EXPANSIVE ROCK:
LARGE-SCALE STRUCTURE IN THE MUSIC OF PINK FLOYD

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This essay and the composition Ten Variations together constitute the dissertation
but are otherwise unrelated
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Abstract

The large-scale song was one of the major innovations of British rock in the 1970s. Many bands built such compositions as a series of sub-songs and instrumental interludes that varied greatly in harmony, rhythm, and instrumentation. Among the most successful bands of all time, Pink Floyd chose a fundamentally different approach: In each of their epic songs “Echoes,” “Shine On You Crazy Diamond,” and “Dogs,” they used a small amount of cohesive thematic material and expanded it dramatically using heavy repetition and a slow harmonic pace. It seems unlikely that such a structure could retain a sense of variety, direction, and cohesiveness over the course of a prolonged duration. Through original transcriptions and analyses of harmonic progressions, guitar solos, sung melodies, accompaniment patterns, form, and sound, this dissertation explores and assesses the ways in which these three pieces meet the challenge issued by their seemingly limiting structure.

“Echoes” marks a transition from the band’s experimental era into their mature, carefully-organized style. While a considerable sense of progression is gained throughout the track by an effective harmonic skeleton as well as a motivic development of a single seed, the piece’s momentum is weakened due to lengthy static sections that do not cohere with the rest of the material. I suggest that "Shine On You Crazy Diamond" maintains vitality over its duration through a musical structure that corresponds to five psychological stages of grief: numbness, yearning, anger, depression, and acceptance. Possibly portraying the bereavement process of the band from its founder and original front man Syd Barrett, this emotional arc imbues the piece with a raw, genuine, and thus powerful framework. While more than half of “Dogs” is based on a single harmonic progression, the song employs an inspired scheme of structurally foundational
guitar solos, a motivic use of melodic and harmonic tension, and a meticulously woven fabric of text, harmony, texture, sound, and instrumentation. As a result, this track constantly maintains a propulsive forward drive. The achievements of these three songs, especially considering their thematic economy, make them stand out within the family of epic rock songs.
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Chapter 1

Introduction

“In Pink Floyd’s eyes, why write a 3-minute song if you can make it twenty minutes?”

(Pink Floyd producer/engineer James Guthrie at the Pink Floyd Conference at Princeton University, April 2014)

Mr. Riffus McRock is writing a song. He has already completed a few verses as well as a contrasting bridge section. Padded with a short intro, a guitar solo, and an outro, the song could probably last for three or four minutes. McRock, however, loves a challenge. He recalls that his cousin, Chops McProg, likes listening to songs that last for more than ten minutes and owns several classical LPs, each of which consists of only two or three pieces. McRock decides to expand his little song so that it will occupy the entire first half of his next album. Should he simply write more and more verses, using the same music but different lyrics? The result, he fears, might not be varied enough. Moreover, Riffus wants his song to have a strong sense of direction, and he feels that too much repetition would prevent that. He considers using a few unrelated sketches that he wrote recently and adding them into the new song. Having nothing in common, however, these different bits are likely to result in a fragmented piece that would lack cohesiveness. Like many composers and songwriters before him, Riffus McRock realizes that a successful long piece of music should probably maintain a sense of variety, direction, and cohesiveness. He still wants to base his composition on the music that he has already written, but how can such little material be sustained for more than twenty minutes?¹

¹ Mark Spicer asks a similar question when discussing the challenges that both progressive-rock musicians and nineteenth-century composers faced when writing an extensive piece of music: “How does one maintain both a
The Emergence of the Large-Scale Medium in British Rock

The large-scale song was one of the major innovations of British rock in the 1970s. Several bands experimented with expanding the standard three- to five-minute format of alternating verses and choruses by adding lengthy instrumental solos, introductions, and interludes. The results were songs that last between seven and ten minutes (e.g., Led Zeppelin’s “Stairway to Heaven,” Dire Straits’s “Tunnel Of Love,” Queen’s “The Prophet Song,” David Bowie’s “The Width of a Circle,” Genesis’s “Firth of Fifth,” and Emerson, Lake and Palmer’s “Trilogy”). A few progressive-rock bands went further and recorded tracks lasting fifteen to twenty-five minutes (and occasionally even longer). These were structured as a long series of short sections that varied greatly in melody, harmony, rhythm, and texture (e.g., Jethro Tull’s “Thick as a Brick,” Yes’s “The Gates of Delirium” and "Ritual [Nous Sommes du Soleil]," Soft Machine’s “Moon In June,” and Van der Graaf Generator’s “Meurglys III”). The sections in those pieces were frequently joined together in “section groups” to create the impression of complete sub-songs, each consisting of its own verses, choruses, and solos. More often than not, pieces of this length were multi-movement suites with individual section titles for their movements, creating a hybrid of the song cycle, the nineteenth-century suite, and the symphonic poem (Macan 1997, 41–42). Notable examples include Genesis’s “Supper’s Ready,” ELP’s “Karn Evil 9,” Jethro
Tull’s “A Passion Play,” King Crimson’s “Lizard,” Van Der Graaf Generator’s “A Plague of Lighthouse Keepers,” The Nice’s “Ars Longa Vita Brevis,” and Soft Machine’s instrumental suites “Hazard Profile” and “Slightly All The Time.” Soft Machine also experimented with another format, in which lengthy, single-movement instrumental tracks were structured of extended jams over steady grooves (“Out-Bloody-Ragrous” and “Facelift”). At the same time, Pink Floyd had their own ideas about how to maintain variety, direction, and cohesiveness over an extended form.

Pink Floyd was formed in London in 1967 by lead singer and guitarist Syd Barrett, bassist Roger Waters, drummer Nick Mason, and keyboard player Richard Wright. Following the success of the band’s first singles and debut album *The Piper at the Gates of Dawn* (1967), Barrett departed from the band and was replaced by guitarist David Gilmour. With the release of *The Dark Side of the Moon* in 1973, Pink Floyd became one of the most popular and successful bands in the world. The lineup stayed the same until Roger Waters left the band in 1986, and the remaining members released three more studio albums without him, the last one in 2014 after the death of Richard Wright. Although many regard Pink Floyd as a progressive rock band, their music is quite different than that of ambassadors of the genre such as Yes, King Crimson, ELP, and Jethro Tull.4 While these bands experimented with and expanded the foundations of rock in regard to harmony, rhythm, orchestration, and performance virtuosity, Pink Floyd devoted themselves to sound manipulation, extended techniques, and extensive arrangement process. These were employed on a musical vocabulary that was surprisingly straight-forward: A limited harmonic palette, simple and consistent rhythms, and repeated textural patterns, all features that

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4 Will Byers listed elements in Pink Floyd’s music that differ them from progressive rock (Byers, 2008)
are more typical of standard rock than of prog music.\textsuperscript{5} While prog bands often wrote abstract lyrics with a frequent tendency towards science fiction, since the early 1970s Pink Floyd’s lyricist Roger Waters has been concentrating on relationships and social issues, using a direct and cynical language. Lastly, the aforementioned prog bands were inspired by 19\textsuperscript{th}-century classical music (Macan 1997, 30-56; Covach 1997, 22-24). Pink Floyd, on the other hand, were much more influenced by blues, indicated by their tendency towards simple building blocks and repetition. The band, in fact, railed against what they perceived as “intellectual” music, to the extent that Gilmour says: “I was never a big fan of most of what you’d call progressive rock.” (MacDonald 1996, 43, 58-59, 266; Blake 2008, 247).

While most Pink Floyd tracks are longer than the average rock song, their official catalogue includes four songs that are especially long: “Atom Heart Mother” (24 minutes; Atom Heart Mother, 1970), “Echoes” (23 minutes; Meddle, 1971), “Shine On You Crazy Diamond” (26 minutes that are split into two tracks in Wish You Were Here, 1975), and “Dogs” (17 minutes; Animals, 1977).\textsuperscript{6} The earliest one, “Atom Heart Mother” is reminiscent of the progressive rock’s format, due to a relatively large amount of material and fast rate of change.\textsuperscript{7} The last three pieces, however, demonstrate a fundamentally different approach to songs of this length: the band used a small amount of cohesive thematic material, appropriate to a standard-length song, and expanded each of its sections enormously by using heavy repetition and exceptionally slow

\textsuperscript{5} Merav Meron-Dvoyris compares Pink Floyd’s music with music by Yes and Genesis, and describes similarities in both music and lyrics between representative pieces (Meron-Dvoyris 2014).

\textsuperscript{6} I treat “Shine On” as a single 26-minute piece throughout this dissertation, since it was created and recorded as such, and the original intention was to release it as one continuous piece on the first side of Wish You Were Here (Gilmour 1975).

\textsuperscript{7} See Meron-Dvoyris 2014 for a discussion about “Atom Heart Mother,” whose sections are short in comparison to Pink Floyd’s three other large-scale pieces. With six sections that carry individual titles, “Atom” resembles progressive rock’s multi-movement suites. The style and sound of “Atom” also make it stand out of the repertoire, as it employs a brass orchestra and a choir and was co-composed with classical composer Ron Gessin. Alongside the song “The Trial” from The Wall, these are the only Pink Floyd tracks that were co-written with people outside of the band.
harmonic pace. As a result, these three compositions have a lot in common with classic three- to five-minute songs: they consist of a small number of sections—each based on a repeated chord progression—that are closely linked to one another through a unified key and likenesses in harmony, rhythm, and texture. Another aspect of similarity is that “Echoes” and “Dogs” are not divided into movements; they are thus extremely long single-movement pieces.

Not a single track of comparable length by the leading British rock musicians in the 1970s employs a similar extent of thematic economy as Pink Floyd’s aforementioned songs. Tellingly, the only pieces of similar size that offer such little amount of material are Soft Machine’s instrumental tracks mentioned earlier, which are structured almost solely of repeated grooves that serve as platforms for lengthy improvisations. It seems that songs of such scale naturally demand a large variety of material coupled with frequent changes of that material. Example 1 compares the amount of material and its pace of change in “Dogs” and representative tracks of equivalent length by Yes, ELP, and Jethro Tull.

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8 This includes all tracks of over fifteen-minutes that were recorded in the 1970s by Yes, Genesis, ELP, Jethro Tull, King Crimson, Soft Machine, Van der Graaf Generator, Gentle Giant, The Moody Blues, Camel, Renaissance, Led Zeppelin, The Who, Queen, Dire Straits, and David Bowie. See Appendix 1 for the complete list of tracks. For a discussion of epic songs outside of the progressive realm see Zak 2008, 345-60.

9 Note that Example 1 does not illustrate the form of these pieces; rather, it compares the way the material is organized, especially in regard to harmony. For comprehensive analyses of Yes’s “Close to the Edge” see Covach 1997 and Macan 1997, 95-105; for an analysis of ELP’s “Tarkus” see Ford 1994. Interestingly, Mervan Meron-Dvoyris draws similarities between the form of Yes’ “Close to the Edge” and Pink Floyd’s “Atom Heart Mother” and “Echoes,” indicating that all three tracks follow an exposition-development-reprise format (Meron-Dvoyris 2014, 89-98).
Example 1.1. Difference in the variety of the material and its pace of change between Pink Floyd’s song “Dogs” and representative tracks of equivalent length by Yes, ELP, and Jethro Tull. “Close to the Edge” and “Tarkus” are multi-movement suites, whereas “Baker Street Muse” is a single-movement piece. Each harmonic entity (“harm. entity”)—a close unit of one or more harmonic progressions—is delineated separately, in a manner often enhanced by changes of key or meter. \(Ch.\) = repeated sections with identical lyrics (a.k.a chorus); \(tr.\) = transitional segments that are included as part of the preceding sections; \(m\) = minor or Dorian mode (due to the constant alternation between the two in rock music); \(ph\) = Phrygian scale; \(pd\) = Phrygian Dominant scale (Phrygian scale with a raised 3rd degree); \(v\) = varied meters or tonal centers; \(free\) = unmetered section.
The Origins for Pink Floyd’s Large-Scale Structure

It is clear why progressive rock bands were intrigued by extended forms. Long pieces fit this genre’s endeavor to experiment with and expand the musical vocabulary of rock, notably in regards to instrumentation, harmony, rhythm, and form. The large-scale medium also illustrated the impact of nineteenth-century’s symphonic poem on this eclectic genre (Macan 1997, 40-46 and Covach 1997, 22-24). Since Pink Floyd did not share that influence, the origin for their interest in large-scale form and for their distinctive model for it is harder to track, and I believe that it lays in a series of elements. First, most band members met and started playing together as architecture students at London Polytechnic. Throughout their career this has been mentioned as influential on their propensity for structure, as well as for technology, theatricality, and graphics. Another factor was remarkably practical: in their first concerts, The Pink Floyd Sound (as they were then called) simply did not have enough songs to fill a complete set. As a result, says drummer Nick Mason, “we started repeating songs towards the end of the evening as we ran out of numbers and alcohol affected the audience’s short-term memory. It was also the beginning of a realization that songs could be extended with lengthy solos” (Mason 2011, 30). This revelation was joined by the influence of the Psychedelic movement in London’s underground scene, resulting in lengthy psychedelic interludes that the band added to their R&B covers instead of the customary solos (Schaffner 1991, 12; Blake 2008, 57). Although these improvised sections were originally added to the songs only “to pad them out,” the band decided to concentrate on them and develop them, especially after seeing the enthusiastic reaction of their chemically altered audience (Mason 2011, 35, 48). The band’s involvement with films throughout their career, including writing two movie soundtracks, also played a role. Nick

10 See Schaffner 1991, 130, 133, 162, 164; Mason 2011, 9, 125-126; and MacDonald 1997, 82.
Mason linked this experience with the endeavor to develop a single idea for an entire section and avoid standard song structure (Mason 2011, 168). Lastly, seeing other bands, such as Cream, playing long solos on stage was also influential (Blake 2008, 53).

Pink Floyd’s first attempts in recording large-scale tracks demonstrate these influences well. The instrumental “Interstellar Overdrive” (10 minutes; *The Piper at the Gates of Dawn*, 1967) is a condensed studio version of a popular live number that lasted anywhere from ten to twenty minutes on stage, depending on the concert. Based on extended improvisations more than on written-out thematic material, “Interstellar” and other numbers were “chosen as vehicles . . . to act as a framework for constantly changing ideas,” as part of Syd Barrett’s “radical concept of improvised rock music” (Mason 2011, 83). “A Saucerful of Secrets” (12 minutes; *A Saucerful of Secrets*, 1968), on the other hand, is a three-movement instrumental piece that was created from scratch in the studio. Unlike “Interstellar,” this piece was carefully structured using a chart by Waters and Mason, who were considered “the architects” in the band (Schaffner 1991, 133; Mason 2011, 125-126). Tellingly, it is the structured “Saucerful” and not the improvised “Interstellar” that is considered by the band as the ancestor for the later (and much longer) “Atom Heart Mother” and “Echoes” (Schaffner 1991, 134-135; Mason 2011, 154).

**The Challenge in Pink Floyd’s Model**

The Floydian strategy presents a substantial challenge: how could a rock song that is based on such a small amount of material retain vitality over such a long duration? In other words, do the large-scale compositions of Pink Floyd showcase enough variety, direction, and cohesiveness—the three criteria I suggested earlier—to make them “work,” considering how
economical their thematic content is? ELP, Jethro Tull, and Yes utilize their propensities for harmonic ingenuity, frequent modulations, jagged rhythms, and polyphonic textures to create extensive compositions that keep the listener constantly intrigued and surprised. On the other hand, Pink Floyd’s toolbox, which contains short, repeated chord progressions and steady rhythmic and textural patterns—in fact, the components of an archetypical standard-length rock song—seems inadequate for maintaining momentum over such an extended length. This challenge is highlighted by Pink Floyd’s approach to tonality. While lengthy progressive-rock pieces often get mileage out of multiple keys (as illustrated in Example 1), thus providing senses of tonal contrast, progression, and resolution, Pink Floyd’s large-scale songs eschew this practice by staying in one key throughout (or almost throughout, in the case of “Echoes”). In a nutshell, Pink Floyd used the building blocks of classic-rock to create a large-scale architecture that belongs more naturally to progressive rock.

This dissertation explores how “Echoes,” “Shine On You Crazy Diamond,” and “Dogs” meet the compositional challenge issued by their limiting model. Thus, I will analyze and assess the means by which the song maintains a sense of variety, direction, and cohesiveness, despite their lengths. Spread out over six years in the band’s career, these songs showcase different approaches to this task and thus illustrate an evolution in the band’s style. In addition, I aim to use these pieces as a case study for complementing existing analytical scholarship on Pink Floyd by offering a close look at text-music relations, roles and construction of the guitar solos,

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11 Edward Macan indicates a few tools that progressive rock used for coping with the challenges of variety and direction: systematic juxtapositions between acoustic, gentler, and simpler sections (which he calls “feminine”) and electric, denser, and complex sections (“masculine”); various types of melodic expression; and a gradual buildup of tension and sound toward a powerful climax (Macan 1997, 43-44). While all three exist in Pink Floyd’s music to some extent, they are definitely more common in the progressive rock of Genesis, ELP, Gentle Giant, and Yes.
harmonic vocabulary and syntax, and architectural design, all in three individual songs. This is especially true in regards to “Echoes” and “Dogs,” both of which were yet to be subject for in-depth analytical research. Through analyzing and transcribing these three extensive compositions, I thus wish to contribute to the understanding of Pink Floyd’s style.


One might question the need for an isolated analysis of tracks that are part of larger unified works, since both “Shine On You Crazy Diamond” and “Dogs” are parts of concept albums (Wish You Were Here and Animals, respectively). The organization of text, pitch, and sound in Pink Floyd’s concept albums deserves a separate analysis, as in Shaugn O’Donnell’s investigation of the tonal arc in The Dark Side of the Moon (O’Donnell 2005). These two analytical methodologies are reminiscent of the way we might analyze a 19th-century symphony. Through their concept albums, Pink Floyd contributed greatly to the notion that LPs, and not songs, are the ultimate medium for a complete artistic statement in rock music. Audiences, however, have continued to consume rock music in the format of standalone songs since the 1960s, when it was the default medium (Yodfat, 215-216). This is especially evident today, when songs have again become the most popular format for consuming music. Thus, while it is important to trace inter-movement connections that hold the piece together as a whole, it is no less essential to understand how a lengthy Allegro movement works on its own.

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Chapter 2

Distant, Motionless, and Submarine: Time and Movement in “Echoes”

When placing the needle on side A of Pink Floyd’s 1971 record Meddle, the first sounds one hears are a blowing wind and a thick stroked bass note with a delay effect, which then transforms into a one-note energetic bass figuration in a perpetuum mobile fashion. An atmosphere is immediately evoked and sets the foundation for the piece “One of These Days.” With a two-chord pendulum as the entire harmonic skeleton and without a defined melody, the 6-minute instrumental track is organized almost solely by texture, dynamics, and timbre. Like the one-chord instrumental “Careful With That Axe, Eugene” from 1968, this track creates the impression of a live jam that was put on record and is based on very little thematic material.

The opening of the second side of the record could not be more different from the first: A single high ping is heard, accented but gentle, coated with a spacey reverb effect and a tail of a sustained synthesized note. This ping has the same role the triangle often has in orchestral music: it announces something new. This sets the trigger for “Echoes,” an ambitious 23-minute piece that is considered a milestone in the evolution of the Floydian style. After its startling opening, however, it turns out that many of “Echoes” ingredients are quite similar to those of “One of These Days” and “Eugene.” Tempos at the bottom of the metronome join static textures and groove-based jams in creating a slow-developing track with very little thematic material. Will these foundations be effective when stretched over an entire side of a record, and which role will the opening ping play in the song?

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Background and Form

Recorded a year after the bombastic “Atom Heart Mother,” which involved a brass orchestra, a choir, and a classical composer to tie the knots and write the notes, “Echoes” is the band’s first attempt to create a piece of similar scale on their own. It was constructed based on thirty six musical fragments that were recorded in the studio during January 1971, with no material written in advance (Schaffner 1997, 164). The song features an extended use of sound processing and unusual instrumental techniques, taking full advantage of sixteen recording tracks instead of the eight that the band had been using up to that point (MacDonald, 164). The instruments, however, sound thin and do not always integrate, and the performance is likewise less tight than that in following albums. This is Pink Floyd’s debut of a sung large-scale piece, and its somewhat abstract lyrics hint at the direction that would occupy lyricist Roger Waters for the rest of his career: people and relationships, which in “Echoes” are hidden under a surface of underwater imagery. While the musical ideas came mostly from Gilmour and Wright, Mason and Waters took the same role of “architects” that they had held in “A Saucerful of Secrets” and mapped out the material from beginning to end on a chart.  

Considering its length, “Echoes” has a surprisingly straight-forward form. It contains only two short themes: a sung verse (the only sung segment in the song) and a thematic guitar riff that I view as an instrumental chorus. These are joined by extended intro, interlude, and outro, as well as several guitar solos and an instrumental bridge. More than any other large-scale Pink Floyd songs, “Echoes” looks like a common 4-minute song that got blown out of proportion, with two differences: the chorus in “Echoes” is instrumental, and the instrumental segment of a

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15 Schaffner 1997, 164; Wright 2008; Wright 1997.
16 Another possible reading is that each sung section contains a verse (the two minor phrases) and a chorus (the phrase that begins with the tonic major), the way Merav Meron-Dvoyris interprets it (Meron-Dvoyris 2014, p 95-96).
solo or an interlude in the shorter model is multiplied in “Echoes” into an series of instrumental sections (see example 2.1). Due to a prolonged interlude in the middle that has very little ties to the rest of the piece, “Echoes” has an apparent ABA form: an exposition, where the thematic material is introduced; a free interlude; and a reprise, where the themes return (see example 2.1).

Example 2.1. “Echoes” as an expansion of a standard-scale form, alongside songs of a similar structure:

The Beatles’ “Revolution” (1968), The Rolling Stones’ “Jumping’ Jack Flash” (1968),
and Pink Floyd’s “Matilda's Mother” (1967).

Buildup in the Verse: “Inviting and Inciting Me to Rise”

A few factors contribute to the sense of direction in the verse, compensating for somewhat repetitive melody and harmonic progression. Each verse begins with two identical phrases in the key of C♯-minor, followed by a closing phrase that begins with a surprising C♯M chord (see example 2.2). While this major tonic is only temporary, it creates a sense of arrival every time it
appears, largely due to the vocal harmonies that highlight the major third. Additionally, the closure of the third phrase resonates with and amplifies the ending of the previous phrases. While the first phrases end using a melodic motion D♯-E in an inner voice, the third phrase magnifies the same motion by having the entire chord move upwards (see example 2.2). Both factors enhance the verse’s third verse and provide it with momentum.

Similarly, each verse ends with a harmonic, melodic, and textural rise in accord with the lyrics. Like something that “starts to climb toward the light,” the V surprisingly ascends to VI, thus offering a literal deceptive cadence. With no one who “forces down our eyes,” the two parallel vocal melodies ascend and fly “around the sun,” spinning between two adjacent pitches. This upward motion is extensive: after all, it has begun underneath the water. Likewise, when the speaker “throw(s) the windows wide and call(s) to you across the sky,” this call must be loud enough to be heard through such distance, and the entire band joins forces in crescendo, most
effectively by the drum fill ({3:39-3:43}, {4:52-4:56}, {19:48-19:56}). All these elements result in a strong sense of direction and a massive buildup toward the upcoming instrumental chorus.

The Instrumental Chorus: “Starts to Climb Toward the Sky”

Like most Pink Floyd songs, “Echoes” does not have a sung chorus: neither lyrics are repeated throughout the song, nor does a sung section stand out as a clear core of the piece. Instead, the song marks the debut of what can be called an instrumental chorus: an assertive instrumental theme led by an electric guitar that is positioned in a dramatic peak of the song, where a sung chorus might have been expected. Such entity is different from the groovy jams, improvised solos, and free-form improvisations that saturated Pink Floyd’s instrumental segments prior to Meddle due to its identifiable, thematic character as well as its multiple appearances throughout a song. The addition of a thematic guitar melody to the Floydian vocabulary reflects the rising influence of guitarist David Gilmour, who joined the band after its debut album, on the direction and sound of the band.\(^\text{17}\) Like a sung chorus—the core of most standard-scale songs that is occasionally also found in large-scale prog pieces—such an instrumental chorus can greatly contribute to the overall structure: by presenting a prominent material that provides an energetic highlight, it adds both to the sense of variety and to the sense of direction; and by repeating several times throughout the piece, it provides the listeners with familiar music and links different sections together, thus contributing to the sense of cohesiveness.

\(^{17}\) Schaffner, 166. Gilmour also says that the early 1970s was when he began to be proud of his playing, and mentioned a section in “Echoes” as an example (MacDonald, 206).
The instrumental chorus in “Echoes” follows each verse and completes it to a recurring dual unit of “verse plus chorus” (see example 2.1 above). Following the aforementioned dramatic buildup at the end of the verse, the instrumental chorus begins with a strong sense of arrival. It is centered on three variations of an ascending guitar riff that illustrates the preceding lyrics: “Something stirs and something tries / And starts to climb towards the light” (see example 2.3). This section is effective in that it is easily identified when appearing after each verse, thus contributing to the song’s cohesiveness. The basic guitar riff, however, is not as expressive and memorable as instrumental choruses in later songs, and it is based on a simple arpeggio using a strict sequence. Furthermore, each time the riff appears, the phrases are modified and gradually chopped to an extent that by the third chorus only sparse chromatic motions are left. All of these prevent this instrumental chorus from fulfilling its potential and becoming a solid core that provides the surrounding material with direction and strengthens the structure of the piece as a whole, in the way instrumental choruses in later pieces do. Tellingly, in a live performance of “Echoes” that took place between the recording sessions of the album, these riffs are yet again different (see example 2.3). It is thus plausible to argue that, in the eyes of the band, none of these riffs was an ultimate version that should remain unchanged. This approach will change dramatically in instrumental choruses in later pieces, where the riffs will religiously be kept the same in each repeat and performance, with no room for improvisation.

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18 Compare this section to the instrumental sections that open “Wish You Were Here” (1975) and “In the Flesh?” (1979), both of which can be considered as instrumental choruses and are the core of these songs. The instrumental choruses in “Shine On” (1975) and “Dogs” (1977) will be discussed in the next chapters.
Example 2.3. The guitar riffs (reduced) in each of the instrumental choruses in the studio version of “Echoes,” as well as in a live recording from a concert at Paris Theatre in London, March 10, 1971

The Guitar Solos

Guitar solos have a place of honor in the music of Pink Floyd. The playing of David Gilmour is a fundamental, highly recognizable component of the band’s sound. Gilmour belongs to a celebrated group of guitarists who made their names as masters of timbre and lyricism rather than of virtuosic technique. In numerous Pink Floyd songs, his solos carry more melodic

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19 This bootleg recording was released on a CD (Pink Floyd 1989).
20 In the pantheon of rock there are several other guitarists whose playing is praised due to their sound and expression rather than speed and virtuosity, e.g., Eric Clapton, Jimi Hendrix, and Mark Knopfler. Their playing is clearly influenced by the blues, a genre that celebrates a “cool” approach and spacious phrasing. Gilmour claimed that it was his technical limits that pushed him to “rely on other things” such as sound and effects and “try and make nice, sort of, melodies with it” (Gilmour 1984).
weight than the vocal parts do, fulfilling his stated desire to “try to make it [the guitar] sing… imagine that the guitar’s kind of singing” (Gilmour 1984). Consequently, while solos are often an opportunity for guitarists in live concerts to improvise and depart from the recorded version, solos in Pink Floyd concerts—as well as those of their cover bands—tend to remain vigorously faithful to the solos recorded by Gilmour in the studio.21 Their integral role is especially evident in songs featuring multiple solos such as “Money,” “Shine On You Crazy Diamond,” “Dogs,” and “Comfortably Numb.” More than the sung sections, the guitar solos provide an overall sense of direction by outlining the contour in energy level of the song, articulating its structure, and leading it to its peak. After the departure of Syd Barrett in 1968, the role of the electric guitar in Pink Floyd’s music arguably became as central as that of the singing.22 Gilmour once shared his opinion on the matter with a typically British flair: “The majority of people who like to listen to music do want to hear singing… The fact that that voice is babbling inanities doesn’t seem to matter terribly much. I would rather have someone playing something beautifully on a guitar or sax or synthesizer than have a voice babbling inanely” (MacDonald 1996, 185).

Unlike the aforementioned songs, in which distinctive solos are spread out throughout the track, “Echoes” contains several soloing segments that are all compacted together back to back 5:24–10:45. As a result, they have a relatively limited impact on the song’s overall sense of direction. Due to differences in the guitar sounds, harmonic progressions, and accompanying

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21 See, for example, the performances of the guitar solos in the song “Comfortably Numb” in the Pink Floyd concerts Pulse (Mallet 2006) and Live 8 (Pink Floyd 2005), as well as in concerts by cover bands, such as Australian Pink Floyd 2011 and Think Floyd 2012.

22 When Syd Barrett led the band, the role of the voice in Pink Floyd’s music was much more central than in their later works and contributed to the pop character of many of the songs, while the main soloing instrument was Richard Wright’s keyboard. Gilmour, who replaced Barrett as the band’s guitarist, brought with him a different style and abilities that greatly influenced the musical direction of the band and contributed to placing the guitar in the spotlight. In the first years after Barrett’s departure, the band wrote a large number of instrumental tracks, alongside multiple songs in which the singing sounds insecure. Arguably, only with the release of the 1973 LP The Dark Side of the Moon, Waters and Gilmour started feeling comfortable as lead singers.

23 The format of several subsequent solos is reminiscent of jazz and is also found in blues, which, as mentioned, was very influential on guitarist David Gilmour.
textures, it is plausible to delineate three individual solos: {5:24-5:52}, {5:52-7:01}, and {7:01-~10:40}. Compared with Gilmour’s solos in later years, these solos are somewhat repetitive and less structured. Their phrases are less memorable, and many do not develop organically into one another. Additionally, the first two solos are slightly obscured in the mix, at times creating an impression of an accompanying guitar that surprisingly found itself on center stage. Likewise, the guitar sound in these solos is thin and dry, unlike later solos that would fill the sound spectrum with various effects, most notably reverb. Tellingly, in live renditions of “Echoes” Gilmour played completely different solos than those on the album, also utilizing different effects on the guitar. This is while many of his solos in later songs tend to stay the same in live concerts (as will be discussed in following chapters).

While the first solo dissolves organically into the second due to a continuous harmonic progression and accompaniment, the transition to the third solo features a dramatic reduction in density and volume, as well as thinning the texture and harmony. This sudden shift is further punctuated by a decisive closure in the form of symmetric chromatic motion between the outer voices (see example 2.4). The tension that has been built starting with the second verse through the second guitar solo therefore releases at once. As a result of this zigzagged energetic contour as well as their melodic construction, the three solos lose certain stamina and continuity that could have contributed to the sense of direction throughout such prolonged soloing unit.

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24 Maben 2003, Pink Floyd 1989. Notably, when Gilmour showed pride in his playing in “Echoes,” he referred to the bridge section and not to his solos (MacDonald, 206). These are also not mentioned among his favorite solos (Gilmour, 1985).
Example 2.4. Decisive closure using symmetric chromatic motion between outer voices in the transition from the second guitar solo to the third

The Groovy Jam and the Open Interlude: “Hangs motionless upon the air”

Pink Floyd’s psychedelic jams in their early concerts were invitations for the audience to put life on hold and immerse themselves in the sound. That music extensively featured oscillating harmonies, repetitive rhythms, and manipulations of timbre, all of which provide a music equivalent to a hallucinogenic experience (Whiteley 1990, 38). As such, they affect the listener’s perception of time by creating an impression that time has stopped, slowed down, changed direction, or disappeared. This tactic was soon adopted into the studio, where these tools were joined by slow tempos and harmonic pace, sound processing, and prolonged forms, which all resulted in a sensation of a slower time. This is especially evident in two archetypical devices in Pink Floyd’s music that I call “the groovy jam” and “the free interlude.” Recurring throughout the band’s corpus, these instrumental sections seem to be smartly-dressed descendants of those

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25 Yodfat 2014, 221-226; Whiteley 1990, 46. This approach gets to its extreme in Pink Floyd’s latest album, *The Endless River* (Cohen 2014).
early live jams. Both types are featured in “Echoes” and are largely responsible for its prominent size.

The groovy jam archetype is a rhythmic section in 4/4 with a fixed texture and steady or slow-changing dynamics, which sometimes showcases a spacious guitar solo hovering on top. It is usually based on constant alternation between two chords, most often a minor tonic (i) and a major four (IV). In contrast with longer chord progressions that retain a sense of direction, such harmonic pendulum creates a static impression. The free interlude archetype is based on little to no written material, is usually unmetered and often non-tonal, and is saturated with extended techniques and sound effects. In “Interstellar Overdrive,” ”Echoes,” and “Dogs,” such free interludes separate the themes at the beginning of the song from their reappearance at the end, not unlike the form of a jazz standard with a well-defined head chorus and out chorus, nd improvised solos in the middle. Both the groovy jam and the free interlude archetypes, hence, offer a motionless, meditative pondering that leaves listeners in one place, rather than taking them on a journey to another.

“Echoes” third guitar solo is a representative example of the groovy jam. This 4-minute section contains guitar licks so sparse that they hardly link into a continuous, coherent melody.

26 David Gilmour draws this link when explaining the origin for the instrumental “Any Colour You Like,” which is as an example for such “groovy jam.” (MacDonald 1997, 168).
27 Groovy jams over alternating i and IV can be found in the ending of “Pow R. Toc H,” the guitar solos in “Atom Heart Mother” and “Echoes,” and the majority of “The Great Gig in the Sky” and “Any Colour You Like.” Roger Waters indicated that jams over this harmonic pattern were part of the writing process for the 1973 LP The Dark Side of the Moon, and indeed, this progression becomes motivic in this album (Longfellow 2003). This jamming device is also discussed by Merav Meron-Dvoyris (Katorza 2014, 85-86). Similar groovy jams using two different chords can be found in “One of These Days” from the other side of Meddle, as well as in five tracks of the mostly-instrumental 2014 LP The Endless River (Cohen 2014). The early instrumentals “Careful with That Axe, Eugene,” “Dramatic Theme,” and “Obscured by Clouds” are entirely based on groovy jams over a single chord.
28 Indeed, Syd Barrett, the front man and main writer of Pink Floyd in its early years, recognized the structural resemblance between jazz standards and his own writing: ”structuring . . . like in jazz: starting with a riff and then improvising” (Cavanagh 2003, 12). Such free interlude also appears in the middle of “Set the Controls for the Heart of the Sun” in its live version from Ummagumma. Other non-tonal sections, many of which also unmetered, can be found throughout the entire corpus in “A Saucerful of Secrets,” “Quicksilver,” “Main Theme,” “Up The Khyber,” and “Party Sequence.”
In particular, the sporadic riffs at the end of this section seem to be more of a sidekick of the groove than leading material ({9:00-10:40}). The funky accompaniment is built of a repeated rhythmic and textural pattern, and it is solely based on a harmonic pendulum of i and IV over a tonic pedal tone. Hence, the melody, rhythm, texture, and harmony, all result in a meditative—although groovy—experience, in a fashion similar to Pink Floyd’s concerts at UFO club, where audience were dancing in repetitive motions and seemed to be able to go on forever. This section is then followed by an extended free interlude, after virtually all components of the material thus far (melody, harmony, rhythm, texture, and timbre) evaporate ({~11:20--~14:40}). Spacious and completely non-tonal, this free interlude is exclusively based on a wind-like sound and seagull-like yowling that were produced by the bass guitar and electric guitar, respectively (Wright 2008). Both the groovy jam and the free interlude illustrate the stillness captured in the lyrics: the albatross that “hangs motionless upon the air,” the distant waves and tide, and the fact that “no one calls us to move on.”

While these sections might suit live Psychedelic happenings perfectly, I find that they are problematic when put on record as part of an otherwise structured 23-minute piece of music. Since the groovy jam includes no links to earlier material (beyond the common key and tempo) and the free interlude likewise presents completely autonomous material, both sections could in theory fit in any large-scale Pink Floyd track. The stasis of these sections, coupled with their

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30 Indeed, the groovy jam in “Echoes” (7:00--11:00) has a striking resemblance to the one in “Atom Heart Mother” (10:19--12:40), the 23-minute piece from the previous album. Both sections employ identical tempo, instrumentation (electric guitar solo on top of a drums-bass-keyboard accompaniment), and chord succession (i-IV over a tonic pedal tone), as well as similar textural and rhythmic patterns (notably involving a crash cymbal that marks the 2nd beat in every 4/4 measure).
detachment from the rest of the song, results in weakening both the cohesiveness and the sense of direction that were created by the preceding material.  

Indeed, in retrospect the band disparaged their tendency toward long, repetitive sections. Roger Waters says: “I got the feeling that there was a serious lack of panic about losing the listener’s interest,” and David Gilmour states in regard to the origins of such sections: “We used to do very long, extended jamming on stage—interminable, many people would say, and probably rightly” (MacDonald 1997, 275, 188).

**The Ping’s Echoes**

The ping that opens “Echoes” is probably the single most recognizable element in the piece. It was created by accident when the band was experimenting with ideas in the studio. Due to a nontraditional miking of a piano through a Lesley speaker, every time keyboard player Richard Wright hit a high B it produced what Gilmour describes as “a strange resonance . . . kind of feedback thing . . . Ping! A complete accident. We said ‘That’s great!’ and we used it as the start of the piece” (Schaffner 1991, 164). The ping immediately evokes a sound world and an atmosphere. It appears three times before a low C♯ on the piano joins in and identifies the key of

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31 This conclusion, of course, does not intend to judge the musical value of these sections; rather, it assesses their contribution to the overall structure regarding the criteria of variety, direction, and cohesiveness.

32 Robert Wyatt of Soft Machine, on the other hand, remembers hearing the Floyd in their early concerts and being amazed exactly by their “nerve in taking their time to get from one note to another. I couldn’t do it, but Floyd were always in control” (Blake 2008, 70).

33 In tours in the late 1980s, the audience applauded the moment they heard keyboard player Richard Wright playing the opening ping of “Echoes” (Blake 2008, 388). Guest bassist Guy Pratt remembers: “There was a beautiful heckle one night . . . ‘Give us a ping, Rick!’” (ibid).

34 Since Mason writes that this demo version was the one that was used for the final album, I reckon the note that created the incident described here must be the same high B that is heard at the beginning of “Echoes.” (Mason 2011, 153).
the piece as C♭ minor and the ping as its 7th degree. Although it is then joined by other notes on the piano, the ping keeps standing out due to its register, timbre, and louder dynamics. It repeats thirteen more times over a harmonic pendulum—not unlike the one that later accompanies the groovy jam— before it fades out. The ping does not appear again until the bridge, but its presence lingers throughout the exposition. Over the course of the intro, the ping’s B evolves into the leading-tone B♯, which in turn generates tension by its desire to resolve into the tonic C♭ (see example 2.5). These three notes and the pulls between them set the foundation for the melody of the entire verse—the only sung section in the piece—as well as for similar chromatic fragments in the bass line throughout the exposition (see markings in red). This tight, economical pitch structure grants the entire exposition a strong sense of cohesiveness. Since, however, the resulting melodic and harmonic skeleton is quite circular, it again induces a static experience rather than a journey with a clear direction and anticipation toward the following sections.

35 A minor-7th chord as a tonic is prominent in Pink Floyd’s vocabulary, and it plays a central role in numerous songs including “Breathe,” “Welcome to the Machine,” “Shine On You Crazy Dimaond,” “Any Colour You Like,” and “Dogs” (alongside a 9th), as well as the dramatic closing chord of “The Great Gig in the Sky.”

36 As example 2.5 shows, the B of the ping, after fading out, is picked up in a lower register and develops into B♯, all linked by the unique timbre of the piano. The natural 7th (B), a relatively stable degree in Floydian harmony, thus evolves into the leading-tone B♯ that desires to resolve into the stable tonic (C♭). This process then repeats until the arrival of the verse, where the main vocals take charge and resolve both the piano line and the counter melody of the guitar into C♭ and E, respectively. One can argue that the motivic B appears again later as the first note of the third guitar solo (7:25+). Additionally, the *crescendo* effect of reversed cymbals that is used throughout the verse contributes to the sense of motion forward. The use of reversed drum sounds will be revisited in later works such as “Shine On You Crazy Diamond.”
The section with the strongest momentum in the piece is the instrumental bridge (\{\sim 14:40-19:11\}). It begins with a sustained chord in the organ, which gradually grows out of the free interlude. Following three minutes of abstract sounds with no tonal gravity, this chord immediately sounds like a tonic. Without perfect pitch, it is reasonable to assume that it is C#-minor, the key that opened the piece and occupied the entire exposition before the free interlude stirred things up. After some twenty seconds, however, during which tonality is gradually rising from the dead, the momentous ping marks its resurrection. With a combination of an unmistakable timbre and register, this one soft note announces the approaching reprise no less effectively than a strike of a gong (\{15:03\}). But the most striking element in its revival is its pitch: for the first time in the piece, the ping is in unison with the accompanying tonic.

I remember hearing “Echoes” for the first time, and I recall my confusion at this moment. The ping that opened the song produced a minor 7\textsuperscript{th} over the bass: a B-note over a C#-minor tonality. Not having perfect pitch, I assumed that the transition section began in the same key. Hearing the ping in unison with the key caught me by surprise: if the chord is C#-minor, did the

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\[37\] I adopted the use of the term fanfare from Merav Meron-Dvoyris (Meron-Dvoyris 2014, 95).
ping transpose into C♯? I ran to the piano and found out that it was the other way around. The ping was still B; it was the key that has changed to B-minor (see example 2.6). After the universe of pitch, texture, meter, and timbre collapsed during the free interlude, the loyal ping in fact remained tactless: it is the surrounding world that has changed. The question that remained was—will the original key of C♯-minor return?

The sustained B-minor chord soon transforms into a repeated 4-chord progression, which is a variation in the key of B-minor on the verse’s harmony (\{16:21+\}). By adopting material from the exposition, this progression joins the ping in setting the ground for the returning themes and building a sense of anticipation. Although this section is somewhat reminiscent of the song’s intro, the new key, as well as new elements such as a perpetuum mobile bass figuration in the spirit of “One Of These Days” and a new meter of 12/8 offer variety and contribute to the sense

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38 Incidentally, it is possible that the decision not to transpose the ping to C♯ was more practical than structural. Based on several sources, it seems that the special sound created by the piano and the Leslie speaker was caused by hitting a specific key (Mason 2011, 153; Schaffner 1991, 164). It is likely that a different pitch, such as C♯, would not have produced the same effect.

39 Meron-Dvoyris describes the evolution of this chord progression in Meron-Dvoyris 2014, 98.
of forward motion. It is enhanced by a slow crescendo and gradual accumulation of the texture. An orgasmic explosion of a guitar orchestra marks a peak in this section: melodic fragments are woven together using several parts that are multiplied by a delay effect, and additional guitars double the bass line in a massive distorted sound (\{18:14+\}). The energy then receives a final, dramatic boost: after nine repetitions and 140 seconds, the chord progression is transposed up a step, back to the original C\#-minor (\{18:44+\}). Just like the structural melodic rise from B to C\# during the song’s intro, the tonal skeleton in the bridge ascends from B to C\# and grants the entire bridge with a last boost of momentum (see red marking in last example). The bridge concludes with a drum fill, an ascending guitar’s slide, and an overall crescendo (\{19:08-19:12\}), all leading toward a satisfying sense of arrival as the reprise begins, and everything comes back to normal: the original 4/4 meter is retrieved, the harmony is back at the original key, and the ascending guitar slide melts into a piercing organ chord that gradually fades out. “Cloudless every day you fall,” the third verse quietly opens, embracing the familiar melody and harmony of the previous verses using a thinner, “cloudless” texture, as appropriate after such thunderous climax.

To summarize, the ping plays a structural role in the piece: it triggers an ascending motion that becomes motivic throughout, links between the intro and the bridge, and catalyzes the reprise, thus creating both a sense of cohesiveness and a sense of direction. It is joined by the instrumental bridge, which, following the static impression of preceding sections, creates a

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40 This bass figuration became an iconic Floyd device in later tracks such as “Shine On You Crazy Diamond – part VI,” “Sheep,” and “Another Brick in the Wall - part I.” Although “One Of These Days” and “Echoes” mark the first time Pink Floyd used a delay effect for creating such figuration, similar aggressive, repeated bass patterns opened both The Piper at the Gates of Dawn (1967) and Sources of Secrets (1968) albums, as well as the track “Interstellar Overdrive.”
dramatic momentum using a skillful mix of harmony, timbre, orchestration, texture, and
dynamics, bringing the energy back and carrying the listeners into the final verse.

The Ending: “A million bright ambassadors of morning”

While all three verses are identical in melody and harmony, the verse in the reprise
({19:12+}) carries some apparent differences in comparison with the two that open the song
({2:58+} and {4:12+}). While the first verses showcase the vocals in a natural, unprocessed
sound, in the third verse they are saturated with a flanger-like effect, suggesting an underwater
environment that corresponds with the song’s imagery. The busy accompaniment in the first two
verses, featuring countermelodies by a slide guitar and keyboards, gives place in the closing
verse to a thinner background of sustained organ chords. Lastly, the sound mix of the third verse
is completely different than the previous two, presenting the voices in the front and offering a
wider panning of the left and right channels, most evidently in the drum set. These subtle but
effective changes keep the verses varied, while also offering a progression from the exposition to
the reprise. Coming after a series of solos, interludes, and a climactic bridge, this third verse—
“the echo of a distant tide”—has a different impact than the opening verses, and it is reassuring
and comforting.

The third verse is followed by a triple appearance of the instrumental chorus ({19:56-
21:17}). A common device from standard-scale songs, augmenting the final chorus places
weight at the end of a composition and creates an overall momentum. Since there is little variety
between these three choruses and no significant difference between them and the previous
choruses, this section feels quite repetitive and not as uplifting as it could have been, considering
that it is the last loud and energetic section in the piece. It is then followed by a mournful duet between the piano and the guitar over the verse's progression ({21:17--22:30}). The song ends with a Floydian flair: The “million bright ambassadors of morning” are illustrated by a sound processing that creates the impression of numerous voice-like parts that seem to keep sliding up and never stop ({~22:30-end}). An upward movement is yet another musical equivalent for a psychedelic experience (Whiteley 1990, 38), and this section indeed suggests an illusion that time is speeding up or slowing down. Gilmour described:

“. . . like those Escher paintings where the staircases go up and up and up, never getting anywhere . . . There’s a tone and it keeps going ‘ding ding ding ding,’ and up and up and the same time they are surreptitiously taking out high frequencies, so that it never gets anywhere. That’s what the choir on the end does right on the very end of ‘Echoes.’” (Gilmour quoted in MacDonald, 206)

Hence, the outro captures two principal and somewhat contradicting forces that live within “Echoes” from beginning to end: an upward motion (“up and up and up”) and a directionless state (“never gets anywhere”). Additionally, a repeated high pitch keeps resonating on top of the ascending glissandos: although its timbre is different and its pitch is G♯, it nevertheless resembles the ping and thus neatly ties the ending of the piece with its beginning.

Summary

“Echoes” is a transitional piece in the development of Pink Floyd’s style in general and of their large-scale creations in particular. While long segments in the piece are meditative and clearly resonate with early extended pieces and live jams, others suggest a careful arrangement
and structural planning that would be further explored in later works. The tension between stasis and direction is a key factor in understanding and experiencing “Echoes,” and both seem to live within it in equal measure. After “Echoes,” Pink Floyd has clearly leaned toward tighter structures with clearer directionality, while meditative and free-form sections have become shorter and sparser. This progression exemplifies a broader change in the aesthetics of the band’s music, as Psychedelic elements were gradually vanishing in favor of clear and precise lyrical and musical statements.

“Echoes” is inconsistent in maintaining the criteria of variety, direction, and cohesiveness. On the one hand, a skillful use of harmonic rhyming, texture, sound, and instrumentation creates a sense of progression throughout its vocal and instrumental themes. A tight melodic organization keeps the sung melodies cohesive, and motivic development of a seed from the beginning of the track greatly contributes to the overall structure and direction. The only large-scale piece in the repertoire to feature a secondary tonic, “Echoes” is granted with considerable momentum due to a structural use of modulation in the bridge section. Musician and critic Lenny Kaye from the Patti Smith Group nicely summarized both the merits of “Echoes” and its place in the band’s evolution by saying that the track demonstrates “the band’s growing mastery of ‘the art of the segue.’” (Schaffner 1991, 164). On the other hand, the minimal motion of the vocal melody prevents it from developing substantial tension. Furthermore, lengthy repetitive sections create a static, timeless impression and do not clearly cohere with the rest of the material, thus weakening the song’s momentum.

Indeed, when Pink Floyd released their compilation CD *Echoes* in 2001, “Echoes”—despite being the title track—was dramatically shortened from 23 minutes to 16. Although it is shorter by a third, the edited version is astonishingly similar to the original, and tellingly, it is mostly the
freer sections that were cut. While this edit was probably necessary for practical reasons in order to fit the compilation, it is fair to assume that the band found these cuts to be tolerable, if not beneficial. Released thirty years after the original album, this edited version seems to reflect the transformation that the band has gone through in regards to structure. During tours in the 1980s, “Echoes” clearly stood out as a representation of older and freer aesthetics. The young musicians in the ensemble, extremely competent with the rest of the set, could not comprehend the open-ended free interlude, and David Gilmour neatly summarized the nature of such sections by explaining that musicians need to “disintegrate” in order to perform them properly (Blake 2008, 331).

The band’s opinions about the piece over the years reflect its problematic structure. While Richard Wright defined “Echoes” as “a very thematic piece of music” and considered it as “one of the finest tracks the Floyd have ever done,” Roger Waters described it as “a long, drawn-out piece,” stating that the album Meddle showed “a groping for form.” Nick Mason said that its shape is “slightly meandering” and justified dropping it from the set list shortly after the Momentary Lapse of Reason tour began by saying that “. . . it wasn’t much fun to play. It was a bit dull. It’s very repetitive. It can be quite nice but we just found there wasn’t enough ‘meat’ in it to make it interesting . . .” On another occasion, however, he noted that he found the “slow pacing” of the piece “rather pleasant.” While David Gilmour was proud of the “guitar orchestra” in the bridge section, he found “Echoes” to be less significant than some of the much shorter tracks on the other side of Meddle.”

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Chapter 3

“The Shadow of Yesterday's Triumph”: “Shine On You Crazy Diamond” and the Stage Theory of Grief

In 1968, Pink Floyd’s founder, singer, songwriter, and guitarist Syd Barrett was gradually losing his hold on reality. The pressure from the music industry, the public, and his colleagues likely enhanced Barrett’s increasing use of LSD and, some argue, preexisting mental instability. After only one album and several singles, Syd Barrett was officially dismissed from the band. Drummer Nick Mason described one of the moments that led to this unfortunate series of events:

“Syd was completely out of it yet again, and the rest of us were finally reaching breaking point. It was time to come out of denial. We had tried to ignore the problems, and willed them to go away, but even our lust to succeed could no longer obscure the fact that we could not continue with Syd in this state, coupled to which it just was not fun anymore – and doubtless no fun for Syd either. We did not want to lose Syd. He was our songwriter, singer, guitarist, and – although you might not have known from our less than sympathetic treatment of him – he was our friend.” (Mason 2011, 105)

Seven years later, Pink Floyd became one of the most successful bands in the world, as their 1973 LP *The Dark Side of the Moon* immediately became an international bestseller. Bassist Roger Waters decided to write a tribute to their original front man, songwriter, and friend, whom

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42 Mason 2011, 96, 111; Schaffner 1991, 106.
they all had not seen for years. “Shine On You Crazy Diamond” was written as an epic 26-minute piece that is structured out of nine sections. After numerous performances on stage, the band planned to record “Shine On” on an entire side of an album, in a similar fashion to “Echoes” in Meddle. During the creative process in the studio, however, Roger Waters came out with an overall concept of absence as the theme of the new album, and as a result “Shine On” was cut in half and became the opening and closing tracks of Wish You Were Here, with three new songs sandwiched in the middle: “Welcome to the Machine,” “Have a Cigar,” and “Wish You Were Here” (Schaffner 1991, 198-199; see example 3.1).
Track 1: Shine On You Crazy Diamond parts I-V

<table>
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<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
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<td>6:27</td>
<td>8:42</td>
<td>11:15</td>
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<tr>
<td>Leading instrument</td>
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<td>Clean El. Guitar</td>
<td>Distorted El. Guitar</td>
<td>Distorted El. Guitar</td>
<td>Vocals</td>
</tr>
</tbody>
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Track 2: “Welcome to the Machine”

Track 3: “Have a Cigar”

Track 4: “Wish You Were Here”

Track 5: Shine On You Crazy Diamond parts VI-IX

<table>
<thead>
<tr>
<th>Part</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
<th>IX</th>
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<td>6:02</td>
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<tr>
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<td>Vocals</td>
<td>None</td>
<td>Keyboard</td>
</tr>
</tbody>
</table>

Example 3.1: The form of “Shine On You Crazy Diamond” as part of the album Wish You Were Here (1975)

The lyrics of the album discuss issues such as friendship, loss, memory, and pressure from the music industry. While all themes easily relate to Syd Barrett and the band’s relationship with him, Waters said that the “absence” theme of the album is not specifically about him. In regard
to “Shine On,” however, all band members repeatedly stated that both its lyrics and its music were written about Syd Barrett. Waters recalls:

“I wanted to get as close as possible to what I felt… that sort of indefinable, inevitable melancholy about the disappearance of Syd. Because he’s left, withdrawn so far away that, as far as we’re conferenced, he’s no longer there”. (Schaffner 1991, 197-198)

This description sounds as though Waters is talking about someone who passed away, and indeed, Barrett never came back to himself. Although according to Richard Wright the ghost of Barrett kept lingering in the band’s music (Wright 2008), “Shine On You Crazy Diamond” remains the only piece in the repertoire that is unanimously about Syd Barrett and attempts to convey the band’s feelings about him.

**The Stage Theory of Grief**

Like the large-scale piece “Echoes” that precedes it, “Shine On” presents little thematic material alongside substantial instrumental improvisations. Its form, however, is not as reminiscent of a standard-scale song. Officially divided into nine parts, “Shine On” is structured as a chain of distinct solos and groovy jams, alongside one sung section that repeats twice. Due to an exceptionally slow harmonic pace, static textures, and heavy repetition within each part, as well as the use of one unified key throughout, “Shine On” faces the same challenge that “Echoes” does in regard to maintaining a sufficient sense of variety, direction, and cohesiveness.

I suggest that “Shine On” copes with this challenge in a unique way: Its musical structure follows a sequence of emotional states. In the late 1960s, Swiss psychiatrist Elizabeth Kübler-

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43 Wright 2008; Gilmour 1988; Gilmour 1984; Waters 2002a; Waters 2002b; MacDonald 1996, 265.
Ross introduced the notion that a natural psychological response to loss involves an orderly progression through distinct stages of bereavement, better known as the five stages of grief or the Kübler-Ross model (Kübler-Ross 1969). As a result of her work and subsequent publications, this stage theory of grief has been widely accepted by both clinicians and the general public (Maciejewski et al 2007). This bereavement process is not limited to a response to death; rather, it can be relevant for grief resulting from various types of personal loss. While stage theories over the years have suggested various titles for each stage, most follow a similar skeleton (Rothaupt & Becker 2007; see example 3.2). This sequence is by no means strict: Stages can overlap, their order may vary, and some may be more substantial or last longer than others.


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44 The Kubler-Ross model, which was not empirical, was extrapolated to bereaving different types of loss (Maciejewski et al 2007). Other models have been developed over the years, including nonlinear theories such as task models (Rothaupt & Becker 2007).
I suggest that “Shine On” is not only a momentous requiem for a close friend, but also a highly-necessary bereavement process for four people who admittedly experienced sadness, guilt, and regret that were kept under the surface for a long time.\textsuperscript{45} The piece thus reflects the coping of the band with, as the lyrics suggest, “the shadow of yesterday’s triumph.” Consequently, I choose to look at the piece through the lens of the stage theory of grief. My aim is to show that “Shine On” gains structural strength by representing each one of the stages of bereavement, in an order strikingly similar to the one that is offered in these theories. This emotional sequence contributes to the success of this composition as a 26-minute piece with little thematic material and slow rate of change.

\textbf{Numbness}

The first track of “Shine On,” and consequently the entire album, begins with multiple keyboard layers, all producing a continuous G minor chord. With no meter or chord progression, this intro immediately creates a static atmosphere, not unlike the non-directional sections in Floyd’s earlier music (\{0:00-2:10\}; all following time marks refer to the first track of “Shine On”). Likewise, ruminating melodic phrases played by a horn-like synthesizer are slow and spacious, allowing considerable breathing between them. Despite being completely electronic—this is the only Pink Floyd album that excludes any acoustic instruments in its first few minutes—these sounds seem human, due to a shimmering quality that keeps the sustained notes alive and continuously changing. As in previous pieces, the music seems to manipulate the way time is perceived. Static, meditative, and melancholic, this section is an invitation for the listener

to take a break, reflect, and travel back in time to the glorious days of Barrett, before the diamond became crazy. The numbness of the music reflects the initial, shocked reaction to Barrett’s tragedy, before more forceful emotions start bubbling and floating on the surface.

After two minutes of constant tonic harmony, a clean electric guitar takes the lead and the harmony begins to move (\{2:10+\}). As in “Echoes,” motion in time seems to correlate to motion in space: An extremely slow chord progression stems from the preceding tonic, sparks the harmonic engine, and begins a journey. Still, this progression numbly ruminates with no clear direction, alternating between a tonic (Gm), a subdominant (Cm), and a minor dominant (Dm), each one lasting for as long as twenty seconds. The absence of the leading tone—and consequently a major dominant chord—is significant, allowing for a directionless wander with no substantial pull toward the tonic. Overall, this numbness section creates a still impression that prepares the surface for upcoming happenings.

**Yearning**

Three minutes and fifty seconds into the piece, an iconic Pink Floyd moment appears: a 4-note phrase played by an electric guitar over a static, unmetered G minor bed. Just like the ping in “Echoes,” this instrumental motif was the starting point and the inspiration for the entire piece (Waters 1993), and it is both its core and possibly its most recognizable hook. For Storm Thorgerson, the legendary designer of Pink Floyd’s album covers, this motif demonstrates the band’s mastery in evoking a mood with just a few notes. With yet again a link between music and space, Thorgerson found that this motif is “moody, atmospheric, and it has this sense of wide-open spaces of the inner mind.” (Schaffner 1991, 203-204). Indeed, these four notes seem
to capture many of the feelings that the band had for Barrett. It’s striking how much emotion
the band found in this short instrumental phrase, which over the years they described as “very
sad,” “plaintive,” “poignant,” and “mournful” (Waters 1993; Mason 2011, 204). More than what
it says about the phrase itself, it arguably shows the feelings that the band has projected into it
once the lyrics were added and the subject matter became clear. Biographer Nicholas Schaffner
writes: “To Waters, these notes resonated with a profound melancholy that brought the specter of
Syd Barrett inescapably to mind” (Schaffner 1991, 197).

At the moment it appears, this Bb-F-G-E phrase marks a change. It is at the forefront of the
mix—much louder than the accompanying keyboard layers, which have gone through as
significant *decrescendo* earlier—and showcases a penetrating timbre. This phrase is more
assertive than any of the melodic fragments that were improvised earlier by the guitar and
keyboard, and it certainly does not evoke numbness anymore. Those improvisations employed,
in a bluesy fashion, six notes of G-minor scale (with an occasional blue note) that were all
soothing, appropriately to the numb atmosphere (see example 3.3). The 6th degree was
completely absent from the melody for almost four minutes, and it appeared only in the
accompaniment as part of a C-minor chord. The arrival of a natural E—a foreign note that
suggests the Dorian mode—as the final note of this robust phrase is therefore striking (see
example 3.4). Furthermore, since the phrase is played on four different strings using a heavy
reverb effect, all of its notes keep resonating, making it into a hybrid between a melody and a
chord: Gm7 (a common Floydian tonic, as discussed earlier) with an addition of E-natural. The
coexistence of the F and the E produces a bittersweet dissonance that is yearning for a resolution
and enhanced by the difference in timbre between a stopped note (F) and an open string (E).
This is the first moment in the piece where such tension and anticipation are induced. Hence, I
identify the section that begins here with the second stage of the grief sequence, and likewise name this phrase “the yearning motif.”

Example 3.3: The pitch arsenal of the guitar and solo improvisation throughout part I (first track, 0:00-3:50)

Example 3.4: The yearning motif

Over thirty seconds and through five repetitions that grow closer and closer, the yearning motif accumulates tension. This is enhanced by a massive crescendo and a sudden steady beating of the bass drum that begin with the fourth appearance of the motif. At the moment the fifth one concludes on the final E, a full rhythm section marks its debut in forte with a forceful 6/4 groove, and the long G minor harmony changes to C major ({4:32}). This is a true moment of catharsis (see example 3.5). The musical term “anticipation” receives its full meaning here, as the prolonged non-harmonic tone E is suddenly supported by an accompanying chord. The tension releases at once, and the C-major chord partially satisfies the longing of the motif, bringing the listeners to a familiar territory: a bitter-sweet i-IV progression, the good old Floydian stamp. These two chords, Gm7 and C, are in fact linked through the four notes of the yearning motif: Bb, F, G, and E.

46 It is rumored online that this phrase was called “Syd’s Theme” by the band while working on the piece (http://www.bruder-franziskus.de/pinkfloyd/faq/wywh.html).
Example 3.5: Introduction and catharsis of the yearning motif

In 2007, a group of researchers conducted an empirical examination of the stage theory of grief, in which they surveyed grieving people, asked them about their emotional responses, and correlated the data with the theory (Maciejewski et al 2007). While previous research had largely focused on other stages, mainly depression, it was found that yearning was in fact significantly more common among those interviewed. Correspondingly, yearning is the predominant emotion in “Shine On,” and it is also clearly represented both by the album’s title *Wish You Were Here* and by the lyrics of the title song. Furthermore, yearning is a prominent emotion in the short lyrics of “Shine On,” which is one of a few Pink Floyd songs that have a
repeated, uplifting sung chorus. Appearing only in parts IV and VII, the lyrics present yearning for the early days of Syd Barrett (“Remember when you were young / You shone like the sun…”; “Nobody knows where you are / How near or how far . . . and I’ll be joining you there.”). Lastly, the yearning motif—the catalyst for the entire piece—has a structural role in “Shine On”: it repeats throughout the piece in varied forms and triggers substantial musical developments, in a similar way to the ping in “Echoes.”

After the motif catalyzes the arrival of a IV degree (CM) for the first time in the song, it keeps directing the harmonic progression. The yearning motif builds an expectation as it repeats over a harmonic pendulum of i-IV, but when its last note suddenly drops to Eb and then leads into D, it carries the harmony with it in decisive parallel octaves, completing a chromatic journey from F to D (see example 3.6). Following its last appearance as the main role, the yearning motif promptly moves to the back of the stage, and doubled by an organ, it becomes a supporting actor for the guitar solo and accompanies its first half ({5:14-6:07}). The following chord progression also seems to derive from the yearning motif, as it extends the descending chromatic motion ({6:07+}, see example 3.6).

Example 3.6: Development of the yearning motif and the harmonic progression
The yearning motif returns in its original form as a background for a baritone saxophone solo (part V, \{11:09+\}). Played by an acoustic guitar this time, it soon transforms into a repeated accompaniment figuration (see example 3.7). This figuration clearly derives from the motif, since it is produced by the same position on the guitar neck, a similar fingering, and primarily the same strings. This eighth-note pattern creates a polyrhythmic feel over the 6/4 meter: coupled with the opening E, its highest pitches emphasize a subdivision of the bar into four equal units, which is highlighted by the use of the same string for all four notes (see marking in red). These rhythmic accents catalyze a dramatic change: At \{12:01\}, the entire band follows the lead of the acoustic guitar and switches into a meter of 12/8, which likewise emphasizes four beats (see example 3.8). Furthermore, the soloing baritone saxophone is then replaced by a tenor saxophone, allowing for the improvisation to rise up in the air, until it fades out at the end of this track.
Example 3.7: Guitar accompaniment during the baritone saxophone solo

Example 3.8: Guitar accompaniment during the tenor saxophone solo

Hence, since its arrival the 4-note yearning motif has initiated progression in melody, harmony, rhythm, and instrumentation, producing a strong sense of direction throughout the first track of “Shine On” following the static, numb opening.

In the second track of “Shine On,” the guitar figuration returns, accompanied only by a sustained G-minor chord (track 5, {6:02}); all following time marks refer to the second track of
“Shine On”). While its pitches are exactly the same as before, the last note in each phrase is now longer. Only after a few repetitions of this figuration the meter is revealed to be a slow 4/4, in which the fast notes are sixteenth-notes (see example 3.9). This new rhythmic feel is soon adapted by the entire band, as a one-chord groovy jam begins, not unlike those found in previous works such as “Echoes,” “Any Colour You Like,” and “Careful with That Exe, Eugene.” Once again, the yearning motif seems to be the catalysis for a significant rhythmic change, which allows the music to grow into a new place with different harmony and atmosphere.

To summarize, the yearning motif has a crucial role in the development of the material throughout both tracks of “Shine On.” As a result of the substantial changes it catalyzes in the musical arrangement, the sections of song’s sections are kept varied and the piece as a whole gains a strong sense of direction. At the same time, the motif’s continuous presence, coupled with the unified key of G minor, keeps the piece cohesive.
Anger

Both “Welcome to the Machine” and “Have a Cigar,” the songs that follow the first track of “Shine On,” convey anger. The lyrics are an accusation against the cynical and careless music industry, and the musical tone is appropriately harsh and cold. These are followed by the song “Wish You Were Here,” one of the only true ballads in the Floyd repertoire. Its heartfelt lyrics and title, coupled with a straight-forward composition and a mostly acoustic arrangement, clearly contribute to the stage of yearning, thus taking the listener backwards on the “bereavement map.” It is thus quite effective that a bubbling anger gradually finds its way back at the beginning of the closing track, “Shine On You Crazy Diamond – Parts VI-IX,” where the emotional level reaches its peak in a climax for the entire album.

This section begins with a perpetuum mobile bass figuration of a single note over a meter of 12/8, just like those in the earlier tracks “Echoes” and “One of These Days.” This steady bass line, coupled with a relatively fast tempo, produces an unsettling atmosphere that increases with the arrival of a vigorous slide guitar solo (2:30+). Unlike the guitar solos in “Echoes,” those in “Shine On” are spread throughout the entire piece, and the one in part VI is clearly the most heated one. The guitar’s sound is saturated with a distortion effect, and as the only solo in the piece to showcase a slide guitar, it contains numerous glissandos (see example 3.10). From the faintest pianissimo at the beginning of the track, the solo and the matching accompaniment generate a massive buildup using dynamics, texture, and register, thus resulting in a growth of intensity. Extended ascending glissandos are used to build tension and take each segment of the solo into a higher register. Likewise, insistent melodic cells vamp and then elevate into a higher octave, like an anger that keeps bubbling and is about to burst (repeated patterns in example 3.10 are marked in red and purple). This is enhanced by a rhythm guitar that plays a long series of
syncopated chords that unnerve the feel of the meter and contribute to the sense of anger (see marking in blue).

Like in “Echoes,” the climax of “Shine On” is an instrumental phrase rather than a sung one: Once the slide guitar solo reaches its highest peak, a second guitar joins in, and together they wail parallel descending scales (see example 3.11). This dramatic descent is enhanced as every two notes the guitars exchange places and slide into the other scale. The gradual climb of the guitar solo to the summit, joint by the intense fall, is the story of Syd Barrett in a nutshell: a meteoric rise of a bright diamond, followed by his traumatic collapse.
Example 3.11: The climax of the piece using two slide guitars

Alongside the sung chorus, “Shine On” has a thematic instrumental section that is led by the guitar, not unlike the instrumental chorus in “Echoes.” This theme appears twice in the piece: in part IV, between two sung segments, and in part VI, just before the vocal segment returns (see example 3.1 above). While the melody and harmony of both appearances are very similar, their rhythm is significantly different. In the first instrumental theme, the melody, played by two guitars in octaves, arrives as part of a yearning section, and it is appropriately mellow and melancholic and adopts the preceding meter of 6/4 (see example 3.12). For its second appearance, the melody derives from the angry guitar solo of part VI, and likewise, it is played by a single guitar with a pungent sound over a 12/8 meter and an aggressive bass line that continues from the preceding solo. After four measures, however, the atmosphere changes at once, and in the middle of the phrase the meter switches to 6/4. This change prepares the return of the vocal section and thus marks a return to the stage of yearning.
Example 3.12: The instrumental theme in part I (as part of the yearning stage) and in part VII (transitioning from the anger stage back to yearning)

Hence, these different treatments of the same thematic material demonstrate the emotional journey of the piece, charge it with a sense of progression from the stage of yearning to the stage of anger, and reflect the return to the stage of yearning, while also maintaining a sense of cohesiveness.

The Nostalgic Jam

Notably, there is one section in the piece whose mood does not correlate with any of the common emotional responses to loss. Reminiscent of the “groovy jam” in “Echoes,” part VIII showcases a funky 4/4 groove that is based on a single chord (6:09-9:07). As the equivalent section in “Echoes,” it immediately brings to mind the band’s free live jams with Syd Barrett, which had little thematic material. In the context of “Shine On,” this brief section offers a
nostalgic recollection of the piece’s subject matter. Like a memory that has floated from the past, this section ends when the groove evaporates in a gradual fade out. A reversed drum pattern brings the listeners back to the present and leads the music into the stage of depression ({8:13-9:07}).

**Depression**

Part IX, which was written solely by keyboard player Richard Wright, features a slow harmonic progression that is structured of a richer chord palette than any of the other progressions in the piece. It is also the only one to temporarily depart from the decisive tonic (see example 3.13). This progression has a gloomy character, due to a series of harmonic phenomena: cross-relation between the first two chords (Gm and Bbm); a tonicization of F minor using its iv degree Bbm; a half-diminished chord; and an extended dominant, which, using various inversions, builds tension and desire toward the tonic. With a spacious horn-like keyboard lament hovering from above, it is arguably the saddest moment in the entire piece. This funeral march clearly represents the depression stage in the bereavement sequence.

**Part IX {Track 5, 9:07}**

**Moderato \( \frac{\text{d}}{=45} \)**

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**Example 3.13:** The beginning of the funeral march in part IX, which represents depression
Acceptance

The lamenting keyboard solo ends with a step-wise descent starting from scale degree $^4$, which arguably brings to mind church music ($\{11:22+\}$; see blue marking in example 3.14). Once it reaches the tonic note G, everything changes: The rhythm stops and most of the instruments withdraw, leaving behind an eternal bed of keyboard layers that is reminiscent of the opening of the album. After twenty five minutes of constant G minor tonality, the closing segment of “Shine On You Crazy Diamond” features a surprising G major chord. The use of a Picardy third in the final chord of a piece in minor is common in classical music, but in a typical Floydian fashion, the major tonic that closes “Shine On” is stretched over more than a minute. The horn-like keyboard continues its improvisation, but, once in a major mode, it now offers comfort. A meditative feeling is generated by the spacious melody and the static, shimmering chords. This is the first peaceful moment in both the piece and the album. Following numbness, yearning, anger, and depression, the album closes with a motion of acceptance.
Example 3.14: “Shine On”’s final section, which employs a Picardy third as well as a quote of Syd Barrett’s song “See Emily Play”

Over the past twenty years, the grief and loss research has gone through a considerable change. While the traditional school of thought saw detachment from the deceased and the breaking of emotional bonds as the ultimate goal of grief work, new studies suggest instead an adaption to the loss (Rothaupt & Becker 2007). Interestingly, “Shine On” reflects this new approach. The very last melodic phrase of the piece quotes one of Syd Barrett’s earliest hits: “See Emily Play” (see marking in red in the example above). Almost inaudible, this gesture suggests integrating Barrett’s memory, rather than putting it behind. It is no surprise, then, that Richard Wright, who plays these last notes, said in an interview a year before he died that he thinks there is still a little bit of Syd in him (Wright, 2008).
The “bereavement map” in example 3.15 summarizes the association of “Shine On You Crazy Diamond” with the stage theory of grief. The illustrated waveform demonstrates the quietness of the stage of numbness; the long, gradual increase in volume during the stage of anger; and the fade out during the stage of acceptance.
Example 3.15: The ‘bereavement map’ of “Shine On You Crazy Diamond”
Summary

“Shine On You Crazy Diamond” draws a wide emotional arc from beginning to end that imbues the piece with a powerful, genuine framework. Enhanced by the album’s other three songs, both tracks of “Shine On” convey a representation for the most common emotional reactions to loss, which both in content and in order fit the stage theory of grief. The short yearning motif repeats throughout the piece, develops, and acts as a catalyst to trigger substantial musical changes; the repeated instrumental theme is altered during its two appearances based on its position in this grief sequence; and multiple guitar solos lead the song into its musical and emotional climax. All of these result in an evident sense of progression from beginning to end, while the piece maintains variety due to timely changes in rhythm, instrumentation, and mood, in accord with its bereavement map. At the same time, the combination of unified key, consistent timbres, limited harmonic vocabulary, and repeated motifs and sections keeps the piece cohesive as a whole.

Both “Shine On” and the entire album *Wish You Were Here* arguably offered an emotional outlet as well as comfort for both its creators and its audience. Indeed, Roger Waters said that “Shine On” expresses a deep sense of loss of a relationship, and while he has never gotten over the loss of Barrett, he takes comfort from the pain (Waters 2002b). When trying to explain the emotional resonance of the piece, he said: “I suppose it's honest and heartfelt and quite poetically expressed,” and “... there’s a truthful feeling in that piece ...” (ibid; MacDonald 1997, 265).
Chapter 4

“Dogs”: A Different Animal

In the climactic moment of Pink Floyd’s song “Dogs,” the wailing electric guitar of David Gilmour suddenly splits into three distinct voices (13:55–14:06). One melodic line is no longer sufficient for the vigor of this third and last guitar solo in the song. In three-part harmony, the guitars weep through some of the harshest measures in the Gilmourian corpus: a sequence of augmented triads falls from the topmost register of the instrument to the bottom as the tonal fog of a whole-tone scale immerses everything.

This passage was so singular that when forced to record the solo again after it was accidently erased, Gilmour chose to reproduce the very same phrase rather than improvise a new one (Gilmour 2003; MacDonald 1996, 204). Indeed, this passage is a definitive moment in the song’s build-up. Gilmour’s guitar navigates the energy throughout the song toward this tonal swirl, offering an appropriate climax to one of the highlights of Pink Floyd’s music, achievable only after having taken the listener for such a tumultuous ride.

This is not how “Dogs” sounded before the band recorded it as part of the 1977 LP Animals. During the two preceding years, Pink Floyd performed an early version of the song, which was then titled “You Gotta Be Crazy,” in numerous concerts. Although the musical themes and form of “You Gotta Be Crazy” stayed almost the same when it became “Dogs,” the impression that the two versions make is completely different. Today, listening to concert recordings of “You Gotta Be Crazy” is a mixed experience: the material is interesting, but substantial repetitiveness prevents it from maintaining a sense of variety and direction.
It is no surprise, then, that the early versions of “Dogs” suffered from heavy repetition and lacked direction. After the British premiere of “You Gotta Be Crazy,” music critic Nick Kent wrote that “the Floyd, as always, let the song sprawl out to last twice as long as it should… the very least one would expect from a song like this would be a tight, incisive structure…,” while the band’s fan magazine *The Amazing Pudding* summarized this early version as “unenjoyable to listen to: messy and rushed… [The song] slows down and lumbers to the extended final passage at an excruciating pace; the last verse is agonizing.”

Following the first performances of the song, Gilmour himself admitted that it was “hurriedly knocked into shape” for the tour and had yet to be shaped into a satisfying form (MacDonald 1996, 101; Schaffner 1991, 196).

**Lyrics and Form**

The first portion of “Dogs” portrays the life of an average businessman struggling to survive in a cruel capitalist world. According to the cynical vision described in Roger Waters’s lyrics, this task necessitates developing animalistic instincts: constant alertness, the ability to deceive one’s colleagues, and the willingness to hurt them when needed and without hesitation. Over time this way of life gradually becomes more difficult until eventually the businessman fades into a “sad old man, all alone, dying of cancer” (all quotes in this section are from the song lyrics). This portion of the text is delivered in second person and thus can be interpreted either as a broad accusation against the Western *bourgeoisie*, or, as Philip Rose suggests, as instructions given by an experienced dog to a younger one (Rose 1998, 60-61).

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47 The first quote by Nick Kent is from a concert review published in *New Music Express* in November 1974 (quoted in MacDonald 1996, 82-85), and the second reproduced from MacDonald 1996, 101. While Kent admitted later that his review was extreme, it had an impact on the band, and both Mason and Waters agreed with some of it (Mason 2005, 204-7; MacDonald 1996, 90-7; Blake 2008, 220). Readers are invited to judge for themselves: live versions of “You Gotta Be Crazy” from 1974-1975 are available in Pink Floyd 1975b and Pink Floyd 2011.
While the first section’s lyrics are in the third person, the second section presents the viewpoint of the protagonist. A prisoner in his own life, he cannot see a way to escape what binds him. Correspondingly, this portion is voiced as a bitter first-person narrative. The lyrics end with an extended verse of eleven lines (previous verses have four to six lines), each of which opens with the words “who was.” This concluding verse encapsulates the life of the businessman, from growing up in a wretched house and being suppressed by “the man” to aging as a “stranger at home,” until his lonely death, implied by the words “dragged down by the stone.”

The music in “Dogs” is constructed out of three large units, or section groups: the first one (the “exposition”) presents the initial portion of the text through three musical themes (sections A, B, and C), which include both sung and instrumental sections. Each one of these themes has its own melody, chord progression, rhythmic pattern, and musical texture, but they all share a common underlying beat and key. The second unit (a “free interlude”) is a slow, instrumental lament. It is based solely on a single chord progression and rhythmic pattern and maintains a uniform texture and instrumentation. The third unit (the “recapitulation”) sets the subsequent personal portion of the text and restates most of the musical themes of the exposition in a shorter condensed version (i.e., a compressed recapitulation). The last stanza is set to music serving as a coda that wraps up the song both lyrically and musically.

The table in Example 4.1 illustrates the form of “Dogs” and summarizes many of the points that will be discussed in greater detail through this chapter. The term “harmonic cycle” indicates a single appearance of a harmonic progression that repeats a few times in a row.

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48 An exposition presents the main themes at the beginning of a piece, while a recapitulation repeats these themes at its end. Although borrowed from sonata-form terminology, the labels exposition, development, and recapitulation are used here merely to imply formal functions and not tonal relationships.
<table>
<thead>
<tr>
<th>Unit</th>
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<th>Free Interlude</th>
<th>Recapitulation</th>
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</thead>
<tbody>
<tr>
<td>Section</td>
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<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Harm. cycle</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
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<td>Gilmour</td>
<td>Gtr solo no. 1</td>
<td>Gilmour</td>
</tr>
<tr>
<td>Key lyrics</td>
<td>The businessman’s ruthless way of life</td>
<td>“You get the chance to put the knife in”</td>
<td>Life gets harder and harder</td>
</tr>
<tr>
<td>Tempo</td>
<td>$\frac{q}{d} = 52-62$</td>
<td>$\frac{q}{d} = 52-62$</td>
<td></td>
</tr>
<tr>
<td>Chord prog.</td>
<td>6 cycles of the “Dogs” progression</td>
<td>Dm</td>
<td>B section prog.</td>
</tr>
<tr>
<td>D&amp;B pattern</td>
<td>none</td>
<td>two strikes</td>
<td>$\frac{q}{d} + \frac{q}{d} + \frac{q}{d}$ &amp; fill-ins</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>2 a.gtr organ</td>
<td>Gilmour (only in A3 and A5)</td>
<td>Gilmour (in A3 and A5)</td>
</tr>
</tbody>
</table>

**Example 4.1.** Summary of the components of “Dogs” alongside key lyrics. *tr.* – transition; *harm. cycle* – harmonic cycle; *a.gtr* = acoustic guitar; *e.gtr* = electric guitar; *D&B* = drums and bass; *Gilmour or Waters* = lead vocalist; *kbd* = keyboard; *FR* = Fender Rhodes keyboard; *prog* = chord progression.
Many rock songs are based on a single four-chord progression that repeats through the verse or even the entire song; classic examples are The Rolling Stones’ “Sympathy for the Devil” and The Who’s “I Can’t Explain.” In this approach, the guitarist repeatedly plays a series of four chords of equal duration, over which the vocalist sings a changing melody. This simple and successful formula has become a rock song cliché. The leading progressive-rock bands, known for bending the unwritten rules of rock, avoided this formula resolutely, preferring longer, more complex, and asymmetric harmonic progressions. This was especially noticeable in songs longer than fifteen minutes, as these tended to incorporate a larger number of chord progressions and often alternated between different keys (see Example 1.1 above).

“Dogs” is an exceptional case of a song over fifteen minutes long that stays in one key throughout and is largely centered on a four-chord progression, just like the popular model for shorter songs. However, while each harmonic cycle in “Sympathy for the Devil,” for example, lasts for a mere eight seconds, the main progression in “Dogs” is expanded into monstrous dimensions: its occurrences last between 37 and 55 seconds. As a result, this progression subsumes ten out of the seventeen minutes of the song (see Example 4.1 above).

This does not sound like a promising strategy for a rock song, and indeed, no song of such length by other British prog-rock bands from the period shares a similar structure. What saves “Dogs” from being an endless musical wasteland? How does the arrangement help it to maintain variety, direction, and cohesiveness?

49 Some examples are The Beatles’ “Eight Days a Week,” Neil Young’s “Heart of Gold,” U2’s “Pride (in the Name of Love),” The Police’s “Message in a Bottle,” and Journey’s “Don’t Stop Believing.” For many bands, this is a primary compositional method—for example, most of the songs in Nirvana’s LP Nevermind are based on such four-chord progressions.

50 Indeed, when discussing different types of melodic expression in prog rock, Edward Macan states that prog melodies tend to resist the “four-square repetitions of phrase rhythms or phrase lengths normally associated with rock” (Macan 1997, 44).
The Opening of the Song: “Moving in Silently”

“You Gotta Be Crazy” went through a thorough process of arrangement in the studio during 1976, when it was transformed into “Dogs.” In the early versions, sections A and A’ consisted of thirteen repetitions of the main harmonic progression with an unvaried arrangement. On stage, Gilmour was placed at the forefront as the lead singer and coped with Waters’ overly long text by shouting not-quite-melodic cries for help. In the studio version, these sections were condensed into ten repetitions featuring sharp lyrics, a spacious melody, and a colorful arrangement.

The inventive arrangement of the studio version is evident from the very beginning of “Dogs.” The first chord cycle {0:00-0:37} creates the complex sonic illusion of a threat that slowly reaches the listener from a distance, like a carnivore sneaking toward its victim and "moving in silently, down wind and out of sight…". This effect is produced by a series of arranging and sound-processing. A reverb effect, which heavily colors two acoustic guitars in the first measures, gradually dissolves into a dry sound, while the guitars fade in (see Example 4.2). The combination of an increase in volume and decrease in reverb results in a realistic sense of a sonic advance towards the listener. At the same time, the playing becomes more and more hectic, when the somewhat well-spaced chords at the beginning of the song transform into hasty strumming. The use of palm-muting is also reminiscent of the rapid footsteps of a running animal {0:28+}. Using the volume pedal, waves of Hammond organ chords start rushing toward the listener, suddenly collapsing with the change of harmony and backing off into the distance. The impression of motion in space is enhanced

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51 Philip Rose suggests that the sound of the advancing guitars reflects the approach of the dog narrator in the song, before he starts talking (Rose 1998, 62).
52 Palm-muted chords are produced by lightly touching the strings with the left hand, rather than pressing them all the way to the fingerboard. The strumming with the right hand stays the same throughout the entire measure.
by a hard panning from left to right, like an indistinct figure running on the horizon.\textsuperscript{53} It is no surprise that the narrator suggests that “you sleep on your toes” and “keep one eye looking over your shoulder.” A gradual textural crescendo is formed over the course of more than a minute (see Example 4.2).\textsuperscript{54} The drums, bass, and electric guitar mark their debuts with two aggressive strikes on downbeats four bars apart, like the sudden attack of a beast that has to “strike when the moment is right without thinking” \{0:56, 1:05\} (Rose 1998, 62). The introduction ends at \{1:15\}, when a full groove involving the entire band is formed for the first time.

All these features join together in a detailed tapestry that creates a gradual increase in intensity and, as a result, a strong sense of direction. Like an exposition of a play, this opening presents the atmosphere (dark and dismal), the actors (the vocals and instruments), the leading characters (the dogs/workers in the capitalist society), and the dramatic tensions (melodic and harmonic tensions) that will accompany the entire song.

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\textsuperscript{53} Pink Floyd’s keyboard player Richard Wright used this innovative and effective way of “coloring” chord changes by switching the panning between the speakers already six years earlier in “One of These Days” (\textit{Meddle}).

\textsuperscript{54} This gradual assembling of the instruments resembles “accumulative form,” the term Mark Spicer coined for the common phenomenon of “building up a groove gradually from its constituent parts” (Spicer 2005). The case of “Dogs,” however, is slightly different, since the acoustic guitars are the only instruments whose part during this opening actually sustains through the following groove.
The harmonic progression: “How Can I Find My Way Out Of This Maze?”

The main harmonic progression of “Dogs” is the seed of the song. Already in 1974 Gilmour suggested this four-chord succession to the band as a basis for a new piece, and they immediately liked it.\(^{55}\) Despite its multiple repetitions, the “Dogs” progression maintains tension through the song thanks to its unusual chords, the relationships between them, and a dynamic arrangement.

While most Pink Floyd songs consist of relatively simple chords, three of the four in the core progression of “Dogs” are complex, dissonant chords that blur the authority of the tonic: see chords 2, 3 and 4 in Example 4.3.\(^{56}\) These chords are likely a result of guitar practice: all three are produced by a very similar left-hand fingering and make use of open strings (see Example 4.4). At the same time, the entire chord progression functions as one coherent unit, thanks to the tonic note D, which is common to all four chords.\(^{57}\)

\(^{55}\) Gilmour 1984. The twenty-three-minute instrumental piece “Atom Heart Mother” also began with a chord progression written by Gilmour (Schaffner 1991, 151), and so did the hit “Comfortably Numb” from The Wall (Gilmour 1984).

\(^{56}\) The majority of Pink Floyd songs are based on triads and seventh-chords, as well on progressions with clear tonal directionality. Among these are sporadic appearances of more complex jazz chords, e.g. Dm\(^{7/9}\) in “Us And Them” and D\(^{7(9)}\) in “Breathe,” both chords initiated by keyboard player Richard Wright who was fond of jazz. Most of the chords in the main progression of “Dogs,” however, are dissonant, and are not derived from jazz. Gilmour defined them as “very unusual,” and liked them since they allowed him to improvise freely (Gilmour 1984). Chord 1 is a tonic with added 7\(^{th}\) and 9\(^{th}\), which is relatively common. Chord 2 simultaneously includes a third (D) and a fourth (Eb), an uncommon clash in rock music that results in an unstable feeling. Additionally, Eb is foreign to the home key of D minor, and thus erodes its authority. Chord 3 is a dominant with a suspended fourth (D) and an added ninth (B-natural) that creates a cross-relation with the B\(^{b}\) in the previous chord. Chord 4 is based on G\(^{b}\) (Example 4.2 spells the chord as A\(^{b}\) instead of G\(^{b}\) for ease of reading), and like the preceding chord, it lacks a third and includes two dissonances: an augmented fourth (D) and a ninth (B\(^{b}\)). The progression can be interpreted as a tonic–dominant motion with chromatic neighbor chords surrounding the dominant.

\(^{57}\) D is the bass of the first chord and an upper pedal point in the following three chords, the result on an open D string, which is the highest string within the current tuning. This pedal point is especially prominent due to its voicing as the highest note in each of the chords, as well as to the unique timbre of the open string.
Example 4.3. The “Dogs” harmonic progression in section A, A’, and the free interlude

Example 4.4. Similarities in the way chords 2, 3, and 4 in the “Dogs” progression are produced on the guitar (note that the guitars are tuned one step lower than the common tuning)

Repeated progressions in rock songs tend to be circular in nature: the last chord in each cycle resolves at the beginning of the following cycle, so that a continuous flow is maintained. The “Dogs” progression is different: its last chord calls for a resolution that never arrives, the bass line repeats an aimless journey with no clear goal, and the top line of the guitars produces a grating counterpoint with the bass that never settles. All of these

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58 See, for instance, The Beatles’ “Back in the USSR” (I-IV-iii-IV) and “Octopus’s Garden” (I-vi-IV-V) and Radiohead’s “Creep” (I-III#-IV-iv). A circular feeling can also be made by four-chord progressions that open and end on tonic, e.g. The Beatles’ “Eight Days a Week” and “You Won’t See Me” (I-III#-IV-I in both songs), as well as Pink Floyd’s “Nobody Home” (I-III#-IV-I) and “Time” (i-III-VII-i).

59 Occasionally rock songs incorporate a #IV chord, whose root is a tritone away from the tonic. Most often this chord resolves into a close neighbor, i.e. IV or V (e.g., the progressions #III-V-IV-I in The Beatles’ “Dear Prudence;” I-IV-V-ii-V-I in Stevie Wonder’s “Sir Duke;” I-IV-IV-II# in Alice in Chains’ “Would;” and I-IV-
aspects combine to create a claustrophobic, Sisyphean progression that is doomed, again and again, to end abruptly without resolution and start over immediately. This progression well illustrates the paranoia and helplessness expressed in the text, both recurring motifs in Waters’s writing. Incidentally, this stifling feeling also reflects the physical environment where the song was recorded: according to Mason, the underground Britannia Raw Studios took on the “claustrophobic qualities of a nuclear bunker” (Mason 2011, 218).

The “Dogs” progression, therefore, is successful for two reasons. First, it maintains tension through extended portions of the song, which balances the heavy repetition of the progression and differentiates it from the common four-chord progression in standard-length songs. Second, it illustrates Waters’s vision of workers in the capitalist world, trapped in their lives with no way out and crying out “How can I find my way out of this maze?”

During the majority of section A, the feverish lifestyle of the protagonist is evoked in the restless groove of the guitars, drums, and vocals. The moment the speaker completes his dreadful prophecy about those who work themselves to death (“just another sad old man, all alone and dying of cancer”), the character of the music changes: a heavy half-time groove of drums and bass shades the instrumental cycle that closes section A ({2:59-3:36}, see Example 4.5). For a while, the rhythm guitars try to resist the deceleration and maintain their hectic pattern, but eventually they surrender and slow down as well {3:36+}. Then, for four long measures the entire band marches at a gloomy pace. This dramatic change in energy is matched by stasis in the harmony: after six cycles of complex chords, this slow march employs, for the first time in the song, a simple tonic triad. A short bass riff firmly closes section A ({3:40+}).

\[ G\# ii-V \] in Suzanne Vega’s “Caramel”). This is not the case here; rather than resolving, the bass line goes from G\# back to D, producing a dissonant leap of a tritone and preventing a sense of completion.

60 Gilmour was aware of the power that a successful chord progression has, claiming that “A beautiful chord sequence can be very provocative and emotional.” (Gilmour 1985)
Hence, although section A contains six repetitions of the same harmonic progression lasting almost four minutes, the construction of this progression and its inventive treatment, coupled with the strong bond between lyrics and music, maintain both momentum and tension. All of these elements are joined by a spacious melody that, suitably, never repeats in the same way. Example 4.5 summarizes the modularity of the arrangement due to subtle variations in rhythm, instrumentation, and accompaniment patterns through section A.

### Example 4.5

A summary of the arrangement in section A of “Dogs”

<table>
<thead>
<tr>
<th>Section</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonic cycle</td>
<td>1</td>
</tr>
<tr>
<td>Time</td>
<td>0:00+</td>
</tr>
<tr>
<td>Leading instrument</td>
<td>voice: Gilmour</td>
</tr>
<tr>
<td>Text</td>
<td>The ruthless lifestyle of the businessman</td>
</tr>
<tr>
<td>Meter</td>
<td>4/4</td>
</tr>
<tr>
<td>Harmonic progression</td>
<td>Six cycles of the main harmonic progressions ([Dm7/9, B♭M\text{add}11, A\text{sus4(add9)}, G7M9(11)])</td>
</tr>
<tr>
<td>Rhythmic pattern of acoustic guitars</td>
<td></td>
</tr>
<tr>
<td>Rhythmic pattern of drums</td>
<td>None</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>Two acoustic guitars, organ</td>
</tr>
</tbody>
</table>
Sections B and C: “The Bad Blood Slows and Turns to Stone”

In the theatre world, proverbially, “when the emotion becomes too strong for speech you sing; when it becomes too strong for song, you dance.” In Pink Floyd’s music, when the emotion becomes too strong for singing, Gilmour takes a solo. In section B of “Dogs,” two electric guitars lament the fading of the old man in two-part harmony, while a third wails high on top (3:43-4:46). A mournful atmosphere is created by a series of changes in the arrangement: a slow bassline replaces the groove that characterized section A, while a single, ruminating acoustic guitar takes the place of the reckless guitars. The complex, claustrophobic progression of section A gives ways to the space for harmonic clarity of simple triads, the appearance of harmonic functions that are common in rock, and a correlation of melody and harmony. Example 4.6 provides a bassline sketch of this section. This melancholic tone is enhanced by the addition of a Fender Rhodes, an electric piano with a tender tone.

Example 4.6. Harmonic clarity in section B

61 Other Pink Floyd songs in which the guitar takes the lead in an emotional climax include “The Thin Ice,” “Mother,” and “Hey You,” all from the subsequent album The Wall (1979). Songs where the bridge section is led by the guitar include “If” (Atom Heart Mother, 1970), “Echoes” (Meddle, 1971), and “Free Four” (Obscured By Clouds, 1972).

62 The harmonic idioms used here, i-VII-i, I-bVII-I, and III-I, as well as the tonicization of the relative key, are common in rock music. Other examples of these progression are Simon & Garfunkel’s “The Sounds of Silence” (i-VII-i), The Doors’ “Hello, I Love You” (I-bVII-I), and The Beatles’ “Things We Said Today” (III-I).
The instrumental lament of section B is given voice with the arrival of section C {4:46+}:

“... And when you lose control, you'll reap the harvest you have sown / And as the fear grows, the bad blood slows and turns to stone.”

The expression “bad blood” takes on a double meaning here, one metaphorical (the treacherous relationships between workers within a capitalist society) and one literal (bad blood in the veins of the now-old man slowing down so much that it turns to stone). This mesmerizing metaphor is enhanced by the idleness of the melody, the harmonic pace, and the half-time groove continued from section B. Thus, section C preserves the dejected atmosphere of section B.

At the same time, section C is reminiscent of section A: both involve a vocal melody and lyrics, a repeated harmonic progression, an improvised guitar solo, and similar instrumentation. Section C, therefore, integrates features from both section A and B, as shown in Example 4.7.
<table>
<thead>
<tr>
<th>Section</th>
<th>A {0:00-3:42}</th>
<th>B {3:43-4:45}</th>
<th>C {4:46-7:58}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character</td>
<td>Intensive</td>
<td>Melancholic (instrumental lament)</td>
<td>Melancholic (sung lament)</td>
</tr>
<tr>
<td>Rhythm</td>
<td>Fast (4/4) (except for the last harmonic cycle)</td>
<td>Slow (half-time)</td>
<td>Slow (half-time)</td>
</tr>
<tr>
<td>Main melodic instrument</td>
<td>Voice (Gilmour)</td>
<td>Two electric guitars</td>
<td>Voice (Gilmour)</td>
</tr>
<tr>
<td>Chord progression</td>
<td>Repeated progression that begins with Dm(^7)/9 and BbM(^{add11})</td>
<td>A single appearance of a distinctive progression</td>
<td>Repeated progression that begins with Dm(^7)/9 and BbM(^{add11})</td>
</tr>
<tr>
<td>Guitar solo / duet</td>
<td>An improvised solo over a single harmonic cycle</td>
<td>A written-out duet throughout the entire section</td>
<td>An improvised solo over a single harmonic cycle</td>
</tr>
<tr>
<td>Participating guitars</td>
<td>Two acoustic guitars and one electric guitar</td>
<td>One acoustic guitar and three electric guitars</td>
<td>Two acoustic guitars and one electric guitar</td>
</tr>
</tbody>
</table>

**Example 4.7.** Similarities among the sections of the exposition

Hence, the exposition follows a scheme of thesis, antithesis, and synthesis, thus creating a sense of development and direction. Section A presents the main theme of the song; section B refreshes the ear by presenting new material that differs from the former in instrumentation, harmonic vocabulary, and texture, offering a sense of variety; and section C unifies the exposition into a cohesive unit by merging elements from both section A and B. Much like the opening of a standard-length song, the seven-minute exposition of “Dogs” also gains cohesiveness by a common key (D minor) and a steady pulse (slightly accelerating from 52 to 62 beats-per-minute).
The Free Interlude

The exposition ends with a description of the protagonist “dragged down by the stone,” suggesting his death. At this harsh moment a new unit begins \(\{7:58+\}\), which did not exist in any of the song’s earlier versions. Immediately we are thrown into a different, somnambulant musical world, which takes the form of a free interlude, reminiscent of the one from “Echoes.” While sections B and C in the exposition already felt rather slow, the ponderous beat of this new unit seems to slow the blood flow even more. The new pulse is produced by a ride cymbal, and it takes a few moments to realize that the slow beating on the bass drum expresses a new meter of 6/4. Similarly, for almost thirty seconds it is unclear whether the new unit carries any harmonic pattern or if it is entirely based on the Dm\(^{7/9}\) tonic chord familiar from the exposition. The function of this material is also unclear—is it an especially slow and spacy jam? A static texture of keyboards and effects, reminiscent of the opening of *Wish You Were Here*? A ruminating keyboard solo that allows Gilmour to get out of the studio for a cup of tea?

Despite being relatively unrestricted and open for improvisation, the free interlude in “Dogs” maintains the same meter, key, and chord progression throughout. It is thus quite different than the atonal, unmetered free interlude in “Echoes.” In fact, this interlude is based on the “Dogs” progression familiar from section A, though the slow harmonic pace disguises the progression well; here, however, it lasts for no fewer than 55 seconds. The free interlude and the exposition are also linked by an enigmatic electronic howling that repeats dozens of times during the interlude. This sound originates from the word “stone” that bridges these two units. Blended with processed recordings of dog barks, which also appeared earlier in section C, this howling adds a psychedelic layer to the interlude.\(^{63}\)

\(^{63}\) The recordings of the barks were processed electronically using a Vocoder effect (MacDonald 1996, 214).
Although the free interlude consists of four cycles of the “Dogs” progression, these cycles are not identical, which represents a departure from typically unvarying repetitions of harmonic cycles in the standard-length format. While the middle two cycles consist of sixteen measures each, with four measures per chord—as in section A—the first and last cycles are structured differently. As shown in Example 4.8, the opening cycle is augmented by four measures, whereas the closing one is diminished by the same, therefore the overall length is exactly the same as if the interlude was structured out of four identical sixteen-measure cycles. As a result, the beginning of the free interlude creates an impression of stasis, while its ending gives an impression of acceleration.

### Example 4.8. Dynamic harmonic pace in the free interlude

<table>
<thead>
<tr>
<th>Harmonic Cycle {Time}</th>
<th>Measures 1-4</th>
<th>Measures 5-8</th>
<th>Measure 9-12</th>
<th>Measures 13-16</th>
<th>Measures 17-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle 1 {7:58+}</td>
<td>Dm^7/9</td>
<td>BbM(add11)</td>
<td>A^sus4(add9)</td>
<td>G#M^9(#4)</td>
<td></td>
</tr>
<tr>
<td>Cycle 2 {9:07+}</td>
<td>Dm^7/9</td>
<td>BbM(add11)</td>
<td>A^sus4(add9)</td>
<td>G#M^9(#4)</td>
<td></td>
</tr>
<tr>
<td>Cycle 3 {10:03+}</td>
<td>Dm^7/9</td>
<td>BbM(add11)</td>
<td>A^sus4(add9)</td>
<td>G#M^9(#4)</td>
<td></td>
</tr>
<tr>
<td>Cycle 4 {10:57+}</td>
<td>Dm^7/9</td>
<td>BbM(add11)</td>
<td>A^sus4(add9)</td>
<td>G#M^9(#4)</td>
<td></td>
</tr>
</tbody>
</table>

To summarize, while the free interlude offers variety and a necessary relief from both the unified material and the tight structure preceding it, it also maintains ties to the exposition and therefore strengthens the cohesiveness of the song, in contrast to the one in “Echoes” which is isolated and unrelated to the surrounding material. An elastic harmonic pacing colors the beginning of the interlude as static, while offering forward momentum at its end, thus preparing the upcoming recapitulation.
The Guitar Solos: “And You Believe at Heart Everyone’s a Killer”

Surprisingly, the early versions of “Dogs” introduced only one guitar solo, which is another reason why the song seemed to feel so pale and lacked vitality back then. The studio version of “Dogs,” on the other hand, contains no less than three improvised solos, which are distributed throughout the song, in addition to the written-out guitar duet that repeats on section B and B’ (see Example 4.9). The melodies featured in these five guitar-based segments are more diverse and animated than those sung by Gilmour and Waters throughout the song, and by concentrating on chord tones, they also offer relief from the dissonant sung melodies.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Exposition</th>
<th>Recapitulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solo / Duet</td>
<td>Solo 1 {1:50-2:24}</td>
<td>Solo 3 {13:28-14:09}</td>
</tr>
<tr>
<td></td>
<td>Duet in section B {3:43-4:45}</td>
<td>Duet in section B' {14:10-15:21}</td>
</tr>
<tr>
<td>Character</td>
<td>Intense 4/4</td>
<td>Vigorous 4/4</td>
</tr>
<tr>
<td>and meter</td>
<td>Slow lament 4/2</td>
<td>Slow lament 4/2</td>
</tr>
<tr>
<td>Drums/bass</td>
<td>(\bullet+\bullet+\bullet) with 16th-notes</td>
<td>(\bullet+\bullet+\bullet) with 16th-notes</td>
</tr>
<tr>
<td>pattern</td>
<td>fill-ins</td>
<td>fill-ins</td>
</tr>
<tr>
<td></td>
<td>(\bullet+\bullet+\bullet) plus (\bullet+\bullet)</td>
<td>(\bullet+\bullet+\bullet) plus (\bullet+\bullet)</td>
</tr>
</tbody>
</table>

Example 4.9. Guitar solos and duets in “Dogs”

Although Solos 1 and 3 share the same harmonic progression and are placed in equivalent formal sections in the exposition and the recapitulation, their roles within the song are different. While the former preserves the dynamism of the preceding sections, the latter pushes the energy to its peak. The differences between them are apparent precisely because both solos are closely related: the third solo borrows gestures from the first solo and develops

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64 The solo is in addition to the guitar duets on sections B and B’, which were performed in the early concerts using electric guitar and keyboard due to the lack of a second guitarist.
them with an aggressive finish, as shown in Examples 11a and b. Correspondingly, it calls for a denser accompaniment of drums and bass (see Example 4.9 above).

Both solos open with a similar phrase that begins on a high E; however, in the third solo this phrase is longer, while incorporating short, syncopated notes (see the two markings “1” in Example 4.10). The range of the first solo is lower than that of the third one, the latter ascending to the topmost notes of the guitar (see marking “2” \{13:40\}). An ascending syncopated phrase appears in the middle of the first solo. At the equivalent point in the third solo a very similar phrase appears; however, here it is inverted and lasts longer (see marking “3”, \{2:13-2:17\} and \{13:46-13:53\}). Both solos treat the third chord (G\#M9(#4)) in a surprising manner; while Solo 1 presents a Bb dominant seventh-chord in third inversion, Solo 3 whirls into a whole-tone scale (see marking “4”, \{2:20-2:24\} and \{13:55-14:06\}). Each solo ends differently, in a manner appropriate to its role in the song. The closing phrase of the first solo overlaps and doubles Gilmour’s singing, which opens the following verse (“You gotta keep one eye…,” see marking “5” \{2:25\}), thus providing a sense of continuity. The third solo, however, offers a much firmer closure, as will be discussed shortly.

Thus, while the solos at both ends of the song share similar building blocks, their different characters and functional roles distinguish the recapitulation from the exposition and help to vary the otherwise repetitive material in these units.

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65 Both phrases are in A Mixolydian mode (A-B-C#-D-E-F#-G) and based on a repeated rhythmic pattern of an eighth-note plus a sixteenth-note (\(\text{♩+♩}\)).
Example 4.10. Comparison between the first and third guitar solos
While the first and last solos sound impulsive and free, the middle solo is tightly structured. Although more than double the length of the outer two solos, it is almost exclusively based on repetitions and variations of two simple motifs: an ascending fifth D-A, shown with red boxes in Example 4.11, and a descending third F-D, shown with blue circles. Both motifs derive from the tonic triad D-F-A and are developed through the use of embellishment, augmentation, and alternation. This melodic organization creates a distinct speech-like rhetoric that pervades section C; it also fits this section’s similarly spacious vocal melodies and differentiates section C from sections A and A’, which are far more hasty. At the same time, the solo features a subtle link to the subsequent free interlude through a segment of strange noises with no defined pitch {6:20-6:25}. These sounds, skillfully produced on the electric guitar by Gilmour, are reminiscent of an animal howling, thus relating to the dog barks heard during the free interlude and the beginning of section C.

The tight organization of the middle solo is not accidental. Of the three solos, this is the only one that has existed in all versions of the song since 1974, and it has been developed over the years. An examination of some different live versions of the song indicates that this solo matured slowly, through slight changes from each concert to the next, and that the motifs described here were already seeded during the first tour. When Gilmour entered the studio in 1976 to record the solo he already had a clear vision of it, based on two years of trial and error.
Example 4.11. Motivic development in the second guitar solo

The climax of the song arrives—following a substantial melodic and rhythmic build-up—as a culmination of all three solos and a defining moment for the entire song (see m. 157-158 in Example 10 {13:55-14:06}). In an elaborated version of the instrumental climax in “Shine
On” that employs two lead guitars, “Dogs” features three guitars at the end of the solo, all played by Gilmour.66 Over the last occurrence of the song’s core harmonic progression, the three guitars free-fall down in a whirlwind of augmented triads, forming a whole tone scale. A rare phenomenon in both Pink Floyd’s music and rock vocabulary in general, this pitch collection stands out from the relatively tonal environment as an inventive interpretation of the accompanying G#M9(#4) chord. In its preceding thirteen appearances throughout the song, this chord was left unresolved. This last time, however, an unexpected sense of relief is achieved with the arrival of the following D-minor chord (m. 159, {14:04}). Retrospectively, the whole-tone scale has made the G#M9(#4) chord function like an altered dominant: a six-note whole-tone #IV chord (G#-B♭-C-D-E-F#) that resolves into its polar opposite, a pure tonic triad that lies a tritone away (D-F-A). This climactic moment is enhanced by the dreadful words “And you believe at heart everyone's a killer,” which catalyze the solo. It is no surprise that due to its vigor and structural importance this solo demands four extra measures. Over a D-minor triad and a half-time groove, Gilmour plays a decisive closing gesture that slows the solo’s momentum to create a smooth transition to the following guitar duet, thus setting up the cumulative coda (mm. 159-162 in example 4.10 above {14:04-14:10}).

Other factors work in tandem with the guitar solos to intensify the recapitulation (see Example 4.1). The switch in narrative voice from second person in the exposition to first person in the recapitulation is highlighted by the change of singer: David Gilmour, whose soothing, melancholic voice humanizes the exposition, is replaced in the recapitulation by

66 In the climactic moment of the first guitar solo in “Shine On You Crazy Diamond – Part II” (Wish You Were Here, 1975), there is a harmonized descending scale that alternates between two guitars, while the rest of the solo is played by only one guitar {4:17-4:28}. A second soloing guitar also joins in toward the end of the second solo in “Shine On You Crazy Diamond – Part I,” forming a brief passage of parallel thirds and continuing in unison {8:28-8:37}. “Atom Heart Mother” (from Atom Heart Mother, 1970) also includes a section in which two slide guitars play two parallel solos {21:15-22:11}. 
Roger Waters, whose singing is arguably more bitter and pungent in tone. Additionally, the opening verse of the exposition presents two loud strikes of the rhythm section, four measures apart {0:56-1:07}; the equivalent moment in the recapitulation is intensified when these are multiplied into four strikes, one every two measures {12:17-12:53}. Overall, the recapitulation is shorter than the exposition: section C is completely absent from the recapitulation, and section A’ is considerably shorter than its equivalent section A. As a result, the recapitulation creates a denser and more aggressive impression.

In sum, the guitar solos and duets in “Dogs” add variety, direction, and cohesiveness to the song. The sense of variety is a result of their distinct characters: the intense first solo determines the nature of section A; the instrumental guitar duet offers a comforting lament where words fail, while strengthening the song’s cohesiveness by linking the exposition and the recapitulation; the slow, morose middle solo illustrates the end of the protagonist’s life using a distinctive and tightly organized structure; and the feverish last solo embodies the recapitulation and distinguishes it from the otherwise similar exposition. Due to their different levels of intensity, placement in the song, and character of their accompaniments, these solos and duets also generate a strong sense of direction throughout the piece. In particular, the development of components from the first solo in the last one, coupled with the overall intensification of the recapitulation, creates a forceful momentum that gets to a climax in the unusual ending of the last solo, while also contributing to the song’s cohesiveness.

Philip Rose suggests that the two singers represent two different narrating dogs: In the first portion of the text a senior dog, represented by Gilmour’s voice, is guiding a younger dog, while in the second portion the narrator is the second dog, represented by Waters’ voice (Rose 1998, 62).
Coda: “Dragged Down By the Stone”

All of the melodies in the song, in both the vocals and the guitar, repeatedly emphasize a dissonant E over the tonic D minor chord. E, the second degree in the scale, aspires to resolve into the tonic; by refusing to do so, it generates melodic tension throughout the song. The numerous appearances of this motif can easily be traced by listening to the beginning of each harmonic cycle in the song: almost all of them begin with a melodic dyad F-E or D-E over a D minor chord (see Appendix 2 for a list of these appearances). Indeed, this motif originates in the first chord of the song, Dm7/9, which contains both D and E at the same time.

A similar harmonic motif joins the melodic one. The song is saturated with neighbor chords to the dominant A major: B♭add11, G♯9(#4), and B♭, all of which aspire to resolve to A and are emphasized and expanded during their efforts to do so. Through the majority of the song, these chords do not truly resolve, instead building a harmonic tension that coincides with the melodic one. Section C is where for the first time a B♭M-chord resolves into a dominant followed by a tonic, thus offering an authentic cadence that releases the residual harmonic tension. Throughout the first three harmonic cycles of section C, however, this resolution appears only in the accompaniment and does not relieve the tension of the melody.

Only twice in the song does a simultaneous resolution these harmonic and melodic tensions appear. It happens in two structural moments: the ending of the exposition and the

---

68 Although the note E is included in the accompanying chord Dm7/9, there is still a noticeable dissonance between the melody and the bass. All of the harmonic cycles in sections A and A', including the guitar solos, begin with an E note over a Dm7/9 chord, except for cycle A5 which opens with a combination of G and E. The phrases in section B also begin with an F-E figuration, this time while E is a consonant over a C major chord. Additional appearances of the dyad F-E are repeatedly emphasized throughout section C and the coda. In addition, an ascending motif D-E-F-G-A repeated throughout guitar solo no. 2, until the solo ends with a partial descending version (A-G-F-E), thus overall highlighting the refusal of E to resolve into D.

69 The chords B♭Madd11 and G♯M9(#4) in the “Dogs” progression are based on the notes B-flat and G-sharp, thus encircling the Dominant A from both sides and aspiring to resolve into an A major chord that is notably absent (the chord Aadd9 does not offer a satisfying resolution due to its suspended 4th). Especially prominent is the B♭ major chord, which appears numerous times throughout the song and is often prolonged and emphasized—these occurrences highlight its desire to resolve into the dominant. Note that the subdominant chord, one of the most common chords in rock and in Pink Floyd music in particular (either in its major or in its minor form), is completely absent from the song. Arguably, VI (B♭ major) takes the place of iv or IV (GM or Gm) throughout “Dogs.”
ending of the entire song. The exposition ends with a climactic phrase, in which the line “dragged down by the stone” is doubled by all instruments in a dramatic unison (see Example 4.12 {7:56-8:01}). This is the first time in the song that such a unison occurs, and Gilmour accentuates the moment by straining his voice to an A5, the upper extreme of his register and indeed the highest sung note in the entire song. After plentiful repetitions of the F-E pattern through sections A, B, and C, the note E determinedly resolves into D, offering for the first time a perfect authentic cadence that resolves both the melodic and the harmonic tensions built up so far. Through illustrative word painting, all instruments sink down toward the inevitable tonic, just like the fate of the old man to “drown” and “go down, all alone / dragged down by the stone.”

<table>
<thead>
<tr>
<th>Exposition: {7:45-8:01}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recapitulation: {16:37-16:52}</td>
</tr>
</tbody>
</table>

- **Voice**: repeated throughout
- **Bass**: emphasized and extended chord
- **BoM**: VI
- **AM**: V
- **Dm**: i

**Example 4.12.** Resolving the melodic and harmonic tensions at the end of the exposition and the coda

The song ends with a long coda that summarizes the tragic life of the protagonist: “Who was born in a house full of pain... Who was told what to do by the man / Who was broken by trained personnel / Who was fitted with collar and chain” {15:20+}. Hammering the nails into the coffin of the protagonist, the same melodic phrase repeats again and again, total of eleven times. The intensity begins to grow in the seventh line, in which a repeated, processed delay effect is added to the melody. Starting with the ninth line both the main
melody and the echo are harmonized, so that these last three lines are heard in four different parts \{16:20+\}. The peak of tension arrives when the repeated harmonic progression suddenly stops with a firm arrival of a Bb-major chord (see example 4.12 above). This chord leads the way into a final authentic cadence, where the line “dragged down by the stone” is again doubled by all instruments in unison \{16:38+\}. Here, the musical torment portrays the heartrending death of the protagonist, which, like the closing tonic, was seemingly inevitable from the very beginning of the song: “Who was breaking away from the pack / Who was only a stranger at home / Who was ground down in the end / Who was found dead on the phone / Who was dragged down by the stone.” The consistent tension throughout the song, which resolves so dramatically in the coda, thus grants the song a sense of purpose and direction. At the close of this coda, the song ends with a strummed Dm\(^{7/9}\) chord identical to the one that opens the song, linking together the beginning and the ending of “Dogs.”

The table in Example 4.1 above summarizes the arrangement of the song as seen through its harmonic, rhythmic, and timbre components, while also identifying key textual lines that catalyze musical changes.

**Summary**

For years an unvaried song that arguably refused to end, “Dogs” was transformed in the studio through a long arrangement process into a diverse, detailed composition. Although more than half of the track is based on a single harmonic progression, its construction and versatile treatment create a sense of variety and freshness. The inclusion of a free interlude within “Dogs” offers a contrast to—and thus relief from—the tight form, while its asymmetric harmonic structure creates a sense of progression throughout this extended section. The multiple guitar solos and duets calibrate the energy of the song, define each of its sections, and produce a strong sense of direction. Repeated melodic and harmonic motifs
strengthen the song’s cohesiveness as well as its directionality by accumulating tension that resolves only at the end of the exposition and of the entire song, finally allowing a sense of relaxation. Lastly, the arrangement fosters an integral bond between lyrics and music, while each stanza receives a personalized musical arrangement and central lines spark instrumental sections that enrich the imagery.
Conclusions

Pink Floyd’s songs “Echoes,” “Shine On You Crazy Diamond,” and “Dogs” are constructed like no other song of similar length by the leading contemporaneous British rock bands. In their economical use of thematic material and slow rate of change, it seems as if these pieces could have lasted for four minutes, but instead run for up to twenty six minutes. Many large-scale tracks by progressive rock bands of the 1970s do this with virtuosic performance as well as in compositional aspects such as melody, harmony, rhythm, and texture. Pink Floyd utilizes a different, and arguably subtler, type of virtuosity: an aptitude for arrangement and structure, coupled with proficiency in the studio. These devices balance the band’s simpler harmonic and rhythmic language, as well as lesser technical abilities, and are largely responsible for the success of these pieces.

Each one of the three pieces uses a different form and copes with the structural challenge in its own way. The form of “Echoes” resembles a standard-scale song that was expanded, mainly due to an extensive series of instrumental interludes in the middle of the track. Coupled with the static nature of some of these sections, this form limits the ability of “Echoes” to completely “work” as a 23-minute piece. “Shine On,” the only one among the three pieces that is officially divided into subsections, presents a wide emotional arc that contributes greatly to its success. “Dogs” has the most mature form among the three, and its design and meticulous arrangement grant it such a tight structure that it is hard to believe it lasts for seventeen minutes. It is likely that the weaknesses of “Echoes” are due to its origin as a series of discrete and sometimes unrelated segments, while the other two pieces were created more organically from a single musical seed.

The use of improvised instrumental sections has evolved considerably between “Echoes” and “Dogs.” While “Echoes” incorporated both a groovy jam and an unmetered, atonal open
interlude, “Shine On” included only a single groovy jam, whereas the free interlude in “Dogs” presents a much tighter version that directly relates to the rest of the material. Although all three songs showcase Pink Floyd’s fondness for slow tempos and repetitive harmony, the distance between the perception of time in the dreamy and static “Echoes” and in the assertive “Dogs” is as far as the distance from the former’s underwater world to the latter’s earthy subject matter.

An interesting contribution to the success of Pink Floyd’s large-scale tracks comes from outside of the tracks themselves. Almost all tracks in the repertoire that are longer than ten minutes are positioned in the albums back to back with short, simple songs. The wild “Interstellar Overdrive” from their debut album is followed by “The Gnome,” a child-like tune, and the quasi avant-garde “A Saucerful of Secrets” by the dreamy “See-Saw.” The brass orchestra, choir, and full rock band in “Atom Heart Mother” give place to the intimate “If”: a simple, mostly-acoustic ballad with whisper-like vocals and straight-forward lyrics. A two-minute joke-piece featuring David Gilmour’s dog Seamus closes the first side of Meddle, whose second side features the epic “Echoes.” Lastly, the aggressive “Dogs” is preceded by the personal 80-second “Pigs on the Wing, part I,” one of the only songs in the repertoire that features only voice and acoustic guitar. In each of these cases, the contrast between the adjacent tracks is striking. The short songs balance the magnitude of the adjacent epic pieces and put them in context.

The fact that “Shine On,” “Dogs,” and to some extent “Echoes” succeed in maintaining a sense of variety, direction, and cohesiveness despite their challenging form makes them stand out within the family of epic rock songs. By presenting a successful large-scale structure that uses building blocks appropriate for a standard-length song, Pink Floyd did something altogether novel, charting a new path for form in rock music. Despite the influence of Pink Floyd on other rock musicians, however, it seems that this path has not been followed by
others. While it is beyond the scope of this study to investigate the reasons for this, I would suggest that other progressive bands have not been interested in the musical vocabulary of standard rock, whereas musicians outside the progressive realm have preferred shorter and more intuitive forms. Additionally, this unique format celebrates Pink Floyd’s laid-back, long-breathing concept of time, which has possibly been considered tiresome by musicians of more recent generations. Following “Dogs,” neither the band nor any of its individual members have written any song longer than ten minutes, so arguably they also lost interest in such extended forms. Instrumental sections also became sparser starting with the 1979 The Wall, and open improvisations in the spirit of the free interlude and the groovy jam are complete absent from both The Wall and the 1983 Final Cut. As Roger Waters once said in regard to “Shine On You Crazy Diamond”: “Some of it goes on and on and on…” (Blake 2008, 236). Perhaps dinosaurs such as “Echoes,” “Shine On You Crazy Diamond,” and “Dogs” were meant to remain a rare and peculiar species.
### Appendix 1

**List of tracks of over 15 minutes by leading British rock bands in the 1960s and 1970s**

<table>
<thead>
<tr>
<th>Band</th>
<th>Song’s title</th>
<th>Length</th>
<th>Titled movements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Machine</td>
<td>Moon In June</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Out-Bloody-Rageous</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slightly All The Time</td>
<td>18</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Facelift</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hazard Profile</td>
<td>19</td>
<td>yes</td>
</tr>
<tr>
<td>Genesis</td>
<td>Supper’s Ready</td>
<td>23</td>
<td>yes</td>
</tr>
<tr>
<td>Jethro Tull</td>
<td>A Passion Play</td>
<td>45</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Thick as a Brick</td>
<td>44</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Baker Street Muse</td>
<td>17</td>
<td>yes</td>
</tr>
<tr>
<td>Van der Graaf Generator</td>
<td>Meurglys III (The Songwriter's Guild)</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A Plague of Lighthouse Keepers</td>
<td>23</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Squid 1/Squid 2/Octopus</td>
<td>15</td>
<td>yes</td>
</tr>
<tr>
<td>Yes</td>
<td>Ritual (Nous Sommes Du Soleil)</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Remembering (High The Memory)</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Revealing Science Of God</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Dance Of The Dawn)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Title</td>
<td>Length</td>
<td>Status</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>Close To The Edge</td>
<td>19</td>
<td>yes</td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>The Gates of Delirium</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>The Ancient (Giants Under The Sun)</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td><strong>Emerson, Lake and Palmer</strong></td>
<td>Tarkus</td>
<td>20</td>
<td>yes</td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>Memoirs of an Officer and a Gentleman</td>
<td>20</td>
<td>yes</td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>Piano Concerto No. 1</td>
<td>18</td>
<td>yes</td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>Karn Evil 9</td>
<td>30</td>
<td>yes</td>
</tr>
<tr>
<td><strong>King Crimson</strong></td>
<td>Lizard</td>
<td>23</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Renaissance</strong></td>
<td>Song of Scheherazade</td>
<td>25</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Camel</strong></td>
<td>The Snow Goose</td>
<td>43</td>
<td>yes</td>
</tr>
<tr>
<td><strong>The Nice</strong></td>
<td>Ars Longa Vita Brevis</td>
<td>19</td>
<td>yes</td>
</tr>
<tr>
<td><strong>--------</strong></td>
<td>Five Bridges</td>
<td>19</td>
<td>yes</td>
</tr>
</tbody>
</table>
Appendix 2
Occurrences of The F-E Melodic Motif in “Dogs”

In all of these examples the note E is a dissonance over a Dm chord, unless otherwise indicated.

<table>
<thead>
<tr>
<th>Timing</th>
<th>Instrument / Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>{0:37-0:38}</td>
<td>voice F-E</td>
</tr>
<tr>
<td>{1:14-1:15}</td>
<td>voice D-E</td>
</tr>
<tr>
<td>{1:50-1:51}</td>
<td>guitar solo E-F-E</td>
</tr>
<tr>
<td>{2:24-2:26}</td>
<td>voice doubled with guitar solo F-G-E</td>
</tr>
<tr>
<td>{2:58-3:02}</td>
<td>voice F-G-E</td>
</tr>
<tr>
<td>{3:42-3:44}</td>
<td>guitar F-E (E is a consonance)</td>
</tr>
<tr>
<td>{4:14-4:18}</td>
<td>guitar D-E-F (E is a dissonant passing-tone over B\flat M)</td>
</tr>
<tr>
<td>{4:47-5:17}</td>
<td>acoustic guitars’ repeated pattern D-E</td>
</tr>
</tbody>
</table>

70 All of the vocal melodies in sections A and A’, in fact, concentrate on dissonances: E, G and C over a D minor chord; G over B\flat major; B\natural (and F\natural in A’-2) over A\superscript{4}, and D and F over G\flat M.

71 The Fender Rhodes part provides another appearance of the motif throughout section C by repeating F and E in its soprano line.
{6:44-6:47} guitar solo
1. (A-G)-F-E in melody.
2. A series of ninths between melody and bass, ending with E over D.

{7:17-7:25} vocals a-cappella
(A-G-F-E-D)-F-E, F-E... (repeated with echo)

{7:32-7:36} voice
(D)-E-F-E-F-E-
F...

{7:45-7:52} voice
F-E, F~E  
(E is a dissonance over BbM)

{7:53-7:55} voice
F-E(+F-E)  
(E is consonance over AM)

{7:56-8:00} voice+bass
(A)-F-E-D  

{15:22-16:37} voice+bss+gtr
F-E-D-(C)

---

As described above, the entire solo no. 2 draws a series of ascending passages D-E-F-G-A, followed by a descending passage A-G-F-E (see Example 11 above). A structural D-E motion that coincides with the F-E motif is thus implied throughout the solo.

The F-E tension resolves here into D, as discussed above.
Bibliography

Works Cited


*JAMA*. 297(7), 716-723.


http://www.mtosmt.org/issues/mto.11.17.3/mto.11.17.3.osborn.html


http://search.proquest.com/docview/1561388?accountid=13314


Audio and Video Recordings


-------. 1975b. “You Gotta Be Crazy” (June 28 1975, Canada). Retrieved from:


Think Floyd. 2012. “Comfortably Numb” (Los Rosales, Guardamar, Spain, 12 May 2012),


Whitehead, Peter, dir. 1967. Tonite Let's All Make Love in London, online video. Originally produced by Lorrimer films. Available at
Gilad Cohen

Ten Variations
For Oboe, Piano and String Quartet

(2011)

This composition and the essay Expansive Rock: Large-Scale Structure in the Music of Pink Floyd together constitute the dissertation but are otherwise unrelated.
Gilad Cohen

Ten Variations

Program notes

Ten Variations confronts enigmatic and abstract sections with moments of clarity and directionality. It is based on a short, simple melodic theme that is travelling through a musical journey and gradually revealed throughout the piece.

Mysterious, rocky, festive, cool or glum - a different mood and character are used in each variation in order to expose a new facet of the theme. While some of the variations live comfortably in the world of 20th century’s concert music (Ravel and Shostakovich being highly influential), others use rhythms and sounds derived from popular and world music (here bands like Alice in Chains, Pink Floyd and the Israeli Arabic-Jewish ensemble Bustan Abraham come to mind). Likewise, different moments in the piece may be soothing, captivating or startling for the listener. Ten Variations ends with a celebration of folk tunes, classical music polyphony, rock harmonies, and funk-dance grooves, while the theme is presented for the first time in its complete, triumphant form, thus offering a sense of catharsis.

"Ten Variations" was the top winner of the 2012 Franz Josef Reinl International Composition Contest in Vienna (Austria)

Online recording

A demo recording of the piece is available at https://vimeo.com/32605396
Performance notes:

GENERAL:
1. All the variations should be played in a row (attacca), with no longer breaks than indicated.
2. Boxed passages should be played in regardless of tempo and barlines, with no attempt to match the rest of the instruments.

STRINGS PIZZ.:  
- Pluck first note, gliss to the following note and pluck again.
- Pluck first note, then gliss until reaching the second (without plucking again).

VIOLINS:  
In the boxed passages in Variation no. 1, for diamond noteheads apply "harmonic pressure" on strings, while sound is alternating between actual harmonics and nearly white noise.

VIOLA:  
1. A standard guitar pick is needed in Variation no. 10. The violist might find that strumming chords with a pick is easier when holding the viola on his/her lap, like a guitar.

www.giladcohen.com  
email: gilad@giladcohen.com  
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Variation no. 1
Andante, Dark and Mysterious (\( \dot{=44} \))

* - Violin II's part should sound like an echo of violin I with two repetitions; thus, among the two violins, each note is softer than the previous one.
rubato, ruminating

For diamond noteheads, apply harmonic pressure on strings, while sound is alternating between actual harmonics and nearly white noise.

* - The combination of the viola and cello's parts should sound like an echo with two repetitions; thus, each fifth is softer than the previous one.
Freely, but together with piano

Freely, but together with oboe

(p) (sudden stop)
Variation no. 2
Allegro, Rocky and Driven; keep a very steady beat ($\frac{4}{4}$ $= 140$)

Throughout this variation, the open C may be played as left-hand pizz. Alternatively, the pattern can be plucked with three fingers.

(match dynamics to cello)

gradually to sul pont.
Variation no. 3
Same tempo, festive, driven

Ob.

ff shrilling
arco

Vn. I

ff shrilling

Vn. II

f

arco

Vla.

f driven
ord.

Vc.

f driven

Pno.

ff

p
Variation no. 4

Ob. fpp

Vn. I

Vn. II
t as echo of 1st violin

Vla.

Vc.

tenuto

Pno. sub-p

mf sounding as if from far away

slow glisses

pp (blend within piano and pizzicato)

G

sffz

pizz. arco

port.

mp

(1/4 tone sharp)

III

sul C

port.

mf

(1/4 tone sharp)

III

IV

pizz.

arco

p  f  p

p  f

p  f

p

(still tenuto)
gradually to sul pont. allow random harmonics

senza sord.
Regardless of notes' length, each chord begins with PP and ends in F. The result: a fast crescendo for short chords, and a slow crescendo for long chords.

Strings: At the end of each crescendo, stop bow on the string, producing scratchy sound.

ppp mf
f pp f f pp mf

f pp f f pp mf

f pp f f pp mf

f pp f f pp mf

(match dynamics to strings)
Variation no. 6

Andante, groovy, laid-back (½=88)

Ob.

Vn. I

Vn. II

Vla.

Vc.

Pno.

quasi col legno battuto

p–f

quasi col legno battuto

p–f

p round, warm, full sound

all pizz. let vibrate as possible (pluck both chords) vib.

simile

mf round, warm, full sound

kissing on the wood while pedal is depressed, causing as much resonance as possible

mf

119  J  
SOLO

Ob.  f cantabile

Vn. I  f espress., intense (blend with oboe in an equal dynamic)

Vn. II  mp

Vla.  p

Vc.  sf

Pno.  (1/4 tone sharp)

(1/4 tone flat)

130

f round, warm p f p sub f p sfz f mf

(quasi col legno (change bows as needed) (no dim.) pp)

quasi col legno battuto
Variation no. 7
Andante rubato ($\frac{1}{4}=45$), ruminating

(TACET var. 7)
VIOLINS: Gliss as slow as possible, ignoring the beat and the other instruments, from the indicated harmonic to the highest one on the E string, switching seamlessly between strings, and fade out when approaching the end of the fingerboard.

Change bow when necessary, seamlessly as possible. Repeat as many times as needed until cue.

The overall result of the strings should sound like constant ascending glissandos with no beginning or end.

VIOLA & CELLO: Gliss as slow as possible, ignoring the beat and the other instruments, and fade out when approaching the end of the fingerboard.

Change bow when necessary, seamlessly as possible. Repeat as many times as needed until cue.

The overall result of the strings should sound like constant ascending glissandos with no beginning or end.
After piano stops:
10 seconds
3 seconds

- Ob.
- Vn. I
- Vn. II
- Vla.
- Vc.
- Pno.

PP

almost nothing
(R.H.)
Variation no. 8

Moderato rubato, sad \( \dot{q} = 100 \)

p solo, express., sadly

ord.

pizz.

(ord.)

(match to cello)

arco

pizz.
Variation no. 9

Allegro, Energetic (d.=60)

solo, energetic, playful, quasi minuet
Quasi "Waltz"
mf solo, spicy, like a weird dance

mf steady

sul E
Ob.

Vn. I

Vn. II

Vla.

Vc.

Pno.

Spirited

191

p elegant poco a poco cresc.

f energetic
poco rall.

Q Poco Sostenuto, Giusto, Spirited

Ob.

Vn. I

Vn. II

Vla.

Vc.

Pno.

mf

dolce

p
dolce

f
espress.

ff

spirited

ff

spirited

ff

spirited

ff

spirited

ff

spirited

f

espress.

ff

spirited

f

espress.

ff

spirited

arco

sul G

arco

(p)

gliss.
Ob.
Vn. I
Vn. II
Vla.
Vc.
Pno.

ff molto espress., soli
ff giusto

(counterpoint)
f cantabile, elegant
A tempo, poco sostenuto
Variation no. 10

Allegro giusto, groovy and energetic, keep a very steady beat ($\cdot=140$)

W 287
Y Poco Sostenuto

ff solo, espress.

f giusto (don’t overpower oboe)

f giusto (don’t overpower oboe)

arco

f giusto (don’t overpower oboe)

f giusto (don’t overpower oboe)

(8)
(don't slow down)
BB (A tempo, driven)

ff express.

molto vib., sul pont. ad lib.,
producing shrilling sound

slow glisses

ff shrilling

molto vib., sul pont. ad lib.,
producing shrilling sound

slow glisses

ff giusto

ff giusto

ff giusto

ff giusto