking and experience truths that move beyond the facts and numbers. Here, beyond what the data can provide us, outside our ordinary understanding, we can encounter what filmmaker Werner Herzog refers to as “ecstatic truth”.

In this article, I explore the ideas of deep time and ecstatic truth through the music of Lawrence English and Lea Bertucci. In 2023, the duo released *Chthonic*, an album of experimental ambient music that alludes to both geology and mythology. Focusing my discussion on this recent album, I analyse how the combination of ambient music, album title, song titles, and cover image opens the possibility of a reflective encounter with deep time through the imaginative lens of myth. I begin by placing the album within the context of English and Bertucci’s other musical projects and then focus on their collaborative process creating *Chthonic*. I then offer a brief description of the five pieces on the album. Next, I discuss what Herzog means by ecstatic truth and outline McPhee’s idea of deep time. Finally, by drawing on journeys to the underworld depicted in Homer’s *Odyssey* (1998 [ca. 8th century BCE]) and Virgil’s *Aeneid* (1980 [ca. 29–19 BCE]), I illustrate how Bertucci and English’s blend of field recordings, drones, and layered instrumentation create sonic textures that foster a reflective space guided by the cover image, album title, and track titles to a reckoning with a form of ecstatic geological truth.

This combination provides a bridge between the mythological and the geological. The synthesis of mythology and geology reveals an ecstatic truth of deep time, allowing *Chthonic* to serve as the soundtrack to an imaginative process of understanding the past and future of our planet. In conversation with Timothy Morton’s ideas about what he calls dark ecology, I end by suggesting that *Chthonic* encourages long-term thinking through a sense of planetary interconnectedness informed by deep time. This album opens a meditative space for listeners to reckon with the vast scales of time involved in the formation of our planet, inviting a form of geomythology that speaks to the poetry of geological formation and the epic ongoing narrative of Earth.

Sounds of the Underworld: Geology and Ambient Music

English and Bertucci met at a music festival in Brazil in 2019. English is an Australian composer and performer based in Brisbane who combines field recordings with manipulated synthesiser tones and other ambient sounds to create experimental music made of textured sonic layers. His work explores the act of listening, the role of the body in receiving sound, and the relationship between music, sound, and memory. English's music draws comparison to the music of Gavin Bryars or the experimental sonic layering of William Basinski (1).

Bertucci is an American experimental musician based in New York whose numerous instrumental albums bring together improvisation, sound manipulation, and field recordings. Bertucci plays a variety of woodwind and string instruments, which are woven into ambient pieces that draw on drones, soundscapes, and the avant-garde minimalism of musicians like Harold Budd and Clive Wright. While the approaches of these two musicians are distinct and unique, there are places where their sound worlds overlap. Additionally, they share a fascination with geological scales of space and time.

English and Bertucci remained in contact after the 2019 festival and began sharing ideas remotely. During the pandemic, these musicians intensified their remote collaborations and geological musings. These remote collaborations led to *Chthonic*, an album of five pieces released in August of 2023. The album credits Bertucci with cello, viola, flute, and lap steel guitar, and English with field recordings, analogue electronics, and tape.

Chthonic is a blend of these two artists' approaches to creating experimental music. Writing about their inspiration on the album's Bandcamp website, Jordan Reyes remarks that Bertucci and English's music is "driven by musings on geological scale, movements – tectonic or otherwise – of the earth, and subterranean density and pressure" (2022). Each of the five titles directly or indirectly refers to an aspect of geology. In her review of the album for music publication *Pitchfork*, Vanessa Ague describes the music as "[a]n ominous blend of drones and field recordings ... [that] plays out like a long-distance conversation about geologic time" (2023).

A piece called "Amorphic Foothills" begins the record with rhythmic throbbing – a deeply reverberant rumbling that sounds as if it is coming from deep underground. This pulse is soon joined by trembling, sliding violins. Amorphous rock refers to volcanic magma that has cooled quickly, giving it a glassy appearance (such as obsidian). "Amorphic Foothills" prompts us to imagine lustrous foothills, such as the Black Rock Desert in Utah or the volcanic landscapes of Iceland.

The next piece, "Dust Storm", features wind-like sounds that gradually give way to a distant cacophony that builds and dissipates. These deeper tones rise and fade, shaping the piece with slow changes reminiscent of geological processes. The third track, "Geology of Fire", is built on a bed of pulsing, trilling strings set against what sounds like recordings of lava bubbling within a volcano. These textures are punctuated by rising beeps that repeat at intervals, as if sending a kind of Morse code. As the piece progresses, the strings are overtaken by increasing layers of rushing sound and a lower tone that is delayed and spread across the stereo field in a rhythmic manner. Geology is the study of the earth, and the processes involved in its changing appearance. Accordingly, a geology of fire suggests the study of fire's

ability to shift and change, bringing to mind evenings spent gazing into a fireplace, watching the flames flicker and dance.

The next piece, "A Fissure Exhales", features layers that sound like wind coming from the depths of the earth, a tone that resembles squeaking metal and multiple tracks of violin glissandos manipulated with delay and reverb. Around the halfway mark, a series of drones played on cello take over before giving way to a new soundscape of violin tremolos. The combination gives a sonic impression of underworld sounds, of creatures breathing gaseous fumes. In geology, a fissure refers to a fracture in the earth's crust typically caused by shifting tectonic plates or volcanic activity that opens a crack. Fissures often expose minerals and can, on occasion, release gasses. The exhalation of a fissure indicated by the title may be referring to this phenomenon (I return to fissures below). The final piece, "Strata", features multiple tracks of flutes playing long tones. Beginning with only one, the piece builds to an accumulation of flutes, creating a dissonance from layered sounds. There is a smoother sonic texture underlying the flutes that feels as if it is competing with these instruments rather than blending with them. Both the title and the flute tones piled atop one another create a sense of sonic stratification, with the gentler sound acting like subterranean water flowing beneath the shifting surfaces above.

The word *chthonic*, of Greek origin, refers to things of the underworld in two forms: the underworld of the geologist and the underworld of mythology, a place overseen by deities where the dead reside and monstrous creatures live (2). In the Western literary tradition, Homer's *Odyssey* and Virgil's *Aeneid* are two epic poems blending history and mythology that feature a portion of the narrative in which the hero travels to the underworld. In both cases, their journeys are fraught with danger, they encounter gods, goddesses, and spirits of the dead, and their chthonic passage represents a turning point in the story; a moment of revelation and renewed resolve (3). The album cover symbolises the interface between the geological and mythological:



FIGURE 1. Chthonic album cover (2023).

The cover offers a glimpse into a heated thermal pool. We can peer over the rocky edge encrusted with minerals and see partially down into the depths. But beyond a few dozen feet, we are unable to see any further down. Our imagination is needed if we are to continue the journey down into and beneath the hot pool.

The combination of Bertucci and English's ambient music, song titles, album title, and cover image invokes the imagination by simultaneously referring to geology and mythology. The "ominous drones" (Ague 2023) of *Chthonic* suggest both powerful geological forces shaping our planet and a mythological realm populated with deities and creatures of the underworld. Andre Fischer observes that "[m]ythical truth constitutes itself in appearances of the inaccessible depths of existence where the light of reason does not reach" (2018: 46). Beneath the earth's surface, bubbling with heat and pressure directly below our feet, are places we can only imagine. These are places we have long been able to conceive of solely with the imagination, because they have not been understood until quite recently. The idea that land masses on Earth moved was first put forth by Alfred Wegener in his

1915 book *The Origin of Continents and Oceans*, but the more comprehensive theory of plate tectonics was not fully developed until the mid-1960s (4). Before a scientific understanding gave a new geological perspective of tectonic plates moving over a mantle of liquid magma, mythological understandings imagined underworlds where the dead were sent, where monstrous creatures dwelled, and where gods ruled underground kingdoms populated by spirits. These were places that Homer and Virgil populated with monsters, spirits, and deities in their epic poems. Whenever we reach the limit of ordinary understanding, our imagination can take over as we peer into dark caves, fathom the depths of oceans and lakes, or stare down into the boiling crater of a volcano.

While the geologist can stand at the edge of the thermal pool shown on the album cover and understand the processes that formed it, a geological approach focuses on the presentation of facts and the testing of new hypotheses. The scientific explanation provides a layer of factual truth about a particular geological scene or phenomenon. When the cover image of *Chthonic* is brought together with the ambient sounds and song titles, we are given the opportunity to engage in our own imaginative journey to the underworld. To better understand how this combination of field recordings, sound manipulations, and layers of instrumentation opens imaginative pathways, leading to an illuminating experience of deep time and the possibility of reckoning with the ecstatic truth of Earth's formation and reformation, I turn now to Herzog and McPhee.

Ecstatic Truth and Deep Time

Herzog is a German filmmaker who has made dozens of documentary and fiction films, such as *Fitzcarraldo* (1982), *Grizzly Man* (2005), and *Into the Inferno* (2016), often blurring the boundaries between cinematic genres. To understand the idea of ecstatic truth, we first need to understand Herzog's distinction between facts and truth. In a 2009 interview, Herzog articulated this distinction when he stated that "[f]acts are something very superficial, and they ultimately get the accountant's truth" (2009). For example, the accountant's truth about the Grand Canyon's formation – found in rock samples, maps, data, visualisations, and reports – offers a factual, scientific account of geological processes. While this approach provides quantitative facts and qualitative observation, Herzog is interested in reaching an underlying truth that surpasses what can be measured or observed. Instead of presenting detailed information about the Grand Canyon's formation, Herzog would seek to capture the awe, scale, and emotional resonance of being there.

For Herzog, there is more than one layer of truth. As he continues, "There's an accountants' truth and there's something much deeper" (2009). The qualitative and quantitative layer of truth may be factually correct but fails to illustrate this deeper layer of truth. In another interview, the filmmaker told the interviewer, "If you're purely after facts, please buy yourself the phone directory of Manhattan. It has four million correct facts. But it doesn't illuminate" (Murphy 2007). He acknowledges the role of the accountant's truth but seeks something less factually grounded and more akin to the realm of poetry and mythology. Herzog is interested in the pursuit of facts as a pathway into a deeper truth. Elaborating on how we can access these

deeper layers, Herzog believes “you will find that in great poetry” (2009). “When you listen or when you read a great poem”, he continues,

It will occur to you very abruptly that there’s a deep enormous truth in this poem – and you feel illuminated. And you don’t have to analyse; you don’t have to read lots of literature about this very poem. You just know it instantly. And why do you know it? Because there’s an ecstasy of truth that’s in this poem, and in cinema, you have this as well. (Herzog 2009)

Herzog has also expressed a deep admiration for music, which he frequently employs in his films. For example, in response to a question regarding his musical and literary influences, Herzog said that “[m]usical influences have always been very strong, maybe the strongest ... I would have to say musical figures have been more of an influence on me than literary ones” (2002: 137).

Through the camera, Herzog draws on mythology and poetry to draw the viewer into the kind of sudden illuminative experience that reveals what he refers to as ecstatic truth. Ecstatic here should be approached less as “feeling or expressing overwhelming happiness or joyful excitement” (*Oxford English Dictionary* 2024) and more as “involving an experience of mystic self-transcendence” (*Oxford English Dictionary* 2024). This second definition aligns closely with Herzog’s language of illumination. The word ecstasy is derived from the word *ekstasis*, of Greek origin, which literally translates as ‘standing outside oneself’. As Herzog writes, *ekstasis* refers to “a person’s stepping out of himself into an elevated state” (2010: 10). Ecstatic truth thus refers to moments when we are able to step outside the accountant’s truth and experience something beyond and beneath this level of understanding.

Herzog’s *Lessons of Darkness* (1992), a film that reframes the burning of the Kuwaiti oil fields as an anthropological science fiction, begins by displaying the following quote from Blaise Pascal: “The collapse of the stellar universe will occur – like creation – in grandiose splendour” (Herzog, dir. 1992). But Pascal never wrote that sentence. As he revealed in an essay written about the film, Herzog wrote the quote with the intent of “elevat[ing] the spectator, before [they have] even seen the first frame, to a high level” (2010: 1). Herzog invents a quote, and attributes it to Pascal, as part of his method of opening possibilities for viewers to have an ecstatic experience. As he says, “We are into illumination for the sake of a deeper truth, for an ecstasy of truth” (2007), and this seeking of deeper truth, for Herzog, supersedes any perceived need to cleave to the facts. Herzog draws on geological metaphors to describe the depths of truth that exist beneath the realm of facts, writing that

“In the fine arts, in music, literature, and cinema, it is possible to reach a deeper stratum of truth – a poetic, ecstatic truth, which is mysterious and can only be grasped with effort ... [and that] one attains it through vision, style, and craft” (2010: 9).

He describes layers of truth that are sedimented and positions ecstatic truth as under (i.e. down in the underworld) the accountant’s truth aligned with facts, logic, and reason.

Here we are brought back to the intersection between geology and mythology represented by English and Bertucci's album. Their ambient soundscapes engender reflective moments where we can imagine the geological forces surrounding us. Herzog evokes geology to describe an elusive realm of truth, which can, in this instance, be reached by the stylizations of manipulated sound and layers of instrumental music on *Chthonic*. Their sounds and track titles fabricate dust storms, give voice to exhaling fissures, and reflect the glassy surfaces of amorphous rock. Additionally, the album title refers directly to the underworld of mythology, strengthening connections between myth and geology. By peering beneath the thermal pool depicted on the album cover and listening to the layers of sound, we can be pulled below the level of factual truth (the accountant's truth) into a realm of mythical truth. The appearance of these otherwise inaccessible truths can then foster a reflective encounter with deep time.

Coined by McPhee – an American writer of creative non-fiction whose work includes four books exploring American geology – the term deep time refers to the vast geological timescale of the earth's formation and reformation. Deep time refers to periods spanning millions of years that comprise the geological eras, viewing human history as a tiny late addition to an epic story that has been unfolding for eons. McPhee observed that most people tend to “think in five generations – two ahead, two behind – with heavy concentration on the one in the middle” (1981: 71). Deep time urges us to zoom out from this scale of time and integrate a perspective on a much wider scale. He is not urging us to ignore the more immediate concerns of the moment, nor is deep time about bracketing out any concerns about next week or the next five years. Instead, it represents moments of realisation when we are drawn out of our ordinary scope of concerns and thrust into our relationship to immense forces and expansive timescales.

The grandeur and scale of deep time cannot be grasped by the accountant's truth. Although part of the picture, McPhee points out that “[n]umbers do not seem to work well with regard to deep time” (1981: 29) because the mind becomes paralysed. He observes that gaps in the complete geological story of an area can inspire “a fountain of metaphor” (McPhee 1981: 16) to fill in the picture, referring to these descriptive metaphorical attempts as “geopoetical” (McPhee 1981: 106). Geologists sift through fragments and clues to ancient events, assembling pieces of a long narrative of endless change. When attempting to paint a picture of a mountain range rising kilometres into the sky and then slowly eroding to form smaller rolling hills (the Great Smoky Mountains of Tennessee serve as an illustrative example), geologists rely on their imagination and a poetic sensibility to animate these mountainous motions. The result is that poetic metaphor animates the data to give a more complete physical, psychological, and emotionally resonant depiction of geological time. By invoking the imagination and drawing on “geopoetical” (McPhee 1981: 106) metaphors to reach an understanding of deep time, we open the door to an illuminative encounter with ecstatic truth.

Take, for example, the metaphorical image McPhee employs in his book:

If you were to lift your arms and spread them wide and hold them straight out to either side and think of the distance from fingertips to fingertips as

representing the earth's entire history, then you would have all the principal events in that hillside in the middle of the palm of one hand. (1981: 51–2)

McPhee's description provides a physical scale to ground our understanding of Earth's formation and the evolution of life over millennia. This metaphor acts as an interface between a natural history supported by geology and our psychological and emotional response to that long history. Coming to our aid, Herzog's "notion of ecstatic truth takes the form of an encounter between facts and perceptions, between inner visions and the material world, between personal experiences and the objects of the world" (Costello Branco 2022: 166). English and Bertucci's album can foster this interfacing by mediating between geological facts and metaphoric imaginings to facilitate the kind of illuminative moment where our inner visions correspond to a deeper truth about the constant reformation of our world. These experiences can provide us with new levels of knowing that incorporate our emotional response to the hard facts about geology, helping to infuse descriptions of both the distant past and predictions about the future.

Deep time provides a story about the distant past, allowing us to understand the vast processes involved in the formation of places like the Grand Canyon. The idea of deep time also infuses our current geological understanding to make predictions about the future of our world. Deep time situates us within a vast story of unending metamorphosis. Myths are stories that often convey deeper meanings, values, or explanations for the world around us. Homer's *Odyssey* and Virgil's *Aeneid* are myths that combine historical fact with elements of the divine. The underworld journey of the heroes of these myths serve to integrate these protagonists into a vast narrative that aligns with the panoramic perspective of deep time. A brief exploration of these underworld myths helps reinforce the connection between deep time, ecstatic truth, and English and Bertucci's music.

Past Histories, Future Prophecies: Geomythology, Dark Ecology, and Ambient Music

In Book VI of *The Aeneid*, Aeneas embarks on a journey through the underworld in search of the spirit of his father who will tell him about the future. On his quest he passes by monstrous creatures, including Cerberus, the three-headed dog that guards the entrance to the underworld, and the Hydra who "[l]urks with fifty black and yawning throats" (1980: 180). He encounters the spirits of those who have died, either recently or long ago, and is eventually reunited with his father who begins his prophesy by telling Aeneas "In after years ... What famous children in your line will come, / Souls of the future, living in our name, / I shall tell clearly now, and in the telling / Teach you your destiny" (1980: 186). His father tells Aeneas about "All who shall one day pass under the dome / Of the great sky" (1980: 187) and sets out the destiny of Rome in the years and decades to come.

Odysseus' journey is less a physical journey and more a visionary passage into another realm in search of answers to questions about his fate. In Book XI of *The Odyssey*, he embarks upon his quest by performing the necessary rituals to call upon the gods and the spirits of the dead. On his visionary expedition through "the shadowy hall" (1998: 195) of the underworld, Odysseus encounters warriors, kings

and queens, and gods and goddesses. He undertakes the journey because, as he tells the dead Mycenaean king Agamemnon, "I had need of foresight / to help me, homeward bound for the crags of Ithaka" (1998: 200). Among his many encounters, he meets the blind prophet Teiresias who describes Odysseus' future, right up to his peaceful death, and ends by assuring him that "all this shall be just as I foretold" (1998: 189).

In both cases, the heroes seek (and find) knowledge of the future. For both protagonists, the journey includes an encounter with the past. These underworld journeys situate the central characters within a lineage, placing them among the history of their people and positioning them among the forces that have shaped the past and will shape the future. Both Aeneas and Odysseus emerge confident in their place in history and assured of their future.

The monsters they encounter can be interpreted as metaphoric representations of subterranean forces and fearsome expressions of powerful geological forces such as volcanoes and earthquakes. Geologists, while coming from a different perspective and using vastly different knowledge sets, nonetheless also seek knowledge of the forces that have shaped the past and which will continue to shape our planetary future. In lieu of monsters and powerful gods, geologists study the motion of tectonic plates and the formation of new oceanic crust rising from the mantle. For the geologist, the extreme temperatures of the earth's molten core, and the movements it creates, form a kind of underworld. The interface between these levels of understanding can then lead toward a synthesis that can be understood as a kind of geomythology.

Geomythology is the study of myths, legends, and traditional stories to uncover their connections to geological events or features. The term was coined by Dorothy Vitaliano in her 1973 book *Legends of the Earth: Their Geological Origins*. In this and subsequent works of geomythology, scholars examine how ancient cultures interpreted and preserved accounts of natural phenomena, such as earthquakes, volcanic eruptions, and floods, in and through their myths and oral traditions (5). These myths and legends have often encoded observations of past geological events. For example, stories of great floods, such as the story of Noah's Ark or ancient Mesopotamian flood myths, may correspond to real geological events like glacial meltwater floods or the inundation of low-lying areas. Geomythology has provided insight into how ancient peoples perceived and adapted to their environments, blending geology, anthropology, and folklore studies.

Coming from a different perspective than Vitaliano and others, and supported by the album's title and cover image, Bertucci and English's music alludes to geological phenomena while suggesting, and perhaps giving voice to, the presence of creatures lying deep underground. The pulsation at the centre of "Amorphic Foothills" sounds to me like a mountain heartbeat. It is as if the music were tracing the movement of tectonic plates, following the shifting of their violent paths, shoving shelves of rock upward and opening chasms filled with water. As the piece progresses, the pulse fades out, only to return with power, like the insistent earth reminding us of its relentless power and ceaseless rhythmic movements. Over millennia, the overland plates have converged and separated several times. The earth was once one massive continent, then gradually split apart into the five we know today. But these plates continue to move and change, reforming the land in

a process of continental restructuring. The rocks breathe, expand, and contract, and this first piece sounds like a time lapse collapsing millions of years into five minutes.

Similarly, the series of flutes in “Strata” represent shifting sonic layers that harmonically grind over one another, mimicking the movement of layered rock scraping and pressing together. In addition, as the name suggests, “Dust Storm” sizzles like a swarm of locusts, or the sped-up sounds of the tide sliding over a rocky beach. The motion of the piece builds and dissipates, returning with a cyclical motion as if the listener is on a journey and has turned back. The track most powerfully suggests the hissing rush of forming and reforming sand dunes. While listening, I am reminded of time-lapse videos of sand dunes as they shift and change, acting like accelerated mountain ranges in miniature.

The layers of trembling violin in the second half of “A Fissure Exhales” share space with sounds resembling the moaning of a creature deep within a cave. Fissures create openings for the release of gasses and can expose mineral-bearing rock. With the title and the moaning sounds featured in the piece, Bertucci and English suggest a mythological layer to this geological phenomenon by giving it breath. Fissures act like openings, gateways down into the underworld of rock and mineral. The sounds of exhalation within the music, rising up from the opening below, could equally describe the expulsion of gasses and the breathing of some chthonic monster – a Hydra living deep beneath the surface, evoking the sounds of “the deep world sunk in darkness / Under the earth” (Virgil 1980: 169).

The factual truth regarding the sounds of geological phenomena would, in most cases, sound like silence. Within the timescale of a few minutes, we are generally not able to hear the shifting of tectonic plates. Within the seven minutes and seven seconds of “Strata”, however, we can use our imagination to hear the sounds of shifting rocks and steaming vents. We can listen as the twelve minutes of “A Fissure Exhales” offers layers of violin that tumble and slice over a bed of rushing noise, imitating the force of erosion.

Chthonic's synthesis of geology and mythology opens the possibility of a new kind of deep time geomythology – one that incorporates the factual account recorded by geologists (the accountant's truth) into a poetry of vast timescales evoked by the imagination (an ecstatic truth). A different sense of geomythology can thus build a bridge between the scientific study of the earth, the humanities, and music (6). A contemporary geomythology can synthesise the factual knowledge of geology and the imaginative, emotional, poetic sensibility of mythology (i.e., the ecstatic truth). From this perspective, *Chthonic* can serve as the soundtrack to an imaginative geomyth about deep time – a myth of both the past and the future.

Timothy Morton's concept of dark ecology attempts to articulate how humans are inexorably intertwined in a complex ecological web. It is dark because it confronts the grim realities of our future in the Anthropocene and challenges anthropocentric views that position humans as separate from (and in control of) the natural environment (7). Part of amalgamating into this web of ecological relationality involves integrating non-anthropocentric ideas about temporality. As Morton writes,

Realizing that there are lots of different temporality formats is basically what ecological awareness is. It's equivalent to acknowledging in a deep way the

existence of beings that aren't you, with whom you coexist. Once you've done that, you can't un-acknowledge it. There's no going back. (2021: 42)

Just as there's no going back for Odysseus and Aeneas, who must accept their fate, the acknowledgement of deep time incorporates these dramatically different "temporality formats" (Morton 2021: 42) that intertwine us in a web of coexistence. Morton emphasises how "being able to understand durations is particularly important for us right now, because global warming's effects may last up to 100,000 years" (2021: 24) but adds that "very few of us are able to imagine the right durations of geological time without special training" (2021: 24). Encounters with works of art offer an alternative to the special geological training Morton refers to. Aligned with the descriptions of the underworld in *The Odyssey* and *The Aeneid*, Morton observes that "art has an inherently disturbing (in a nice or not so nice way) effect, an effect that you don't intend and can therefore strictly be called *demonic*, in the sense that demons are the messengers of the gods: it's a message from somewhere else" (2021: 43). Ecstatic truth offers a pathway to receive deep-time messages from the distant past and far future, and these messages can be transmitted by the qualities of English and Bertucci's ambient music.

Listening to the Earth: The Ecstatic Truth of Deep Time

I agree with Vincent Ialenti who writes that "venturing to undertake deep time learning is more useful for cultivating long-term thinking than never embarking in the first place" (2020: 88). Our lives are understandably preoccupied with the schedules, commitments, and plans of the week. Our short-term thinking, however, can be balanced by engaging in reflective exercises meant to situate our brief lifespans into an epic planetary story. This deep time learning can be used to weave our thoughts and actions into a meaningful narrative of organic life that sprang from the oceans 3.8 billion years ago. Such involvement can curb any fixations on the short term and inspire a sense of responsibility and stewardship over an environment that was growing and changing before we arrived, and which will continue to grow and change long after we are gone.

English and Bertucci have created soundscapes that depict exhaling fissures and dust storms and explore amorphous hills and geological strata. Listening to *Chthonic* offers a reflective space that can draw together a geological and mythological understanding. The ambient experimental music they have recorded sonically represents the ecstatic truth McPhee writes about – that revelatory experience of understanding the planet as the ever-changing interplay of powerful forces. Whereas facts lead to the accountant's truth, ecstatic truth illuminates the imagination, and *Chthonic* offers a way to hear beyond the factual truth of geological time and listen in to a geomyth narrating the immense forces involved in deep time.

Our lives are blips of time, brief moments between one age and the next. While the Colorado River took millions of years to carve out the Grand Canyon, humanity is hastening the destruction of the watersheds that support such rivers. When looking forward, our timescales seem to shrink. It may be more difficult to imagine

five million years in the future than it is to imagine five million years in the past when the Colorado River was just beginning to run across a high plateau of rock in present-day Arizona. But ecstatic truth offers something deeper than the numbers and facts. In a way, the underworld exists for us, in our imagination. The earth is moving under our feet, shifting and rolling over a magma core that churns under immense heat and pressure. There is an underworld, and both geologists and musicians can imagine this place. We can catch glimpses of this vast underworld – on the rim of a volcano, for example, where we are given the opportunity to peer into the depths and hear the earth’s forces. Similarly, English and Bertucci’s record evokes a mythological truth about deep time. Once brought to a state of ecstatic truth through music, I can almost hear the Colorado River cutting through layers of rock, eroding deeper and deeper over millennia, and reaching its current state rushing six thousand feet beneath the canyon’s rim.

Endnotes

FIGURE 1. *Chthonic Bandcamp Page*

<<https://lawrenceenglishleabertucci.bandcamp.com/album/chthonic>>. Access 3 April 2024.

- (1) See Nyman (1999 [1974]) for an overview of the origin and early development of experimental music. See Toop (2018 [1995]) for an exploration of ambient music.
- (2) See Edmonds (2004) for an examination of Ancient Greek myths of the underworld.
- (3) Joseph Campbell’s *The Hero with a Thousand Faces* (2004 [1949]), a well-known work of comparative mythology, explores different versions of a journey to the underworld as part of a hero’s narrative arc.
- (4) Wegener’s (1966 [1915]) book was the subject of much criticism until foundational works by Runcorn (1956) and Carey (1958) paved the way for a 1965 conference on plate tectonics organised by the Royal Society of London that firmly established the now-proven theory. For a survey of the planet’s geological history, see Fortey (2005) and Knoll (2021).
- (5) See Burberry (2021) and Vitaliano (2007) for more on the origins and development of geomythology.
- (6) See MacFarlane’s book *Underland: A Deep Time Journey* (2019) for an exploration of geology and mythology within the Anthropocene.
- (7) Although there is ongoing discussion about when this new era may have started, and whether it should be categorised an ‘epoch’ or an ‘event’, there is little debate that humans are now a primary force behind accelerating changes on the planet. See Angus (2016) for an overview of discussion surrounding the origins and ongoing development of the Anthropocene.

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