

Illuminating the Dark Side of the Moon

Professor Milton Mermikides 12 June 2025

A Rare Light

Popularity is not, nor should be, a reliable measure of musical value or exceptionality. However the curious amongst us should acknowledge and investigate those rare works that resonate with an extraordinary number and range of people over a noteworthy duration. Such is the case with Pink Floyd's 1973 album *The Dark Side of the Moon* (DSotM), which despite its experimentalism, extended instrumental sections, and a limited number of component track 'hits' is one of the best-selling albums in any genre of all time, with over 45 million copies sold worldwide, 15x US Platinum certification. It is routinely in the critics and public's top album lists, and holds the record for continuous chart process, spending over 950 weeks (that's *18 years*) in the Billboard top 200. As staggering as the statistics are, it is the impression the album has left on listeners and musicians alike that is perhaps the most striking. Somehow DSotM manages to do what feels impossible: be experimental yet immediately *understandable*; sprawling yet focused; universal and yet hold deep personal meaning. This lecture illuminates how this might be; how its lyrics, structure and speech fragments – at once cryptic and simple – speak to timeless themes of the human condition, and how its musical and sonic components penetrate the psyche – like light through a prism – allowing these otherwise unspoken feelings to linger in the imagination.

The Concept of a Concept Album

The Dark Side of the Moon is considered an early, seminal - even the quintessential - example of a 'concept album'. However despite this being an established and familiar term, neither its definition nor its historical origins are clear. No single criteria appears to be sufficient, nor necessary, but we tend to know what we mean by a 'concept album' when we hear it. Here I offer some suggestions of the features of this fuzzy category, what gives a concept album its 'family relationship'. In a broad sense, concept albums tend to pursue a 'macro-level cohesion': a unity, connectivity and symbiosis that happens at the album-level, that is not evident in the individual tracks. How this manifests is varied. The tracks for example could be linked by a theme, story or an idea. Woody Guthrie's 1940 Dust Bowl Ballads - a collection of songs (or 'song-cycle') chronicling the 1930s Dust Bowl era – is often cited as the first example – or a proto-form – of the concept album due to its purposeful thematic linking. Frank Sinatra's In the Wee Small Hours (1955) with its unified theme of romantic melancholy fills a similar category. Of course these examples may seem insufficient or quaint by modern standards (it may even seem unremarkable or generic to have an album all about the theme of love), but they were early examples of an important creative step: An album not just a container - a 'package deal' - of individual songs, but an artistic statement in its own right. This albumlevel unification was to be made more clear and radical with an 'album-level' character reappearing in the individual songs, which transcends the conventional artist-song-album paradigm. For example, in albums like The Beatles 1967 Sgt. Pepper's Lonely Hearts Club Band and David Bowie's 1971 The Rise and Fall of Ziggy Stardust and the Spiders from Mars, characters are invented that thread through some of the tracks. Another way to achieve album level unity is through the use of transitions and direct segues between adjacent tracks demonstrating clearly their connectivity. This was first used on Frank Zappa's

1966 *Freak Out!* And then more famously on *Sgt. Pepper's* where *A Day in the Life* emerges from the embers of the previous track. *Abbey Road* (1969) cemented this idea with the Side Two 16-minute extended medley of songs and song fragments, with gapless – and in some cases musically ingenious – transitions between nominally independent tracks. Tracks can also be linked my **reuse of musical material** (e.g. melodies, chord sequences, lyrics etc). The track, *Sgt Peppers.*. and its later reprise creating a virtual 'in album' concert is an early example of such 'intra-textuality' - in-album musical cross-referencing.¹ There are further strategies for cohesion, the packaging and artwork of the album, its marketing (how to release (or not) tracks in their individual forms). The opportunity of the album release even allows such unifying possibilities as hidden tracks (e.g. *Her Majesty* on *Abbey Road*) or the eternal 'run-off groove' on *Sgt. Pepper's*.²

While few if any concept album traits (thematic linking, album-level characters, musical intra-textuality, and the 'presentational layer') were first to appear by the time *The Dark Side of the Moon* was released, they are all represented and they run deep. After some initial single releases, the band resisted (and actively fought) any segregation of the tracks suggesting a unified vision. *Breathe* is reprised (although not on the official track list), and its two-chord vamp appears again in *Any Colour You Like* and *The Great Gig in the Sky*. The anonymous entourage of characters are threaded throughout, every track on each side of the album is segued, and the heartbeat that starts the album is heard again at the end, suggesting an eternal cycle. The artwork presents a unified (if cryptic) image, and avoids images of the band, or titling – foregrounding the album in its pure form. And of course the entire album is unified by a mysterious but disarmingly haunting tapestry of narratives and themes.

Everything Under the Sun: Universal Themes

There is something uncannily familiar about the lyrics and the underlying themes in DSotM, as if they have been heard before, perhaps always known. The moon (and the other character of the sun) help with such a sense of the eternal, but we also sense timeless struggles of the human condition: What to do with our short lives; facing (or avoiding) the inevitable passage of time; 'quiet desperation'; the lure and cost of ambition and greed; the dark obligations of being in society, and the loneliness and ostracisation that comes away from it; the fear or acceptance of mortality; the line between sanity and madness; what – if any – meaning our lives hold.

These themes of DSotM can be found echoed through time: For example, the representation of the dark side of the moon as a darker, hidden part of ourselves:

"Every one is a moon, and has a dark side which he never shows to anybody"; "...you have to slip around behind if you want to see it" — Mark Twain (≈ 1897)³

The anonymous voices whose responses to Roger Waters' questions are threaded through the album, can be seen to represent *our own thoughts* at one point or another. It is as if they are speaking a part of all of our minds. This idea was coined the '**collective unconscious**' by Carl Jung:

"In addition to our immediate consciousness, which is of a thoroughly personal nature and which we believe to be the only empirical psyche... there exists a second psychic system of a collective, universal, and impersonal nature which is identical in all individuals. This collective unconscious does not develop individually but is inherited." — Jung, The Archetypes and the Collective Unconscious (1959)

A central topic of *Time* (and the "run rabbit run" sentiment of *Breathe*) – the all-consuming but ultimately empty and futile daily work grind to which we dedicate our short lives – is also an ancient idea. Sisyphus of Greek mythology - as a punishment for attempting to cheat death – was forced to endlessly push a boulder up a hill only for it to roll back down in an eternal tortuous cycle. *Time* represents – with a painful beauty – the idea of death denialism as a futile run against time "And you run and you run to catch up with the sun but it's sinking Racing around to come up behind you again. The sun is the same, in a relative way, but

¹ The Beatles' *Glass Onion* on the 1968 *White Album* goes one further referencing numerous tunes on *different* albums (an act of 'intertextuality'),

² None of these are quite sufficient and there are caveats – an album of ballet, musical theatre or opera has motivic linking, transitions and narrative linking but these might be considered examples of 'pre-album' creativity, and not afforded by the album context itself.

³ Twain seemed to be drawn to this conceit, and wrote similar sentiments in *Following the Equator, Fables of Man*



you're older, shorter of breath and one day closer to death". Again this idea has haunted literature for millenia:

"One generation passeth away, and another generation cometh: but the earth abideth for ever. The sun also ariseth, and the sun goeth down, and hasteth to his place where he arose."

. — Book of Ecclesiastes 1:4–9, King James Version, The Old Testament

Or in Shakespeare's *Macbeth*:

"Tomorrow, and tomorrow, and tomorrow, Creeps in this petty pace from day to day. To the last syllable of recorded time, And all our yesterdays have lighted fools The way to dusty death. Out, out, brief candle! Life's but a walking shadow, a poor player That struts and frets his hour upon the stage And then is heard no more: it is a tale Told by an idiot, full of sound and fury, Signifying nothing." –5.5 16–27

The futility and arbitrary boundaries of war explored in Us and Them echo the bleak clarity of Wilfred Owen's war poetry. Lines like "I am the enemy you killed, my friend" (*Strange Meeting*) and the bitter conclusion of *Dulce et Decorum Est*—"My friend, you would not tell with such high zest / To children ardent for some desperate glory, / The old Lie: Dulce et decorum est / Pro patria mori"—reveal the tragic irony of constructed divisions. Like Owen, Pink Floyd expose the devastating consequences of viewing humanity through the lens of us and them, and question the ideologies that make such divisions seem inevitable.

Throughout *The Dark Side of the Moon* lingers the archetypal spirit of the Joker, Jester, or Fool—figures drawn from Tarot, mythology and royal courts who step outside the bounds of conventional society, often gaining in return a unique, if unsettling and dangerous, perspective on the world. Yet this insight comes at a cost: they are cast out, labelled mad, consigned to the metaphorical "dark side of the moon." The reference to Pink Floyd founder Syd Barrett—whose mental decline mirrored this archetype—is unmistakable, and even explicit in the lyric, "and if the band you're in starts playing different tunes, I'll see you on the dark side of the moon." The album can be read as a veiled homage to Barrett, a theme made fully explicit in 1975's *Shine On You Crazy Diamond*, a heartfelt and unambiguous tribute.

In short – although an astonishing creative and original work –there is nothing essentially new in DSotM. Even the Pink Floydism "quiet desperation" first appeared in Thoreau's quote "the mass of men live in quiet desperation". And yet it is this familiarity, this connection to ancient perhaps eternal and insoluble attributes of the human condition, which makes the work so profound and timeless, and in terms of its genre, so original.

Welcome to the Machine: Electronic Music Creativity

DSotM demonstrates a symbiotic marriage of conventional visceral rock and experimental electronic music affordances, a remarkable achievement. The first electronic synthesizer was invented in 1897 (the *telharmonium* weighing in at 200 tonnes), and phonographic recording is older still. Why then does music technology still feel new and radical, despite predating other well established technologies like the typewriter, commercial flight, the washing machine, and vacuum cleaner? The reason, I suggest, is that it fundamentally challenges our expectations of how sound – and music – works, and The Dark Side of the Moon engages directly with many such radical opportunities offered by music technology. For example, recording (and 'sound-on-sound' mixing) allows sounds that did not, or could not possibly be, occurring in the same place or same time, to be brought together. The voices of the 'collective unconscious' (and the cash register sounds in *Money*, airport noises of *On The Run*, the clock chimes of *Time* etc) were all recorded at different times, but interwoven into the studio recording of the band (itself including multiple layers of Gilmour's guitars and Wright's keyboards). What we have is a sonic tapestry of time and space. Existing familiar sounds could also be processed to create acoustically impossible, yet musically beguiling, timbres: The tremolo effect – a pulsed volume change – creating a rhythmic layer to static guitar chords in *Money*; the wobbly shimmering chorus effect on the opening raked chord of *Breathe*; the gargling and

expressive symbiotic effect of fuzz, heavy reverb and a chorus-y echo on the guitar solo on *Time*. Such delay effects (and the use of 'looping') can create the musical device of a canon from one 'voice' – a conversation with its past. One can hear this – a musical repetition of phrases on every beat – on the ascending arpeggio at 3:48 on the *Time* guitar solo, or most clearly on Richard Wright's opening keyboard solo on *Any Colour You Like* (0:00—1:19).

Not only can strange virtual sound-worlds be made from disparate sounds, or 'natural' sounds be processed into radical new timbres, but music technology allows us to synthesize and generate sounds and sequences from simple sonic elements, The experiment composer and electronic music pioneer Varèse expressed the potentials to composition of technology in 1917 "I dream of instruments obedient to my thought and which with their contribution of a whole new world of unsuspected sounds, will lend themselves to the exigencies of my inner rhythm." Note that this perspective acknowledges that technology allows us to potentially create not only any sound we can imagine, but also 'unsuspected ones' that we can't. This is demonstrated beautifully in On The Run. The composer and inventor Peter Zinovieff - whose achievements and insights far exceed his serendipitous role with Pink FLoyd - has supplied the band with his 1972 EMS Synthi AKS. It allowed sounds to be synthesized on a 'pin matrix' -resembling a game of Battleships linking oscillators with envelopes and other controls. This model also had a built in-keyboard and sequencer, the latter allowing the generation of melodic sequences at uber-virtuosic tempos and consistency. Gilmour, with the intervention of Waters, decided on a sequence of 8 notes and basic timbre. This might be considered conventional composition, the machine 'obedient' to human thought. However this most basic of musical objects, was given life, when the parameters of the sound notably its 'frequency' and 'response' were manipulated during the sequence producing extraordinary 'unsuspected' timbres, transforming a pre-imagined sequence into an evolving and beguiling sonic thread.⁴

Speak to Me: Melodic Expression

Much has been theorized, explored, discovered, and conjectured about the nature of musical expression. But here I want to offer a relatively simple perspective. Let's begin with the human voice: what kinds of sonic elements convey expression, emotion or 'feeling'? We need look no further than Clare Torry's extraordinary improvised vocals on *The Great Gig in the Sky*. Here, **timbre** is at least as important as pitch or rhythm—*how* something is sung matters as much as *what* or *when*. We can recognise within the sound itself – more predominantly than its pitch/rhythm descriptions – a scream, a cry, or a consoling sigh by timbre alone.

Pitch and rhythm matter deeply, of course, but they are not constrained by the gridlines of standard notation, or an inflexible melodic template. Tremors, glides, dips, teasing bends—these are not errors, but the lifeblood of emotional expression. We feel resonance in struggle: a graininess at the edge of effort, conveying something primal. This quality is just as present in Gilmour's guitar playing—and, even through electronic mediation, in Richard Wright's keyboard work. The phrases breathe, ask and answer, and no note is left untouched: subtle bends, slides, tremolo arm gargles, and—crucially—the grain, noise, and effort behind the notes all communicate a deeply human intent. With Nick Mason's push-and-pull rhythms leading into downbeats, we feel a fully human expressive will behind the music. This sort of instrument-asvocal expression is deeply embedded in the blues, so it is perhaps apt that despite its psychedelic surface, the band name 'Pink Floyd' was derived (by Barrett) from two blues musicians: Pink Anderson and Floyd Council.

Vocal expression is a fundamental force in musical expression, but music isn't just an emulation of human speech and language. There's another layer of logic at play. Melody, to paraphrase Schoenberg, has both a language-like syntax and what might be called a **harmonic skeleton**: an implied background structure that gives rise to tension and release. This too is clearly evident in Gilmour's playing. Take the *Time* solo— not merely a stream of notes in a key or blues scale, nor only an expressive vocalisation. With a little analysis, we hear how the solo's shape is guided by the underlying chord sequence. The harmony is outlined, elaborated, and meaningfully resisted—not arbitrarily, but with structural and expressive purpose.

⁴ Some scholars suggest that this track is the most influential example of the broad – and now vast – genre of electronic dance music (see Hart et al. 2022).

Like planetary bodies with gravitational pull, acrobatics are possible because of the underlying mechanics.

It's this fusion—of emotionally charged gesture and latent harmonic architecture—that makes such passages so potent. Melodic expression hijacks both our instinct for emotional contagion and our sensitivity to musical expectation. It's a dual dialect of voice and form, orbiting the same emotional centre.

Any Colour You Like: Harmony and Mode

There are several ways to conceptualise and perceive harmony, in fact many of these can be simultaneously relevant and insightful. We might explore what harmonic objects are used (their 'shape'), and where these shapes may be derived: Can they all be constructed from a limited set of notes, and what is the 'master key'? We might determine the emotive effects of such shapes and harmonic palettes. We may explore if there's a sense of tonality, a 'local gravity' – to which notes are pulled; and how chords transform into each other – a vocabulary not just of objects but their interconnections.

All of these perspectives are illuminating when analysing DSotM. We might learn something by simply cataloguing the types of chords used in terms of 'tonal languages'. If we think of the familiar diatonic scale (which includes the major, minor and other modes), then we can imagine it as a palette of notes (or selection of 7 from 12 possible pitches - see figure 1 left). There are certain shapes (chords and scales) that can be created in this pattern (such as major and minor triads) and others that can't (like a cluster of 3 adjacent notes). DSotM reaches beyond the typical diatonic shapes (triad and 7ths chords) of pop and rock harmony to create more shimmering harmonies, such as the chilling Emadd9 opening chord of *Breathe*, the lush Major9 (D Δ 9 and A Δ 9) implied chords on the bridge of *Time*, or the stunning D/G ("and the front rank *died*") from *Us and Them*. There are some harmonic flavours out of the reach of the diatonic scale, the mysterious augmented triad (an equilateral triangle in harmonic space, echoing the album cover) requires a scale like the acoustic (aka melodic minor, with its Ravel and jazz implications), this can be found in the extraordinary "and after all" moment of *Us and Them*. The D7#9 to D7b9 of "softly spoken magic spell" the *Breathe (Reprise)* – inspired by Miles Davis' *All Blues* from *Kind of Blue* – evokes another diatonically impossible harmony (and shape) requiring something like the angular bittersweet octatonic scale. These are all illustrated in Figure 1.



Figure 1: Magic chord shapes from three tonal languages. The diatonic, acoustic and octatonic scales are shown as circled notes in blue, cyan and red respectively, with characteristic chords shown as component shapes: From left to right: the shimmery *front* rank died D/G diatonic chord from Us and Them, the tired of lying in the sunshine $D\Delta9$ chords from Time in dotted lines, and

opening Emadd9 chord from *Breathe*; the mysterious *and after all* $Dm\Delta7$ acoustic chord of *Us and Them*; the angular *spoken magic* D7#9 to D7b9 octatonic chords of *Breathe (Reprise)*. Note the 'album cover; equilateral triangle (in cyan) and the characteristic diminished 7th red square, of these latter two respectively which are inaccessible in the familiar diatonic scale.

So the album reaches beyond the common offerings of the diatonic scales for more intriguing harmonic effect, and even beyond the diatonic scale when further mystery and magic is called for. However the harmonic experience is more than a collection of objects, there is expressive power in how they connect. For example the aforementioned D7#9 and D7b9 of *Breathe* are both (spicy) flavours of a D dominant 7th chord. Dominant 7th chords are the mainstay of conventional tonal harmony, with a root on the 5th of the key, a leading tone, internal dissonance and a wealth of learned expectations they typically 'want' to

resolve to a more stable chord, and usually in just a handful of ways. The D7#9 in Miles Davis's *All Blues* takes the most common resolution – down a 5th to a G chord. The next most common resolution is to Em (a 'deceptive cadence' to the 'relative minor' of G). *Breathe* – for the most part – resolves this D7 in this way to Em (e.g. "race towards an early grave"). This feels perfectly right (if very dark). However at the end of the *Breathe (Reprise)* ("softly spoken magic *spell*) a different and extraordinary choice is made – to a B minor chord. There are other plausible resolutions for the D7♯9, but B minor is not an obvious one. It isn't arbitrary or nonsensical—there's clear musical logic in the internal voice-leading and melodic resolution— but it does feel magical, oblique and chilling – perfectly aligning with the lyric's invocation of a "spell." Interestingly, the motion from D7 to B minor might be understood as a form of *chromatic mediant substitution*: we expect G minor, and instead we get B minor—a non-diatonic chord a major third away. This type of harmonic shift, long associated with magic and transformation in Romantic and film music, lends a profound depth to the moment. Whatever the theoretical explanation, this passage exemplifies the emotional power of prediction-thwarting in musical experience.



Figure 2: The 12 chromatic scale degrees arranged in a circle of ascending (clockwise) and descending (anti-clockwise) 5ths. In tonal harmony ascending and descending 5ths might be associated with brightness and darkness respectively (here illustrated with a light and dark side of the moon). The Dorian mode threaded through DSotM in *Breathe, Breathe (reprise),* a significant portion of *The Great Gig in the Sky,* and most of *Any Colour You Like* is a perfect balance of dark and bright scale degrees (see left). Incidentally the *Shine On* four-note chord (from *Wish You Were Here*) is shown green. A similar balance of light and dark is demonstrated in the 4-chord sequence of *Eclipse* (see right): D (red), Dadd9/C (yellow), the chilling Bb Δ 7(#11) (blue) and A7 (magenta).

Such surprising turns can be found throughout the album—particularly in *The Great Gig in the Sky*, which takes the B minor and somehow pulls it elegantly to the distant harmony of F, then Bb. This floatiness creates an apt, soulful yet haunting sense of harmonic limbo. There are several examples of harmonic passages where harmonic distance is used for expressive effect (such as the Bm to $F\Delta T$ "All you touch and all you see" in *Breathe*). The harmonic elephant in the room—a thwarted tonal implication—is introduced early in the piece through the repeating cycle of E minor to A7. In jazz (and common-practice tonal harmony), this could be understood as a **ii–V** (implying the second and fifth degrees of D major), which conventionally resolves to the 'l' of D major. But this resolution never comes. In fact, if we adopt a *concept album* lens, the resolution is deferred across much of the record. *Us and Them* is in D major, but its tonal centre is a hollow Dsus2. *Any Colour You Like* feels it sits in D minor, but it too is built from a two-chord cycle, a whole tone below the earlier Em–A7. It's only in *Brain Damage* and *Eclipse* that we finally hear an unapologetic D major—lending cathartic resolution and retrospective coherence to the album's harmonic journey.

Returning to Breathe, the Em-A7 sequence begins to feel centred on E minor through repetition,

suggesting the bittersweet flavour of the **Dorian mode**—a sound present in Miles Davis's *So What* from the previously mentioned *Kind of Blue*. One way to understand the expressive effect of the Dorian mode is through the circle of fifths, which arranges the 12 chromatic pitches around a wheel of ascending (clockwise) and descending (anticlockwise) fifths. Ascending fifths can be associated with brightness, descending with darkness. The Dorian mode balances bright and dark degrees perfectly (see Figure 2), perhaps explaining its frequent return in Pink Floyd's music. The iconic four-note motif of *Shine On You Crazy Diamond* (in Pink Floyd's next album the 1975 *Wish You Were Here*) is perhaps the most distilled expression of this harmonic flavour: in a G minor context the dark minor 3rd (Bb) and minor 7th (F), the neutral root (G) and the bright major 6th (E).

The illustration of major and minor intervals along the "light" and "dark" sides of the harmonic moon is particularly illuminating when considering *Brain Damage* and *Eclipse*, both of which shift between those contrasting moods. The latter is illustrated in Figure 2 (right). The piece is in D major, with clear and repeated V-I resolutions from A7 to D major, but the intervening chords Dadd9/C and the beautifully chilling implied $Bb\Delta7(\#11)^5$ draw attention to the cold, dark side of the harmonic moon.

I'll See You on the Dark Side of the Moon

The message of the album undeniably holds darkness — the inevitable passage of time, the struggle to find meaning and a place in the world, the slip into madness, the quiet desperation beneath modern life. But I choose to hear a thread of hope in its ending. The prism on the cover, with its triangle symbolising thought and ambition, refracts a single beam of light into a spectrum — a reminder that even what seems plain or white-hot with pressure contains hidden beauty when we look beneath the surface. The eclipse may obscure the sun, but the corona still burns at its edge, visible if we choose to see it, a warmth we might still feel and share. In the same way, the album offers not resolution but revelation: we can take life at its raw surface, or choose to see the beautiful colours that compose it. We all – in our brief existence – are free to choose how to live, what to give, whom to love. To paint our lives any colour we like. And that choice, quietly, feels consoling and redemptive.

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⁵ As almost always the case in music, definitions are not unequivocal. Do we define a chord by its maximal number of simultaneous notes? What is 'passing' and what is 'there'? What we can say is that this chord (or two chords) in question is usually outlined by the guitar with Bb, D, F (Bb major) followed by E D Bb (some would say Bb(b5)). Collectively these two structures might be termed Bb(add #11). However, a second guitar adds occasional As and even Gs to the mix (Bb Δ 13(#11)), and of course there are keyboards and vocals at play also. Enough. In short, the 'darker' borrowed notes like Bb and F are added to the D major context, to stunning effect.



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The Nature of Music

https://www.gresham.ac.uk/watch-now/series/nature-music

This lecture series and essays provide fundamental background material on rhythm, music as Language, harmony, dissonance, technology, tuning Expression and musical structures.

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