

HARMONY, ASSOCIATIVITY, AND METAPHOR IN THE FILM
SCORES OF ALEXANDRE DESPLAT

BY

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Abstract

The objective of this doctoral study is to develop and demonstrate a theoretical framework to guide both the analysis and composition of twenty-first-century film music. The compositional portfolio submitted as part of this thesis includes scores for nine short films and for a feature-length docudrama. The thesis is based on analysis of twenty feature film scores by Alexandre Desplat (b. 1961), with particular attention to two: *The Curious Case of Benjamin Button* (2009) and *The Grand Budapest Hotel* (2014). Studying one composer's output enables the observation of a compositional voice articulated across multiple film genres. Desplat's work has proven a relevant and worthy subject, because the films he has scored exemplify a wide variety of styles and approaches, including skilful integration of past styles and current trends.

The theoretical framework I use to discuss both Desplat's film music and my own, draws together selected concepts from semiotics, metaphor theory, narratology, and harmonic analysis, especially transformational theory. I use the framework to explore how musical objects – such as modes, chords, and their transformations through time – might act as symbols, icons, or metaphors for one or more elements of the narrative – such as a setting, character, characters' emotions, events, or the attitude of the cinematic narrator. It is argued that this combination of ideas provides a suitable framework – useful in both composition and analysis – for understanding how music might expressively contribute to filmic narratives.

It is argued that Neo-Riemannian triadic transformations – in Desplat's work and mine, at least – are often most usefully considered in relation to the scales and modes that they articulate, transform, and/or subvert. This is a point of difference from other recent transformational analysis of film music. Although my analyses focus primarily on pitch-based features, I also consider how these elements accrue meaning in their interactions with other musical features, such as tempo and orchestration.

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Abbreviations

CN	Cinematic narrator
CoS	Change of scale (TSPC category)
CoTCaS	Change of tonal centre and scale (TSPC category)
CoTC	Change of tonal centre (TSPC category)
ic(n)	Interval class (n)
NRO	Neo-Riemannian operator
NRT	Neo-Riemannian theory
PTC	Piece to camera
TAFM	Transformational analysis of film music
TSPC	Tonal scalar progression class
T [*] TPC	Tonal triadic progression class ¹
VO	Voice-over

¹ After Murphy (2014a)

Introduction

The prolific French composer Alexandre Desplat (b. 1961) is one of the most acclaimed, and arguably one of the most important, film composers to have emerged since the turn of the century. Very few studies exist that analyse one composer's style and methods, and fewer still focus on twenty-first century scores. This study aims to fill that gap, with a study of an individual composer serving the greater task of describing the new century's changing practices. Desplat's music exemplifies many of the film music trends of the early twenty-first century, a period arguably characterised by a decrease in neo-Romantic, symphonic musical styles and an accelerated increase in the influence of popular styles and minimalism. Desplat has found means of reimagining past styles in ways that accord with current trends. As I analyse his scores, various insights arise that relate to both these "past styles" and "current trends", lending the study relevance to the reader interested in broader film music practices, beyond Desplat in particular.

Harmony and tonal invention are fundamental to Desplat's support of cinematic narrative. In this thesis, I analyse the ways in which he contributes to filmic narratives through the associative and metaphorical utilization of scales, chords, and the transformations from chord to chord and scale to scale. My analytical approach, founded on transformational analysis, scrutinizes these elements hermeneutically, with reference to semiotics, metaphor theory, and narratology. Although my analyses focus primarily on pitch-based features, I also consider how these elements accrue meaning in their interactions with other musical parameters, and within their narrative contexts. By analysing a broad cross-section of Desplat's work, focussing on his most successful scores from the period 2003–2014, I develop a theoretical framework applicable across a wide range of contexts, as well as a detailed portrait of this important composer's style. I then explain how this research has informed my own film scoring work, and apply the same analytical thinking to shed light on the communicative functions of my own scores.

A secondary aim is to advance the emerging field of transformational analysis of film music. In addition to its contribution to the scholarly, theoretical, and critical literature, my study of Desplat's practice and reflection on my own composition will, I hope, be useful as a model for emerging film composers who, like me, are interested in becoming more effective musical storytellers for tomorrow's films. In the remaining sections of this introductory chapter, I give an account of the era of film music in which Desplat and

myself are composing, provide a brief sketch of Desplat's film scoring career, and offer a detailed rationale for studying his work. Finally, I introduce the twenty Desplat scores selected for analysis.

0.1 Hollywood Film Music in the early twenty-first century

According to empirical data presented by film music scholar Vasco Hexel (2014, 9–11), Hollywood film scoring practices underwent a significant change of direction around the beginning of the twenty-first century. This can be summarised as a decrease in neo-Romantic, symphonic styles and an increase in contemporary styles influenced by minimalism and/or pop. The use of prominent melodies and recurring motives decreased, while pattern-based figurations of harmonic progressions increased. Use of an elaborate tonal language (“in terms of harmony, melody developmental technique, tension and release”) decreased, while a “minimalist” tonal language increased.² Orchestral scoring decreased, while use of small bands and/or electronic resources such as synthesisers and samples increased. Hexel (2014, 34) poses a hypothesis that Hans Zimmer's influence has been an important factor in this trend: “Zimmer's former apprentices and employees pursue similar strategies, resulting in a marked sameness in tone and style across the output of dozens of recent Hollywood composers.”

Film critic Laurence E. MacDonald (2013, 429) titles a chapter of his film music history “The Derivative Decade: 2000–2009”. Of course, Hollywood film music has always been derivative and stylistically homogenous to some extent, however I concur with MacDonald that the problem has intensified in the twenty-first century. MacDonald points blame at the “temp score”, which composers are often asked to emulate, with limited creative input. He identifies “a problem facing composers across many genres of film [in 2000–2009]: how to succeed in a medium that frown[s] upon originality.” He continues: “In the 2000s, film composers seldom had the same degree of freedom that those of an earlier generation possessed.” This may be overstated, in that earlier generations faced similar challenges, including the temp score. However, one situation

² To clarify this distinction, Hexel offers John Williams' score for *Raiders of the Lost Ark* (1981) to exemplify what he means by an elaborate tonal language, and Philip Glass's score for *Koyaanisqatsi* (1982) for a minimalist tonal language. The latter is characterised by slow harmonic rhythm, cyclic chord progressions, rare or absent modulation and relatively little dissonance.

unique to twenty-first century film composers relates to directorial influence on the score. This can be substantial due to a new process in which the director can offer feedback on cues at the MIDI mock-up stage. This tends to result in scores optimised to alleviate MIDI's shortcomings and/or satisfy the director's every wish, both of which can stifle a composer's creativity.

In a climate that tends to produce derivative scores and "sameness", it is encouraging that certain composers have gained stature and recognition in the industry by defying these characterisations in various ways. Some composers, such as Howard Shore, James Newton-Howard, and Michael Giacchino, have reimagined and breathed fresh life into relatively traditional approaches to scoring, and have been highly successful in this approach. Others have been celebrated and recognized for introducing, or further developing, a musical language that is unique to them and/or refreshingly atypical of earlier Hollywood film music. Such composers include Philip Glass, Thomas Newman, A.R. Rahman, Trent Reznor, Gustavo Santaolalla, and Steven Price. Still others have introduced new styles while balancing this with significant degree of continuity with existing scoring practices. Broadly speaking, this is how I would describe the contribution of Alexandre Desplat and three other European film composers: Jan Kaczmarek, Alberto Iglesias, and Dario Marianelli.

0.2 Biographical Sketch of Alexandre Desplat

Desplat was born in 1961 to a Greek mother and French father, and grew up in France, playing the flute and (more briefly) the trumpet. He studied composition with Claude Ballif at the Paris Conservatoire and Hollywood-style orchestration in the United States with Jack Hayes, whose film orchestration career spanned 1955–2009. In the 1990s, Desplat rose to prominence in French and Italian cinema as a collaborator with Jacques Audiard and others. Desplat scored nearly 75 cinema-released feature films in 2000–2015 alone. His unusually large output is evidence of a fast work rate, strong work ethic, and the ability to maintain positive relationships with several directors, including auteurs such as Roman Polanski, Wes Anderson, David Fincher, Stephen Frears, and Jacques Audiard.

Hollywood first noticed Desplat in 2003, when his score for *Girl with a Pearl Earring* (2003) was nominated for a BAFTA and a Golden Globe. *Birth* (2004) was also well received the following year. Later notable successes, in chronological order, are: *Syriana* (2005), nominated for a Golden Globe, *The Painted Veil* (2006), which won a Golden

Globe; *The Queen* (2006), nominated for a BAFTA and an Academy Award; *The Curious Case of Benjamin Button* (2008), nominated for a BAFTA, a Golden Globe, a Grammy and an Academy Award; *Fantastic Mr. Fox* (2009), nominated for a BAFTA and an Academy Award; *The King's Speech* (2010), nominated for a BAFTA, an Academy Award and a Golden Globe, and winning a Grammy; *Harry Potter and the Deathly Hallows: Part 2* (2011), nominated for a Grammy; *Zero Dark Thirty* (2012), nominated for a Grammy, *Argo* (2012), nominated for a BAFTA, a Golden Globe, an Academy Award and a Grammy; *Philomena* (2013), nominated for an Academy Award; *The Imitation Game* (2014), nominated for a Golden Globe and an Academy Award; *The Grand Budapest Hotel* (2014), which won an Academy Award, a Grammy and a BAFTA; *The Danish Girl* (2015), nominated for a Golden Globe; and *The Shape of Water* (2017), which won a Golden Globe and was nominated for an Academy Award, with the final result pending at the time of writing.

Three other scores by Desplat, which won César Awards in France, deserve mention: *De battre mon coeur s'est arrêté* (2005), (translated as “*The Beat That My Heart Skipped*”); *The Ghost Writer* (2010); and *De rouille et d'os* (2012), (translated as “*Rust and Bone*”). Other noteworthy scores, in film genres infrequently favoured by awarding bodies, are the animation *Rise of the Guardians* (2012), the fantasy *The Golden Compass* (2007) and the science fiction blockbuster *Godzilla* (2014). The films listed above and made before 2015 are those analysed in the study.

0.3 Why study Desplat's film scores?

The large number of Desplat's scores that have received nominations or wins at major awards is noteworthy in that other Academy Award winners of this century (excluding Morricone) have only received nominations of this kind for four films each, at most. The degree to which Hollywood has acclaimed and embraced Desplat's work is one argument for his importance in film music history.

He does not claim to have an original voice, saying:

Over the past fifteen years, I've been able to build a voice, something that looks like me. I don't know if it is a 'new' voice as some say, it is not within my ability to say – but I write what I like! So it's 'me'.³

Nevertheless, in comparison to other film composers of the period, I believe that Desplat has remained relatively creatively authentic; were this untrue, it is doubtful that his personal voice would be as recognisable as it is. Many features of Desplat's style are not unique to him. For instance, a frequent strategy of his is to mingle neo-Romantic harmony with slow *legato* melody lines and/or energetic, post-minimalist, repetition-driven figuration. Other features of his style are more unique, such as his orchestration, with its prominent use of plucked strings, pitched percussion, staccato flute ostinati, sub-bass synth oscillations, and solo timpani. Perhaps to a greater extent than many of his contemporaries, Desplat extensively uses a large vocabulary of modes featuring chromatic intervals, which will be detailed in section 2.3.

Not only does Desplat's style offer welcome relief to the ailments of the “derivative decade”, but it does so on a grander scale than any other composer who is new to Hollywood this century. First, Desplat presents a popular alternative to the Zimmer-imitating paradigm, which is valuable, even if only for variety's sake. Second, there is considerable variety *within* his oeuvre, due to the range of film genres he has worked in, from science fiction to art-house period pieces. Third, Desplat's influences are rich and eclectic, including film music from the 1930s-1970s, non-Western styles including *bossa nova*, and various classical composers, especially from the early twentieth century.⁴ Fourth, while many of Desplat's scores tend to place a greater emphasis on melody and acoustic instruments than is typical of early twenty-first-century film music, he is not such a traditionalist that his music sounds old-fashioned.⁵ He may be, as Alex Ross puts it, “an expert purveyor of wistfully churning post-minimalism, suitable for the evocation of a sepia-tinted past”, but his music clearly has ample resonance with the current

³ Dan Goldwasser (2006).

⁴ He revealed in an interview (Goldwasser 2006) that he is influenced by venerated film composers Franz Waxman, Bernard Herrmann, Nino Rota, Alex North, Georges Delerue, Maurice Jarre, Michel Legrand, Jerry Goldsmith, and John Williams. Influences from concert music include Ravel, Debussy, Shostakovich, Satie, and Mozart. Desplat also confesses (Seitz and Washburn 2015a, 137) that he has “always loved to mix orchestral sounds with ethnic sounds, and with jazz influences or Brazilian bossa nova influences”, although he explains that he disguises the bossa nova influences beyond recognition, unless appropriate to the film's setting.

⁵ Hexel (2014) points to traditionalism without adaptability as a barrier to the success of another French film composer, Gabriel Yared.

generation of filmmakers and filmgoers; otherwise he would not be Hollywood's busiest A-list composer.⁶ Ross ironically touches on one of the features that help Desplat's style to sound *current*. Minimalism may have first emerged in the 1960s, but in film music, post-minimalism and its close relatives are still very much in vogue, as indicated by the trends Hexel describes.

Desplat possesses an ability to reimagine past styles of film music and concert music, in ways that accord with some of the current trends described in Hexel's study. These abilities may explain why Desplat is the most acclaimed film composer to emerge on the international stage since the turn of the century. A study of his work will be a valuable contribution to film musicology in that it will tell another part of the story of film's development. It will shed light on Desplat's solutions to the challenges of the period, including his reimagining of past scoring approaches to articulate an individual and vital compositional voice.

0.4 The twenty corpus films

Rather than attempting to study Desplat's entire output, I have decided to focus on a corpus of twenty film scores from his "Hollywood period" (from 2003) that have been widely recognised as outstanding efforts. Because my research began in 2014, I have not included any later scores. I have ensured that a variety of film genres are represented. A categorisation of the films by film genre and director I will be employing occasionally in the thesis is shown in Table 0.1. Obviously, film genre is complex and often difficult to codify. Nevertheless, the table does highlight six common strands in the genres represented in the corpus.

⁶ Desplat had a total of eleven films eligible to be nominated for an Academy Award for "Best Original Score" in the period 2012-2015, according to lists posted online by the Academy and the Hollywood Reporter. The only more prolific composer by this measure is Christophe Beck, who is yet to be nominated for an Academy Award, and therefore is less of an "A-list composer" than Desplat, who has received eight nominations and one win to date.

Table 0.1: Corpus films in basic categories by film genre and director

Thrillers	<i>Argo</i> , dir. Ben Affleck <i>Syriana</i> , dir. Stephen Gaghan <i>Zero Dark Thirty</i> , dir. Kathryn Bigelow <i>The Ghost Writer</i> , dir. Roman Polanski
Adventures (incorporating science fiction and fantasy)	<i>Godzilla</i> , dir. Gareth Edwards <i>Harry Potter and the Deathly Hallows: Part 2</i> , dir. David Yates <i>The Golden Compass</i> , dir. Chris Weitz <i>Rise of the Guardians</i> , dir. Peter Ramsey
Wes Anderson adventure/comedies	<i>Fantastic Mr. Fox</i> , dir. Wes Anderson <i>The Grand Budapest Hotel</i> , dir. Wes Anderson
British biopics	<i>Philomena</i> , dir. Stephen Frears <i>The Queen</i> , dir. Stephen Frears <i>The King's Speech</i> , dir. Tom Hooper <i>The Imitation Game</i> , dir. Morten Tyldum
Romances	<i>The Painted Veil</i> , dir. John Curran <i>The Curious Case of Benjamin Button</i> , dir. David Fincher <i>Birth</i> , dir. Jonathan Glazer <i>Girl with a Pearl Earring</i> , dir. Peter Webber
Jacques Audiard dramas	<i>De rouille et d'os</i> , dir. Jacques Audiard <i>De battre mon coeur s'est arrêté</i> , dir. Jacques Audiard

While I endeavoured to secure copies of the notated scores from the studios responsible for the films, these attempts proved unsuccessful due to their understandable protectiveness over copyrighted material. Consequently, my aural transcriptions have had to suffice.⁷ These transcriptions have been made directly from the films, supplemented by the soundtrack album versions where necessary and possible, and notated in varying degrees of detail. A variety of texts – some in the popular press, some scholarly – are cited in relevant passages of the thesis. Interviews with Desplat provided another important source of insight into Desplat's thinking about his music, and are cited where appropriate.

⁷ I have taken pains to ensure accurate skeleton transcriptions focusing on the elements of excerpts relevant to the discussion. This does not guarantee a complete lack of errors of transcription in the more complex passages, however. All transcriptions are skeleton scores: they include the melody, any relevant chord symbols to indicate the other parts, and any other parts (e.g. ostinati or counter melodies) relevant to the analysis.

Chapter 1 Methodology and Literature Review

1.1 Research questions

This chapter will provide an overview of my three-pillared methodology, followed by in-depth literature reviews pertaining to each area of that methodology. To begin with, however, I will articulate the research questions framing the entire study:

- 1) How does Desplat relate his music, semiotically and metaphorically, to specific narrative contexts?
- 2) a) What chords, scales, and harmonic transformations does Desplat typically employ in the twenty scores in the corpus? b) What semiotic or metaphorical rationale seems to be guiding Desplat to use these features as he does? c) What is the impact of other elements of the music (tempo, orchestration, rhythm, etc.) upon what these elements are apt to express?
- 3) How does this research, including all its various findings, relate to my own practical film-scoring work?

1.2 Methodology overview: a synthesis of narratology, music theory, semiotics, and metaphor theory

Research Question 1 encapsulates the heart of my methodology: I am interested the relationship between music and narrative contexts, and this relationship is analysed using the frameworks of metaphor theory and semiotics. Section 1.3 explores concepts from narratology to elucidate issues pertaining to the whole filmic narrative as well as music's role within it. Some key concepts from Seymour Chatman's *Story and Discourse* (1980) are explored in section 1.3.1, including a taxonomical approach to understanding story content. Section 1.3.2 considers film music's relationship to narrative levels, including diegetic and non-diegetic levels. In section 1.3.3 I explore film music in relation to narrative agency. Following especially in the work of Jerrold Levinson (2006), I will explore issues relating to the functions of film music in narrative, the narrative agent (if any) to whom a spectator might attribute the music, and the attitude, or *slant* (Chatman 1986) that a cinematic narrator can convey towards the story content.

Whatever function the music plays in the narrative context – be it to narrate the mental state of a character, to reveal the slant of the implied narrator, or something else – this narratology-based inquiry does not explain *how* the music might be able to convey meanings in relation to a narrative. To answer this, I apply concepts from semiotics and metaphor theory, building upon concepts proposed by Juan Chattah (2006, 2015) and others. A primary distinction Chattah makes is between meanings arising through association and those arising through a metaphorical relationship between the music and the narrative alongside which it unfolds. The various types of associations and metaphors will be detailed in section 1.5. Chattah’s approach, I believe, is an elegant solution to the problem of the insufficiency of associativity alone to explain film music’s meanings.

To discuss the metaphors and semiotic constructs at work in film music, one must often refer to specific structural features of the music that contribute in some way to the expressive meaning. The vocabulary for describing structural musical features and a framework for analysing them is provided in this study by music theory, especially transformational theory. The transformations scrutinised by transformational theory are between chords and scales, as will be detailed in section 1.4.7.

Each pillar in this methodology – narratology, music theory, semiotics, and metaphor theory – fulfils a different, but equally revealing role in the understanding of film music. I believe that there are advantages – given the scope of the film scores covered in this study – to considering the interactions of all three, holistically. This synthesis is one of my primary methodological innovations, along with some innovations in transformational theory. Ultimately, my methodology is hermeneutic in nature. This is because it is impossible to discuss the function of music within a narrative without making subjective interpretations about the music, the narrative, and the music-narrative relationship. However, this methodology will provide a framework that will support and aid the coherence of the hermeneutic arguments. In the sections that follow, I will detail each of the components of my methodology sketched above, while providing a background of the literature in that field.

1.3 Narratology and film music

The term *Narratologie*, later anglicised to narratology, was coined by the Bulgarian-French structuralist literary critic Tzvetan Todorov (1969). In its broadest sense, it has come to represent a variety of approaches to narrative analysis. Narratology refers to concepts dating back to Aristotle's *Poetics*, but contemporary narrative theory has roots in Saussurean semiology, via Russian formalism, especially as represented in the work of Vladimir Propp (2010), first published in 1928. In this context, I have chosen to focus on work by a diverse group of interdisciplinary scholars of narrative, including literary theorist Seymour Chatman, philosopher Jerrold Levinson, and musicologist Ben Winters. The latter two writers apply narratology to film music, while Chatman is concerned with narrative in general, but especially as it applies to literature and film.

1.3.1 Chatman's Story and Discourse

The most foundational distinction in Chatman's book *Story and Discourse* is helpfully revealed in the title. For Chatman, *story* (equivalent to *fabula* in Russian formalism) is narrative content, and *discourse* (equivalent to *syuzhet* in Russian formalism) is narrative expression. The *story* comprises of a series of *events* (*actions* and *happenings*) that play out among the *existents* within the story world (*characters* and *settings*). The discourse is *how* that story is told, which in the case of this study takes the form of cinematic discourse. *Story time* and *discourse time* are, importantly, distinct. For example, a story might span nine decades, as does *The Curious Case of Benjamin Button*, but the discourse time lasts less than three hours. Additionally, the discourse does not present events in story order, as most of the film is told in flashback. The order in which story events are revealed by the discourse is the *plot*.

Returning the focus to story, Figure 1.1 captures some further distinctions made by Chatman between different types of narrative content. Any sub-category of narrative content shown in Figure 1.1 can become the object of a communication¹ made by the cinematic discourse.

¹ I am using "communication" here as Chatman (1980, 31) uses the rather too logocentric term "statement", "where 'statement' is quite independent of the particular expressive medium. It includes dance statement, linguistic statement, graphic statement, and so on."

The cinematic discourse is a succession of such communications, although, as Chatman argues, these communications include both audio-visual *showing* and audio-visual *telling*. He writes, “to ‘show’ a narrative... no less than to ‘tell’ it, is to ‘present it narratively’, or to ‘narrate’ it.”² (The question of *who* is doing the narrating will be explored in section 1.3.3.)

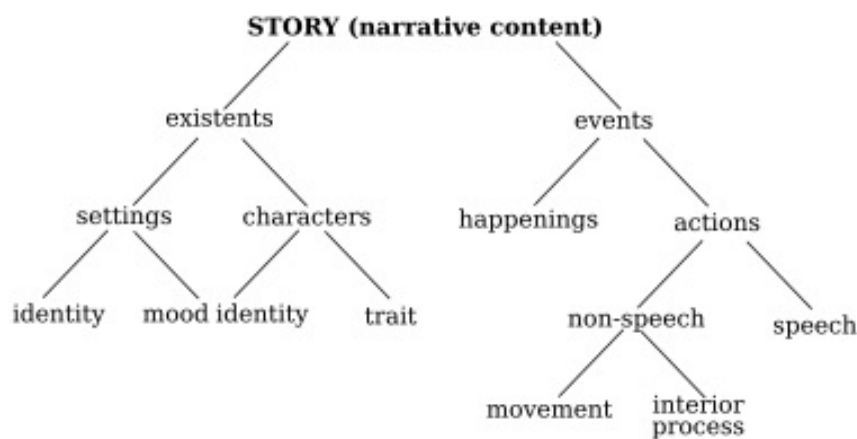


Figure 1.1: Chatman's categories of narrative content

Looking at the *existents* branch of Figure 1.1, one can see that the discourse can present two kinds of communication about a setting: it can identify the setting, or it can describe its mood. Similarly, the discourse can present two kinds of communication about a character: it can identify the character, or reveal the character's trait(s). On the *events* branch, one can see that the discourse can communicate two kinds of actions: speech actions and non-speech actions. Within non-speech actions, the discourse can communicate movement actions or interior processes.

Before looking at what roles film music might play as part of the whole cinematic discourse, it will be helpful to consider the various components of that discourse. Chatman differentiates between the form and substance of the discourse. The *form* of the discourse includes plot structure and devices that limit or control what the discourse reveals, such as limiting the discourse to one character's point of view (Chatman calls this *filter*). The *substance* of the discourse is the media through which the discourse is

² (Chatman 1990, 113)

transmitted. While Chatman makes the distinctions above, he is also concerned with discussing instances in which such distinctions are not easily made.

The *substance*, in the case of cinema, consists of what Christian Metz, a pioneer of Saussurean “cine-semiology”, refers to as “five different sensory orders: the visual image, the musical sound, the verbal sounds of speech, sound effects, and the graphic form of credits.” In film, at any one time, certain of these sensory orders will be more foregrounded than others, like the interwoven parts of a polyphonic musical texture. At times one sensory order or another will be completely absent; for example, graphic text might be absent for large swathes of a film without subtitles. Music might also be absent for large swathes of the film. Speech might be absent for action sequences, which are dominated by sound effects, music, and images. To give an example of the shift in emphasis between the sensory orders, at the beginning of *Birth*, speech alone opens the film, against a black screen. Then visual images and music take over and diegetic sound is absented as the cue “Prologue”³ launches, accompanying Sean’s jog through a snowy Central Park. For a moment, music, and the graphic text of the title “*Birth*” are foregrounded. The polyphony of these five strands makes various communications about the story content to the audience. While individual strands may communicate independently from one another, the communication that results from their combination is particularly important.

With this perspective in mind, music is part of the whole polyphony of sensory orders in the cinematic discourse that communicate about the various narrative content outlined above. As will be illustrated in later chapters, some of Desplat’s music certainly *is part of* the cinematic discourse’s communication about setting identity, setting mood, character traits, and interior processes. It might also provide a subtext to a speech action or (rarely) emphasise a movement action, as in the technique known as “Mickey-Mousing”, or some other happening. Interior processes are a particularly relevant narrative element to a study of film music, because music is one of few ways in which a filmmaker can offer the spectator clues as to what the character is thinking.

³ When cue titles are given in quotation marks, these are the same as the titles used on the corresponding track of the OST (Original Soundtrack) album.

1.3.2 Film music and narrative levels

Another variable of film music's relationship to the narrative content, is whether it is *itself* an element of narrative content – that is, *diegetic music*, to use the well-known term from Claudia Gorbman (1988), after Gerard Genette (1983). Genette and Gorbman employ the word *diegesis* in a similar way to how Chatman employs the word *story*. As Gorbman puts it, diegetic music is “music that (apparently) issues from a source within the narrative”. An unambiguous example of diegetic music composed by Desplat is the Fanfare of the Elves in *Rise of the Guardians*, in which some elves (onscreen characters) perform a fanfare, and we see their trumpets and drums being played in synchronisation with Desplat's music.

More ambiguous examples that blur the diegetic/non-diegetic distinction also exist in Desplat's scores. For instance, in *Birth*, the piano waltz entitled “The Engagement” at first seems played at a party as off-screen diegetic music, because it begins precisely on the cut to the party scene and seems like the sort of music that might be playing at the party of affluent New Yorkers. Then there is a cut to a scene in Central Park, near the party, but the piano music, rather than being silenced or mixed to sound distant, continues as if it is non-diegetic score. In contrast to *diegetic* music, *non-diegetic* music is, in the words of Michel Chion (1994), music “whose supposed source is not only absent from the image but is also external to the story world”.

Complicating things somewhat, Anahid Kassabian (2001) identifies a danger with the use of the word *non-diegetic* to describe film music, claiming that “the distinction between diegetic and non-diegetic music ... obscures music's role in producing the diegesis itself.” Similarly, Ben Winters (2010) rejects the term *non-diegetic* for the same reason and proposes a new model that subdivides what is typically called *non-diegetic* music into three categories: *extra-diegetic*, *intra-diegetic* and *extra-fictional*. The term *extra-fictional* music, which Winters borrows from Branigan (1992), is used for music that “clearly cannot be part of the narrative”, and “that exists outside the film's frame (and might include the overture and intermission music to *Lawrence of Arabia* (David Lean, 1962), for example)”.

Extra-diegetic and *intra-diegetic* both refer to music that is fictional in the sense that it exists within the film's frame and interacts in some way with the narrative, despite not being “audible” within the diegesis. The distinction between these is more ambiguous. *Extra-diegetic*, as Winters (2010) uses the term, refers to music

whose logic is not dictated by events within the narrative space” or that “accompanies certain montage sequences, or seems to be deliberately distanced from the here-and-now of the narrative space’s everyday world ... such as the use of Barber’s *Adagio* in *Platoon* (Oliver Stone, 1986) ... which in contrast to Georges Delerue’s underscoring seems distanced from the narrative action.

Extra-diegetic music is rarer than intra-diegetic music in film generally. *Intra-diegetic*, therefore, refers to the majority of what is generally called *non-diegetic* music, and almost all music by Desplat that will be studied in this thesis. It is music that – though not audible within the diegesis – has a logic dictated by events within the narrative space. Winters (2010) writes that intra-diegetic music “may be considered to be produced by the characters themselves (either due to their physical movements, as with Mickey-Mousing, as an expression of their emotional state, or as a musical calling-card), or by the geographical space of the film”. Winters is not making new distinctions. For example, film composer George Burt’s description of *broad-view* music⁴ sounds similar to *extra-diegetic*. Nevertheless, Winters, by sub-dividing the category of *non-diegetic* music, can offer a more nuanced analysis of the degree to which the music is inside or outside the narrative. The perceived identity of the communicator behind the music is the subject of the next section.

⁴ Burt (1996, 64)

1.3.3 Film music and agency

Chatman (1990) argues that all narratives, including all narrative films, are narrated, whether or not the “narrator” shows any signs of human personality, or is even discernible as a single presence. As has already been mentioned, the cinematic narrator (unlike a narrator in literature) is more of a *show-er* than a *teller* of the narrative content. Moreover, Chatman writes that “even the cinematic voice-over narrator is usually at the service of a larger narrative agent, the cinematic show-er”. The cinematic narrator is a narrative agency consisting in the pre-selection of ‘points of view’ that shape and frame spectators’ interpretations.⁵

As Levinson argues, film music is also often at the service of the cinematic narrator. In other words, when the audience hears certain intra-diegetic or extra-diegetic film music cues, they will infer that the source of this music – the agent behind it – is the cinematic narrator. Obviously in reality, Desplat – along with his music department and with varying degrees of input from the director⁶ – is the *actual* source of the music. However, the average spectator, when unconsciously inferring meaning from the film music, will not be consciously thinking of the composer, but will instead unconsciously attribute the music, along with other elements of the cinematic discourse, to an agent such as the cinematic narrator.

This cinematic narrator’s framing of the narrative content has both a factual and an attitudinal component to it. In other words, not only does the cinematic narrator narrate the story – revealing what Levinson (2006, 157) calls “fictional truths” (things that are “true in the story being conveyed”) about its settings, characters, happenings, and actions – it also betrays, via the *manner* of the narration, its attitudes and feelings towards the narrative content, and perhaps the attitudes that it seeks to induce in the audience. Chatman (1986) calls the attitudes and feelings of a narrator its *slant*. Following Levinson and using Desplat’s scores as my examples, I will show how film music can often be

⁵ As is explored in “apparatus theory”, the apparatus of film – including the camera, the editing, the recording and editing of sounds, and the projection – narrate by miming reality, while their own artificiality is disguised. See Baudry (1974) for the seminal work in this area.

⁶ The degree to which the director guides the composer varies depending on the director. Desplat has stated in interviews that Roman Polanski (director of *The Ghost Writer*) does not prescribe a particular approach via “temp music” (The Hollywood Reporter 2012, 0:37:17) and that, by contrast, Desplat and Wes Anderson have mutually developed a distinct musical tone for their collaborations, which is discussed in section 3.2.1.

interpreted to be expressive of the *slant* of the cinematic narrator, or the attitudinal component of the communications of the latter. Somewhat more rarely, it can also be interpreted to reveal, or help to reveal, “fictional truths” of the story (not just the narrator’s slant on these). Examples of this include the musical expression of a character’s internal processes, or the musical suggestion of some other event or existent that otherwise would not be obvious to the audience.

The closeness of relationship between the cinematic narrator and the story world is a source of apparent disagreement between Chatman and Levinson. Chatman (1990, 120) claims that the narrator, unlike the characters, “does not see things in the story world”, whereas Levinson counters that it is implied that the narrator *does* see things in the story world, since it offers the audience a window on what it sees there. Levinson argues that, while the cinematic narrator’s “degree of story involvement” may be nil, it is nevertheless at the same “fictional level” as the characters of the story, which enables it to report on these characters as though they were real. I am not convinced that their respective insights are in fact mutually exclusive. Chatman emphasises that the narrator is removed from the story world, and this is certainly true in the sense that the cinematic narrator is not physically embodied within the story like the characters are – it merely has perceptual access to the story world and is as fictional as the characters, as Levinson wishes to emphasise.

In addition to the cinematic narrator is the concept of the *implied filmmaker*, the filmic equivalent of the literary *implied author*, an idea developed by Chatman (1980, 148) after Wayne Booth (1961). The implied filmmaker is the agent who, the audience infers, is the mastermind or inventor responsible for both the story and the discourse, including the *cinematic narrator*. Like the *cinematic narrator*, it is an inferred agent to which audiences might attribute what they see and hear in the cinema. Unlike the *cinematic narrator*, the *implied filmmaker* is ontologically positioned as external to the film’s world. Levinson argues that when a film music cue appears to serve no narrative function at all – in that it neither reveals a fictional truth in the story nor appears to reveal the (also fictional) slant of the *cinematic narrator* – the spectator will likely attribute the music to the *implied filmmaker*. Levinson’s distinction – between “narrative” cues attributable to the *cinematic narrator*, and “additive” cues attributable to the *implied filmmaker* – is worthy of consideration, but is not without difficulties.

Levinson's examples of music attributable only to an implied filmmaker include cases "where the atmosphere created [by the music] does not gibe with the style or tone of narration already established". This is similar to Winters' concept of extra-diegetic music, which "seems to be deliberately distanced from the here-and-now of the narrative space's everyday world". The distance Winters is describing is what creates a sense that the music is ontologically positioned as external to the film's world, and therefore readily attributable to the *implied filmmaker*. This distance might often involve what Chion (1994, 8) calls *anempathetic* film music, which he says exhibits "conspicuous indifference to the situation [in the scene], by progressing in a steady, undaunted, and ineluctable manner". The opposite of this, *empathetic* music, will "directly express its participation in the feeling of the scene, by taking on the scene's rhythm, tone, and phrasing".

To build on an earlier observation, I believe there is a continuum between intra-diegetic music attributable to the agency of the cinematic narrator and extra-diegetic music attributable to the agency of an implied filmmaker, based on the degree to which the music is *empathetic* and follows the logic of the diegesis as it unfolds. Additionally, as Nicholas Reyland notes, there is never one correct inference that every astute film spectator will make about a given film music cue; rather, there exists a range of "expressive potential"; that is, a range of possible interpretations.

There are a range of views about the extent to which music film music is involved in narrating. Some scholars have argued that film music narrates to a great extent – even as an autonomous agent – while others deny that it narrates at all. Before analysing Desplat's scores and attributing narrative-related meaning to them, it will be useful to consider which of these perspectives is most helpful, so that I avoid attributing too much (or too little) to the role of Desplat's scores in narrating stories.

At one end of the spectrum is Claudia Gorbman's seminal *Unheard Melodies* (1988), which appears to argue that film music acts as an autonomous narrative agent by defining non-diegetic music as a "narrative intrusion upon the diegesis". This seems to imply that *all* non-diegetic film music narrates. Winters, on the contrary claims that it "does not usually narrate", writing:

While the majority of music in film might be usefully thought of as part of a narrative, it does not usually narrate and therefore cannot be said to occupy an extra-diegetic level that is removed both temporally and spatially from the characters. Rather, I would suggest that, to appropriate Carolyn Abbate's terminology, music generally unscrolls in the present alongside (and as part of) the rest of the narrative, as a kind of mimesis, rather than operating as a temporally distanced and authoritative narrating agency.

Igor Stravinsky, was even more dismissive than Winters, when he once seemed to insinuate that film music is mere *wallpaper music* without *any* narrating value. He remarked in an interview⁷ that "film could not get along without [music], just as I could not get along without having the empty spaces of my living-room walls covered with wallpaper". It unclear, however, how seriously this comment was intended and how seriously it should be taken.

I concur with the view of Levinson (2006), which is a middle ground between the views of Gorbman and Winters in that he acknowledges that music performs both narrative and non-narrative functions. He lists fifteen functions of music (surveying the range of views in film music studies at that time), and proposes that nine of these are narrative functions. Levinson proposes that, to qualify as a narrative-bearing function, the music must at least assist in contributing a "fictional truth", either about the story content, or about the cinematic narrator's slant on it. Levinson's nine narrative-bearing film music functions can be consolidated into five and paraphrased for brevity as follows:

- the indication, modification, qualification and/or emphasis of a character's interior process;
- the indication that an event is significant beyond the everyday;
- the expression of the slant of the cinematic narrator, including how it wishes the audience to feel about the story content;
- the indication that an off-screen event has occurred; and
- the foreshadowing of an event.

⁷ Ingolf Dahl (1946).

Importantly, all of these narrative-bearing functions relate to invisible aspects of the story and discourse. Desplat told Slate Magazine (Stevens 2013) “I always think the score should bring out the invisible, because what’s on screen is on screen. Why double it?” Levinson’s list is therefore very pertinent in this study. Of the five functions listed, I would argue that the first three are widespread in Desplat’s practice and often co-exist in a single passage, while the last two are relatively rare. To discuss *how* music might be able to perform these extra-musical functions, I will invoke a blend of semiotics, metaphor theory, and music theory.

1.4 Music theory

Research question 2a asked, “what chords, scales, and harmonic transformations does Alexandre Desplat typically employ in the twenty scores in the corpus?” This section will outline the theoretical constructs required to answer this question. But first, I will set the scene by describing Desplat’s harmonic and tonal style in broad strokes. It sometimes adheres to common-practice tonality, though more often it is in a post-tonal idiom such as modality, mixed modality, triadic chromaticism, or occasionally atonality. It is mostly triadic in its chordal vocabulary, although tertian extensions such as sixths, sevenths, and ninths are occasionally added. It generally uses modes of the diatonic scale or its close heptatonic relatives.

Desplat’s vocabulary of frequently used scales and their modes is larger than in tonal music of the common-practice period, while his vocabulary of frequently used chord types is smaller. Scales and their affective and associative connotations are therefore important in this study. It also means that the analyst of Desplat’s music, more so than the analyst of common-practice tonality, requires a theory that adequately explains motions between scales, as well as between chords. Before discussing the dynamics of transformations, however, it is necessary to discuss issues pertaining to chords, scales, and modes as they exist out-of-context, and, for that, certain terminologies need to be explained and clarified.

1.4.1 Orthography of pitches, scale degrees, intervals and chords

The following is a list of the orthography I have chosen to represent pitches, scale degrees, intervals, chords, and progressions within the constraints of equal temperament:

A, A#	Tonal pitch-classes ⁸ A and A# (unspecified octave, specified spelling)
3̂, b3̂	Scale degrees a major 3 rd and a minor 3 rd above the tonic. N.B. an absent accidental <i>always</i> indicates a major or perfect interval above the tonic. This is sometimes emphasised with a natural sign, particularly if a flat scale degree is more expected in the context.
{1̂, 2̂, b3̂, #4̂}	Unordered set of scale degrees
A2/d7	Tonal interval class ⁹ of either an augmented second or its inversion, a diminished seventh (unspecified octave, but enharmonically distinct from m3/M6) ¹⁰
A maj, A min	A major and A minor triads (in prose)
A dim, A aug	A diminished and A augmented triads (in prose)
A, a	A major and A minor triads (in figures only)
A, Am	A major and A minor triads (in musical examples conventions of jazz/rock chord symbols will be followed)
[012]	Pitch-class set in prime form. Set [012] contains a pitch-class (pc) x, the pitch-class 1 semitone higher than x, and the pitch-class 2 semitones higher than x
bVI, VI	Major triads rooted a minor and major 6 th above the tonic, respectively. NB. The absence of an accidental <i>always</i> indicates that the chord root is a major or perfect interval above the tonic.
⁶ / ₁₄	Minor tonic triad in second inversion. Other conventions of figured roman notation will also be followed, but some extensions are given below.

⁸ After David Temperley (2000).

⁹ Author's coinage, in keeping with Temperley's "tonal pitch-classes" (2000).

¹⁰ M = major, m = minor, and P = perfect.

$I^{\text{add}2}, i^{\text{add}4}, iv^{\text{add}6}$	Pitches added to triads, other than conventional sevenths and ninths, will be represented in this extended form of figured roman notation. If C is tonic, the three examples given would be {C-as-bass, D, E, G}, {C-as-bass, E \flat , F, G} and {C-as-bass, D, F-as-root, A \flat }, respectively.
I^5, iv^5	Open-fifth sonority in which the scalar context suggests that, if thirds were included, the triads would be I and iv, respectively.
$I^{M7}, iv^{M7}, \flat VI^{M9}$	Major seventh chord on I, minor triad with major seventh on iv (e.g. {F, A \flat , C, E}), and major ninth chord on $\flat VI$, respectively.
V^+	Augmented triad on the dominant.
$V/1, \flat vii/1$	Chords V and $\flat vii$ over a tonic pedal, respectively.
$\sharp\hat{4}/\flat VI$	Pitch that is an augmented 4 th above the root of a $\flat VI$ chord.
\Rightarrow	Progression (e.g. “A maj \Rightarrow A min” is an A major triad followed by an A minor triad) ¹¹
\Leftrightarrow	Oscillatory progression ¹² (when referring to a particular musical passage) <i>or</i> progression in which the chronological order is unimportant (when speaking of a progression in the abstract)

I refer to five categories of scale degrees: *non-modal scale degrees* are those found in both Ionian and Aeolian modes: $\{\hat{1}, \hat{2}, \hat{4}, \hat{5}\}$. *Major scale degrees* are those in Ionian but not Aeolian: $\{\hat{3}, \hat{6}, \hat{7}\}$. Conversely, *minor scale degrees* are those found in Aeolian but not Ionian: $\{\flat\hat{3}, \flat\hat{6}, \flat\hat{7}\}$. Scale degrees that are chromatically raised relative to those of Ionian are classified as *hyper-major*: $\{\sharp\hat{1}, \sharp\hat{2}, \sharp\hat{4}, \sharp\hat{5}, \sharp\hat{6}\}$. Those that are chromatically lowered relative to Aeolian are classified as *hyper-minor*: $\{\flat\hat{1}, \flat\hat{2}, \flat\hat{4}, \flat\hat{5}, \flat\flat\hat{7}\}$. Hyper-major and hyper-minor scale degrees are relatively rare in Western music and are absent from the most common modes of common-practice tonality (Ionian, Aeolian, harmonic minor and melodic minor ascending), which all comprise major, minor, and non-modal scale degrees.

¹¹ After Lehman (2013b)

¹² After Lehman (2013b)

Sitting behind these categories is a linear sequence that David Temperley (Temperley 2000) calls “the line of fifths”. He calls it a line to distinguish it from the *circle* of fifths, which wraps around on itself by not making enharmonic distinctions. Applied to scale degrees measured from a fixed tonic, a section of the line of fifths looks like this:

$$\flat\flat\hat{7} - \flat\hat{4} - \flat\hat{1} - \flat\hat{5} - \flat\hat{2} - \flat\hat{6} - \flat\hat{3} - \flat\hat{7} - \hat{4} - \hat{1} - \hat{5} - \hat{2} - \hat{6} - \hat{3} - \hat{7} - \sharp\hat{4} - \sharp\hat{1} - \sharp\hat{5} - \sharp\hat{2} - \sharp\hat{6}$$

Scale degrees progress from left to right by ascending through tonal pitch-class space in perfect fifths. The scale degree categories appear from left to right in the order hyper-minor, minor, non-modal, major, and hyper-major. While scale degrees can be said to be similar if they differ by ic1 (a small distance in pitch height), they are also closely related if they differ by ic5. This is because of the occurrence of ic5 low in the harmonic series. Consequently, $\hat{5}$ is prominent in the harmonic series of $\hat{1}$, $\hat{1}$ is prominent in the harmonic series of $\hat{4}$, etc.

1.4.2 Scale type nomenclature

The scales discussed in this study have five, six, seven, or eight pitch-classes (mostly seven) and the intervals between consecutive scale degrees (i.e. *scale steps*) are one, two, or three semitones (three being the rarest and two the most common). The relatively consistent size of scale steps ensures that the scales provide a ladder up the octave with rungs that are spaced evenly enough – usually near-evenly rather than evenly¹³ – that the sense of each step being *one* scale step can be maintained. Or, as Tymoczko (2004) puts it, there is an “important degree of consistency between the scalar and chromatic distance metrics”.¹⁴

Before proceeding, I will clarify my usage of the terms *scale*, *scale type* and *mode*, which follows the usage of Tymoczko (2004). This usage can be illustrated and explained as follows. The C diatonic *scale* consists of the pitches {A, B, C, D, E, F, G}. Any or none of these could be the tonic, because *scale* is a modally non-specific term in this study. *Modes* of the C diatonic *scale* include C Ionian, A Aeolian, and F Lydian. C diatonic and G diatonic *scales* share the same *scale type*: “diatonic”. This means they are related by

¹³ See Tymoczko (2011) for a detailed discussion of near-evenness of scales.

¹⁴ In the scalar distance metric, an interval is measured in scale steps, whereas in the chromatic distance metric it is measured in semitones.

transposition, and are identical in interval content and configuration. If I speak of “the diatonic scale” or “the octatonic scale” without mentioning a tonic, I am implicitly using *scale* as shorthand for *scale type*, as is conventional.

Table 1.1 provides a list of scale types discussed in this study. It includes an example of each scale type in its most common mode (mode 1), transposed to have a C tonic. A *scale type code*, such as *DIA* for the diatonic scale type, is also given. These codes were coined by Tymoczko (2004) if asterisked or Julian Hook (2011) if daggered.

Table 1.1: Scale types used in this study

Scale type code	Scale type	Example of mode 1 on C	Pressing scale?
DIA*	Diatonic	{C, D, E, F, G, A, B}	Yes
MMIN†	Melodic minor	{C, D, E \flat , F, G, A, B}	Yes
HMIN†	Harmonic minor	{C, D, E \flat , F, G, A \flat , B}	Yes
HMAJ†	Harmonic major	{C, D, E, F, G, A \flat , B}	Yes
OCT*	Octatonic	{C, D \flat , E \flat , E, F \sharp , G, A, B \flat }	Yes
HEX*	Hexatonic	{C, D \flat , E, F, G \sharp /A \flat , A}	Yes
WT*	Whole-tone	{C, D, E, F \sharp , G \sharp /A \flat , B \flat }	Yes
NMIN†	Neapolitan minor	{C, D \flat , E \flat , F, G, A \flat , B}	No
NMAJ†	Ionian $\flat 2$ ¹⁵	{C, D \flat , E, F, G, A, B}	No
SWT†	Super-whole-tone ¹⁶	{C, D \flat , E \flat , F, G, A, B}	No
GYP†	Double harmonic major	{C, D \flat , E, F, G, A \flat , B}	No
CLI	Chromatic Lydian inverse	{C, D \flat , E \flat , F \sharp , G, A \flat , B}	No
CHL	Chromatic hypolydian	{C, D \flat , E, F \sharp , G, A \flat , B}	No
CHRO	Chromatic	{C, D \flat , D, E \flat , E, F, F \sharp , G, A \flat , A, B \flat , B}	No

¹⁵ Hook’s designation of this scale as NMAJ is a potential source of confusion in that a mode of a different scale (SWT) is sometimes also called “Neapolitan major”. However, there are two advantages of the code NMAJ: it highlights the inversive relationship of this scale to NMIN, and the first mode of the scale is indeed major, but with a Neapolitan scale degree ($\flat 2$).

¹⁶ Julian Hook (2011) gives it this name because it is a superset of the whole-tone scale.

Many of the scale types most commonly used by Desplat are members of the category “Pressing scales”, as indicated in the rightmost column of Table 1.1. Jeff Pressing (1977) was the first to write about such scale types, and Tymoczko (2004) coins the term “Pressing scales” in honour of this fact. To qualify as a Pressing scale, a scale type must:

- have no consecutive semitones; in other words, no [012] trichords;
- have diatonic thirds, meaning that any two scale degrees that are two scale steps apart (i.e. have one scale degree between them) are also three or four semitones apart.

These two constraints, Pressing and Tymoczko argue, give the Pressing scales qualities that have led to the scales’ ubiquity; qualities that many composers and musicians in a diverse range of musical styles find agreeable. For instance, the avoidance of the [012] trichord in a scale is agreeable, partly because such a tight clustering of scale degrees results in scalar unevenness in scales of around eight or fewer scale degrees. This makes it difficult for listeners to perceive the scale as a coherent means of navigating and measuring the space between an octave, because the metric of scale step does not closely resemble the metric of chromatic distance, as explained by Tymoczko (2011, 116–17). It may also partly be because of the high potential for dissonance in the [012] trichord, which is unique among trichords in containing three acoustic dissonances and no acoustic consonances. The diatonic thirds constraint is desirable in that it enables two voices to move in parallel scalar thirds or sixths all around the scale without encountering a dissonance, because diatonic thirds (ic3 and ic4) are acoustic consonances.

Having defined Pressing scales and their desirable features, I now turn to some of the scale types from Table 1.1 that are *not* Pressing scales because they include a [012] trichord, which in the examples below is in on D#, E, and F:

- Neapolitan minor (NMIN), e.g. {A, B, C, D#, E, F, G}
- Double harmonic major (GYP), e.g. {A, B, C, D#, E, F, G#}
- Chromatic Lydian inverse (CLI), e.g. {A#, B, C, D#, E, F, G}
- Super-whole-tone (SWT), e.g. {A, B, C#, D#, E, F, G}

The chromatic Lydian inverse scale is distinctive for its *two* [012] trichords. Both the latter scale and the double harmonic major scale are distinctive in containing two A2/d7 intervals. The super-whole-tone scale is distinctive in that it contains a full whole-tone

scale as a subset. Two scale types that are rarer still merit a mention mostly because they are related by inversion to one of the aforementioned ones. These are Ionian $\flat 2$ (NMAJ), e.g. {A, B, C \sharp , D \sharp , E, F, G \sharp }, which is an inversion of Neapolitan minor (NMIN), and chromatic hypolydian (CHL), e.g. {A \sharp , B, C, D \sharp , E, F, G \sharp }, which is an inversion of chromatic Lydian inverse (CLI). While speaking of inversions, the harmonic major scale is an inversion of the harmonic minor scale. All other scale types mentioned thus far replicate themselves when inverted.

1.4.3 Mode nomenclature

To specify a mode, a digit from 1 through 7 can be added to any of the scale type codes listed in Table 1.1. For instance, here are the codes for the seven modes of the diatonic scale type: DIA1 = Ionian/major; dia2 = Dorian; dia3 = Phrygian; DIA4 = Lydian; DIA5 = Mixolydian; dia6 = Aeolian; and dia7 = Locrian. Notice that the scale type code is typed in upper case or lower case to indicate that the third scale degree is $\hat{3}$ or $\flat\hat{3}$, respectively. The main purpose of the mode's code, other than providing a compact abbreviation for use in figures, is to provide the reader with information on a) what scale type the mode is constructed from; b) which mode number it is relative to a designated first mode; and c) whether the tonic triad is major/augmented or minor/diminished. It also helps to prevent potential confusions, in the event that a mode and a scale type share a name. For example, the mode “harmonic major (HMAJ1)” can be distinguished from the scale type “harmonic major (HMAJ)”.

Table 1.2 provides a complete list of modes of the scale types listed in Table 1.1, and their scale degree content. Mode names of scale types other than the diatonic are largely taken from jazz theory, which uses the seven names for the modes of the diatonic scale and specifies chromatic alterations to a scale degree, as in “Mixolydian $\flat 6$ ”. Readers will notice that in some cases the number of modes is smaller than the cardinality. This is true of scales that Olivier Messiaen (1956) called “modes of limited transposition”. It is acknowledged that in the case of non-heptatonic scales, the spelling of individual scale degrees is problematic, and contingent on the way in which the scale is presented in specific examples. The most likely spellings are given. In certain figures, these codes will be used alone, while in the main body of the text, the mode will often be referred to by its code and name, as in “Ionian (DIA1)”.

Table 1.2: Modes, their codes, and their scale degree content

Code	Name	Scale degree content						
cli1	Chromatic Lydian inverse	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\#\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
CLI2	Chromatic Mixolydian inverse	$\hat{1}$	$\hat{2}$	$\#\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\#\hat{6}$	$\hat{7}$
CLI3	Chromatic hypodorian inverse	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\hat{4}$	$\#\hat{5}$	$\hat{6}$	$b\hat{7}$
cli4	Chromatic hypophrygian inverse	$\hat{1}$	$b\hat{2}$	$bb\hat{3}$	$\hat{4}$	$b\hat{5}$	$bb\hat{6}$	$bb\hat{7}$
CLI5	Hypolydian inverse	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$\hat{7}$
CLI6	Chromatic Dorian inverse	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$\#\hat{6}$	$\hat{7}$
cli7	Chromatic Phrygian inverse	$\hat{1}$	$b\hat{2}$	$bb\hat{3}$	$b\hat{4}$	$\hat{5}$	$b\hat{6}$	$bb\hat{7}$
DIA1	Ionian	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
dia2	Dorian	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
dia3	Phrygian	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
DIA4	Lydian	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
DIA5	Mixolydian	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
dia6	Aeolian	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
dia7	Locrian	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
GYP1	Double harmonic major	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
GYP2	Lydian $\#2$ $\#6$	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\#\hat{6}$	$\hat{7}$
gyp3	Ultraphrygian	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$b\hat{4}$	$\hat{5}$	$b\hat{6}$	$bb\hat{7}$
gyp4	Hungarian minor	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\#\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
GYP5	Oriental	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$b\hat{5}$	$\hat{6}$	$b\hat{7}$
GYP6	Ionian augmented $\#2$	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\hat{4}$	$\#\hat{5}$	$\hat{6}$	$\hat{7}$
gyp7	Locrian $bb3$ $bb7$	$\hat{1}$	$b\hat{2}$	$bb\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$bb\hat{7}$
HEX1	Hexatonic	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$\#\hat{5}/b\hat{6}$	$\hat{6}$	$\hat{7}$
HEX2	Hexatonic	$\hat{1}$	$\#\hat{2}/b\hat{3}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
HMAJ1	Harmonic major	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
hmaj2	Dorian $b5$	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$b\hat{5}$	$\hat{6}$	$b\hat{7}$
hmaj3	Phrygian $b4$	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$b\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
hmaj4	Lydian $b3$	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
HMAJ5	Mixolydian $b9$	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
HMAJ6	Lydian augmented $\#2$	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\#\hat{5}$	$\hat{6}$	$\hat{7}$
hmaj7	Locrian $bb7$	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$bb\hat{7}$
hmin1	Harmonic minor	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
hmin2	Locrian $\#6$	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$b\hat{5}$	$\hat{6}$	$b\hat{7}$
HMIN3	Ionian augmented	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$\#\hat{5}$	$\hat{6}$	$\hat{7}$
hmin4	Romanian	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
HMIN5	Phrygian dominant	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
HMIN6	Lydian $\#2$	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
hmin7	Ultralocrian ($b4$, $bb7$)	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$b\hat{4}$	$b\hat{5}$	$b\hat{6}$	$bb\hat{7}$
mmin1	Melodic minor ascending	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
mmin2	Phrygian natural 6	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
MMIN3	Lydian augmented	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\#\hat{5}$	$\hat{6}$	$\hat{7}$
MMIN4	Lydian dominant	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
MMIN5	Mixolydian $b6$	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
MMIN6	Semilocrian	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
mmin7	Superlocrian	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$b\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
NMAJ1	Ionian $b2$	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
NMAJ2	Lydian augmented $\#2$ $\#6$	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\#\hat{5}$	$\#\hat{6}$	$\hat{7}$
nmaj3	Phrygian $bb7$	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$bb\hat{7}$
NMAJ4	Lydian $b6$	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
NMAJ5	Mixolydian $b5$	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$b\hat{5}$	$\hat{6}$	$b\hat{7}$
nmaj6	Aeolian $b4$	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$b\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
nmaj7	Locrian $bb3$	$\hat{1}$	$b\hat{2}$	$bb\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
nmin1	Neapolitan minor	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$b\hat{6}$	$\hat{7}$
NMIN2	Lydian $\#6$	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\#\hat{6}$	$\hat{7}$
NMIN3	Mixolydian augmented	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$\#\hat{5}$	$\hat{6}$	$b\hat{7}$
nmin4	Hungarian gypsy	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\#\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
NMIN5	Locrian dominant	$\hat{1}$	$b\hat{2}$	$\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
NMIN6	Ionian $\#2$	$\hat{1}$	$\#\hat{2}$	$\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
nmin7	Ultralocrian $bb3$	$\hat{1}$	$b\hat{2}$	$bb\hat{3}$	$b\hat{4}$	$b\hat{5}$	$b\hat{6}$	$bb\hat{7}$
OCT1	Half-whole diminished (major tonic triad)	$\hat{1}$	$b\hat{2}$	$b\hat{3}+\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
oct1	Half-whole diminished (minor tonic triad)	$\hat{1}$	$b\hat{2}$	$b\hat{3}+\hat{3}$	$\#\hat{4}$	$\hat{5}$	$\hat{6}$	$b\hat{7}$
oct2	Whole-half diminished	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}+\hat{6}$	$\hat{7}$
swt1	Neapolitan major	$\hat{1}$	$b\hat{2}$	$b\hat{3}$	$\hat{4}$	$\hat{5}$	$\hat{6}$	$\hat{7}$
SWT2	Leading whole-tone	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\#\hat{5}$	$\#\hat{6}$	$\hat{7}$
SWT3	Lydian dominant augmented	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\#\hat{5}$	$\hat{6}$	$b\hat{7}$
SWT4	Lydian minor	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\hat{5}$	$b\hat{6}$	$b\hat{7}$
SWT5	Major Locrian	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
swt6	Half diminished $b4$	$\hat{1}$	$\hat{2}$	$b\hat{3}$	$b\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
swt7	Superlocrian $bb3$	$\hat{1}$	$b\hat{2}$	$bb\hat{3}$	$b\hat{4}$	$b\hat{5}$	$b\hat{6}$	$b\hat{7}$
WT1	Whole-tone scale	$\hat{1}$	$\hat{2}$	$\hat{3}$	$\#\hat{4}$	$\#\hat{5}/b\hat{6}$	$b\hat{7}$	

1.4.4 Rarity of tonal interval classes, scale degrees, scale types, and modes

Of course, not all of the scale types in Table 1.1, nor all the modes listed in Table 1.2, are equally common, and therefore not all have an equal propensity to surprise a listener. This is important to this study because, as music cognition expert David Huron (2006) argues, the surprise caused by hearing something rare and unexpected contributes significantly to the musical expression of emotions. He observes that musical surprises, when extreme, can invoke the responses “fear, laughter, frisson, or awe” (2008, vii), and that subtle surprises trigger subtle forms of these responses. He makes a useful distinction (2008, 254) between *schematic expectations* – those brought by the listener from their past experiences within a culture, including style-based expectations – and *dynamic expectations* – work-specific expectations established through repetition and other patterns such as sequence.

I will now explore some schematic expectations regarding pitch relationships that are based on listener familiarity with Western tonal music. How can these be quantified? One approach is through statistical analyses of large corpora, focussing on the frequency of certain chord functions or scale degrees. These studies are certainly useful, but each tends to have its own limitations. For example, enharmonic distinctions might be ignored even when these are pertinent,¹⁷ or the distinction between major and minor triads might even be ignored.¹⁸ I propose a rationale for schematic expectations that is based on the premise that Western tonal music is largely based on the heptatonic Pressing scales, and largely limits itself to the scale degrees $\{\hat{1}, \flat\hat{2}, \hat{2}, \flat\hat{3}, \hat{3}, \hat{4}, \sharp\hat{4}, \hat{5}, \flat\hat{6}, \hat{6}, \flat\hat{7}, \hat{7}\}$. Within these constraints, some tonal interval classes are inherently more likely than others, and they can be ranked from common to rare, as will explained in greater detail below. This ranking enables a ranking of scales, scale degrees, and modes from common to rare. The results align very well with my intuitions and what might be called “conventional wisdom” within Western music theory, but the ranking also offers a systematic means of judging the rarity of these musical objects.

¹⁷ See, for instance, the Krumhansl-Kessler “key profiles” presented by music psychologists Carol Krumhansl and Edward Kessler (1982, 343).

¹⁸ This is a limitation of Trevor de Clercq and David Temperley’s corpus analysis of harmony in rock music, whose understandable reasoning is that some chords in rock are open fifths, or mixed-third chords. (2011, 56)

I will begin by detailing my method for ranking the rarity of tonal interval classes. In tonal music, the “rarity” of an interval relates to the degree to which it is infrequent in the four heptatonic Pressing scales. For instance, the tritone (A4/d5) occurs only once in the diatonic scale (DIA), and twice in each of the melodic minor (MMIN) and harmonic (HMAJ and HMIN) scales, as shown in Table 1.3, making it rather rare. The table provides the frequency of each tonal interval class in these scale types, and the sum of these frequencies (columns three through six).¹⁹ According to this measure, the tonal interval classes {A1/d8, d3/A6, A3/d6} are all equally unexpected, because all are absent from the heptatonic Pressing scales. The other interval classes may be ranked from common to rare based on the “sum frequency” (column six) and occur in this order in Table 1.3.

Table 1.3: Quantifying the unexpectedness of tonal interval classes in heptatonic contexts

Relative rarity	Tonal interval class	Frequency in DIA	Frequency in MMIN	Frequency in HMIN or HMAJ	Sum of frequency in DIA, MMIN, HMIN/HMAJ	Frequency in { $\hat{1}$, $\flat\hat{2}$, $\hat{2}$, $\flat\hat{3}$, $\sharp\hat{3}$, $\hat{4}$, $\sharp\hat{4}$, $\hat{5}$, $\flat\hat{6}$, $\sharp\hat{6}$, $\flat\hat{7}$, $\sharp\hat{7}$ }	Span on the line of fifths
Common	P4/P5	6	4	4	14	11	1
	M2/m7	5	5	3	13	10	2
	m3/M6	4	4	4	12	9	3
	M3/m6	3	3	3	9	8	4
	m2/M7	2	2	3	7	7	5
	A4/d5	1	2	2	5	6	6
	A1/d8	0	0	0	0	5	7
	d4/A5	0	1	1	2	4	8
	A2/d7	0	0	1	1	3	9
Rare	d3/A6	0	0	0	0	2	10
	A3/d6	0	0	0	0	1	11

¹⁹ My approach of counting *tonal* interval classes – which has no precedent to my knowledge – is distinct from the approach of counting *chromatic* interval classes, as in the “interval vectors” of musical set theory, following Allen Forte (1973). Chromatic interval classes do not distinguish between, say, A3/d6 and P4/P5 (which are at opposite ends of Table 1.3), which are conflated into ic5. The work of Richmond Brown (1981) on ic1 and ic6 as “rare intervals” bears only a superficial resemblance to my approach, because he is judging rarity based on frequency of *chromatic* interval classes. See page 43 for further justification of my preference for tonal interval classes.

Column seven provides an alternative approach to achieving such a ranking. The rarity of an interval relates to the degree to which they are infrequent between the pairs of the most commonly used scale degrees, mentioned earlier: $\{\hat{1}, \flat\hat{2}, \natural\hat{2}, \flat\hat{3}, \natural\hat{3}, \natural\hat{4}, \sharp\hat{4}, \natural\hat{5}, \flat\hat{6}, \natural\hat{6}, \flat\hat{7}, \natural\hat{7}\}$.²⁰ For instance, there is only one A3/d6 in this set (between $\flat\hat{2}$ and $\sharp\hat{4}$), while there are eleven P5/P4 intervals and five A1/d8 intervals. By this rationale, almost the same ranking is achieved as the other approach, with two exceptions. The first exception is that d3/A6 and A3/d6 are no longer tied; the latter is less common than the former. The second, more significant exception is that A1/d8 becomes the most common chromatic interval (almost as common as the tritone). Of course, the exact degree of rarity of each tonal interval class is style-dependent, but what I am attempting here is to identify a trend that is general to all heptatonic scalar music.

Both approaches to achieving this ranking, and especially the second approach, suggest that Temperley's *line of fifths* is central to the question of the rarity of tonal interval classes. Specifically, the rarity of a tonal interval class in a heptatonic context is proportionate to its *span*²¹ on the line of fifths, where a P4/P5 has a span of 1, and a M2/m7 has a span of 2, and so on. Notice that the span of each tonal interval class – shown in the rightmost column of Table 1.3, is largely inversely correlated to the frequency data in the other columns.

We can now expand the concept of tonal interval class rarity, measured by span, providing four useful applications relating to:

- the intervallic rarity of a scale type or chord type;
- the rarity of a scale degree in the context of the tonic triad type;
- the rarity (and instability) of a mode, based on the rarity of its scale degrees; and
- inferring unsounded scale degrees.

²⁰ Nineteenth-century music theorist Heinrich Schenker (1906) described a “major-minor system” in which a piece of music might be in C major-minor, freely mixing any of the scale degrees of C Ionian and C Aeolian. Considering post-tonal extensions to the “common-practice” Schenker is describing, I propose that – at the very least – the scale degrees $\flat\hat{2}$ and $\sharp\hat{4}$ should be added into the mix.

²¹ Music theorist Julian Hook (2011) coined the term “span” for this measurement.

The *intervallic rarity of a scale type or chord type* can be quantified by summing the span of all its tonal interval classes. This metric is suitable for comparing scales or chord types of identical cardinality (number of pitch-classes).²² It is applied to six heptatonic scale types used by Desplat in Table 1.4. Most musicians would intuitively understand that the chromatic Lydian inverse scale (CLI) is rarer than the diatonic scale (DIA), and that the Neapolitan minor scale (NMIN) is ranked somewhere between these two in rarity. Summing the spans is a way of quantifying this intuition. In the case of heptatonic scales, interval rarity is correlated with scalar evenness. The diatonic scale is the most even heptatonic scale within the constraints of the chromatic system, and has the least rare intervals.

Table 1.4: Summing the intervallic rarity of heptatonic scale types used by Desplat

Scale type	Sum of interval spans
DIA	1+1+1+1+1+1+2+2+2+2+2+3+3+3+3+4+4+4+5+5+6 = 56
MMIN	1+1+1+1+2+2+2+2+2+3+3+3+3+4+4+4+5+5+6+6+8 = 68
HMIN/HMAJ	1+1+1+1+2+2+2+3+3+3+3+4+4+4+5+5+5+6+6+8+9 = 78
NMIN/NMAJ	1+1+1+1+2+2+2+3+3+4+4+4+4+5+5+5+6+6+8+9+10 = 86
GYP	1+1+1+1+2+3+3+4+4+4+4+5+5+5+5+6+6+8+9+9+10 = 96
CLI/CHL	1+1+1+1+2+3+4+4+4+5+5+5+5+6+6+8+9+9+10+10+11 = 110

The metric of intervallic rarity can also be applied to chords, but with the caveat that it needs to be considered alongside acoustic dissonance/consonance, which is an independent and equally important parameter. Both parameters, in their own ways, determine a chord's degree of (in)stability and (un)expectedness. The parameter of intervallic rarity measures the degree to which the chord meets scale-based expectations; it answers the question “to what extent do these pitches cohabit common scales, and consequently seem to belong together?” On the other hand, the acoustic consonance/dissonance parameter relates to the euphonious and rough quality of the chord's vertically sounded interval classes, regardless of scalar context. The interval classes ic1, ic2 and ic6 are all acoustically dissonant, although ic2 and ic6 are only mildly so.²³ A full exploration of the interrelationship between these two parameters is well beyond the scope of this study, however what follows is a minimal explanation.

²² Comparisons between scales or chords of *differing* cardinalities are more difficult, and a solution is beyond the scope of this study. Averaging rather than summing spans is a possible solution, and is arguably unproblematic (and useful) to the extent that the cardinalities are similar.

²³ See Table 2 of (Huron 1994, 294).

Table 1.5: Summing the intervallic rarity in some trichords used vertically by Desplat




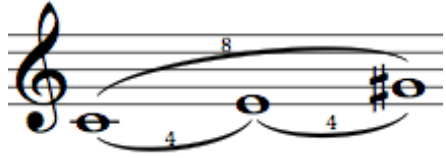
Chord type	Pitches in <i>line of fifths</i> order with <i>spans</i> labelled (<i>*</i> = acoustic dissonance)	Sum of interval spans
Suspended 4 th (e.g. V ₄ ⁵) or suspended 2 nd (e.g. I ₂ ⁵) [027]		4
Minor triad [037] (inv. of major triad [047])		8
Diminished triad [036]		12
Augmented triad [048]		16

Table 1.5 demonstrates how the intervallic rarity can be calculated for the trichords most frequently used by Desplat. In the notated examples, pitches represent pitch-classes, each chord has a root of C, and the horizontal dimension represents the *line of fifths* rather than time. Large horizontal distances between two pitches therefore denote large spans, and each span is labelled with a slur and a digit. I have starred the digit of any interval that is also an acoustic dissonance. The sum of the three spans is given in the right-most column, and rows are sorted according to this value. Because major and minor triads are inversionally related, they are identical in interval content and therefore share a row.

The four chord types in Table 1.5 represent four broad strategies regarding tonal (in)stability. In the augmented triad, a very rare interval (d4/A5) is used, but this instability is mitigated by the avoidance of acoustic dissonance. In the suspended fourth/second chord, the opposite strategy is employed: an acoustic dissonance (ic2) is used, but this is mitigated by only using extremely common intervals, including two P4/P5 intervals. In the minor and major triads both acoustic dissonance and rare intervals are avoided, creating a pleasing degree of stability and euphony, which explains why these chord types are by far the most common in Desplat's work and tonal music

more broadly. Lastly, in the diminished triad the tritone is both acoustically dissonant and a relatively rare interval, making the chord unstable by means of both parameters. (The most extreme use of double-edged strategy, in terms of trichords, is [012], the chromatic cluster, which Desplat only uses as a vertical sonority very rarely).

The rarity of a scale degree in the context of the tonic triad type. This can be calculated by summing the spans between the scale degree and the three members of the tonic triad. The idea is that the tonic *triad* (not only the tonic pitch-class) is the context against which the scale degree is judged to be common or rare. This calculation is demonstrated in Table 1.6 and Table 1.7, which base calculations on a major and minor tonic triad, respectively. These tables demonstrate a quantifiable rationale for facts that Western listeners recognise intuitively, such as the following:

- The top seven scale degrees in each table form Aeolian and Ionian modes, respectively. I call this Aeolian-centric and Ionian-centric expectation.²⁴
- The top five scale degrees in each table form minor and major pentatonic scales respectively. (These are widespread in various musical traditions).
- $\hat{6}$ is rarer if the tonic triad is minor than if it were major.
- $\flat\hat{7}$ is rarer if the tonic triad is major than if it were minor.
- $\flat\hat{2}$ is rare if the tonic triad is minor, but even more so if the tonic triad is major.
- $\sharp\hat{4}$ is rare if the tonic triad is major, but even more so if the tonic triad is minor.

In medieval, impressionist, jazz, and folk styles, minor mode music typically conforms to Aeolian-centric expectations (or a minimal departure of this, using $\flat\hat{6}$). In Baroque, Classical, and Romantic styles, the frequent “raised” $\sharp\hat{7}$ provided a more significant deviation from Aeolian-centric expectations. This is an example of how style-specific schematic expectations can differ slightly from the more generalized Western tonal expectations shown in Table 1.7.²⁵

²⁴ As Norman Carey and David Clampitt (1989, 205) have shown, the tonic triads of Aeolian and Ionian are “tritone-free”, i.e. they exclude *both* of the scale’s ic6-related pitches. This partly explains why these modes are at the top of the tables.

²⁵ The $\sharp\hat{7}$ is typically described as “raised” and use of an Aeolian-centric key signature system remains the norm. This arguably suggests that the Aeolian-centric expectations remained an underlying force throughout the common-practice period.

Table 1.6: calculating the rarity of scale degrees if the tonic triad is major

Relative rarity	Scale degree	Span to $\hat{1}$	Span to $\hat{3}$	Span to $\hat{5}$	Sum of spans to major tonic triad, i.e. the <i>scale degree rarity value</i> for major modes
Common	$\hat{5}$	1	0	3	4
	$\hat{1}$	0	1	4	5
	$\hat{2}$	2	1	2	5
	$\hat{6}$	3	2	1	6
	$\hat{3}$	4	3	0	7
	$\hat{4}$	1	2	5	8
	$\hat{7}$	5	4	1	10
	$\flat\hat{7}$	2	3	6	11
	$\sharp\hat{4}$	6	5	2	13
	$\flat\hat{3}$	3	4	7	14
	$\sharp\hat{1}$	7	6	3	16
	$\flat\hat{6}$	4	5	8	17
	$\sharp\hat{5}$	8	7	4	19
	$\flat\hat{2}$	5	6	9	20
	$\sharp\hat{2}$	9	8	5	22
	$\flat\hat{5}$	6	7	10	23
Rare	$\sharp\hat{6}$	10	9	6	25
	$\flat\hat{1}$	7	8	11	26

Table 1.7: calculating the rarity of scale degrees if the tonic triad is minor

Relative rarity	Scale degree	Span to $\hat{1}$	Span to $\hat{3}$	Span to $\flat\hat{3}$	Sum of spans to minor tonic triad, i.e. the <i>scale degree rarity value</i> for minor modes
Common	$\hat{1}$	0	1	3	4
	$\hat{5}$	1	0	4	5
	$\hat{4}$	1	2	2	5
	$\flat\hat{7}$	2	3	1	6
	$\flat\hat{3}$	3	4	0	7
	$\hat{2}$	2	1	5	8
	$\flat\hat{6}$	4	5	1	10
	$\natural\hat{6}$	3	2	6	11
	$\flat\hat{2}$	5	6	2	13
	$\natural\hat{3}$	4	3	7	14
	$\flat\hat{5}$	6	7	3	16
	$\natural\hat{7}$	5	4	8	17
	$\flat\hat{1}$	7	8	4	19
	$\sharp\hat{4}$	6	5	9	20
	$\flat\hat{4}$	8	9	5	22
	$\sharp\hat{1}$	7	6	10	23
Rare	$\flat\flat\hat{7}$	9	10	6	25
	$\sharp\hat{5}$	8	7	11	26

The rarity (and instability) of a mode, based on the rarity of its scale degrees. The expressive impact of modes will become an important aspect of my analysis of Desplat's musical expression, and the degree to which a mode surprises schematic expectations is an important part of this. In many tonal contexts, the tonic triad is the most frequent triad. This means that the tonal interval classes connecting the first, third and fifth scale degrees to the other four deserve a high weighting when considering the rarity of a mode. These tonal interval classes are the same ones that were used in Table 1.6 and Table 1.7 to calculate *scale degree rarity values*. The latter values are therefore summed in Table 1.6 and Table 1.7 to provide a ranking from common to rare modes of the heptatonic Pressing scales with major and minor tonic triads, respectively. Modes in the equivalent row in each table (e.g. DIA1 and dia6) are inversions of one another around $\hat{1}$ and $\hat{5}$, and share the same scale degree rarity values, but in inverted order. I have underlined the value for the rarest scale degree of each mode.

These rankings are remarkably well aligned with conventional wisdom on what is common and what is rare in tonal music, in the very broadest sense of the term. The caveat is that certain styles will emphasise or underemphasise particular modes more than the table suggests, creating style-based schematic expectations that differ somewhat from those presented in the table. For instance, Baroque, Classical and early Romantic styles strongly favoured modes with no hyper-major or hyper minor scale degrees, which explains why harmonic minor (hmin1) is more common in those styles than Phrygian (dia3), for example.²⁶ The right-most column in each table gives the number of hyper-major or hyper minor scale degrees, so that readers can imagine a ranking where modes with a zero value are forced to the top of the table, better reflecting the schematic expectations of Baroque, Classical and early Romantic styles. With this caveat about style-based expectations aside, Table 1.8 and Table 1.9 show the close relationship between tonal norms and the avoidance of rare scale degrees. As will be discussed in section 1.5.2.5, modes designated rare in these tables will – for listeners most familiar with tonal music – be endowed with a sense of exoticism and/or otherness. Similarly, those designated rare will tend to be endowed with tension and/or instability, as will be explored in the introduction to section 2.3.

²⁶Hyper-major and hyper-minor scale degrees have a span of 6 or more from $\hat{1}$ or $\hat{5}$, so interval rarity was still arguably a governing force behind the musical priorities in this sense.

Table 1.8: calculating the rarity of modes if the tonic triad is major, based on Table 1.6's *scale degree rarity values*

Relative rarity	Mode	<i>Scale degree rarity values for major modes</i>							Sum of <i>scale degree rarity values</i>	Number of hyper-major or hyper-minor degrees
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th		
Common	Ionian (DIA1)	5	5	7	8	4	6	<u>10</u>	45	0
	Mixolydian (DIA5)	5	5	7	8	4	6	<u>11</u>	46	0
	Lydian (DIA4)	5	5	7	<u>13</u>	4	6	10	50	1
	Lydian dominant (MMIN4)	5	5	7	<u>13</u>	4	6	11	51	1
	Harmonic major (HMAJ1)	5	5	7	8	4	<u>17</u>	10	56	0
	Mixolydian $\flat 6$ (MMIN5)	5	5	7	8	4	<u>17</u>	11	57	0
	Mixolydian $\flat 9$ (HMAJ5)	5	<u>20</u>	7	8	4	6	11	61	1
	Lydian $\sharp 2$ (HMIN6)	5	<u>22</u>	7	13	4	6	10	67	2
Rare	Phrygian dominant (HMIN5)	5	<u>20</u>	7	8	4	17	11	72	1

Table 1.9: calculating the rarity of modes if the tonic triad is minor, based on Table 1.7's *scale degree rarity values*

Relative rarity	Mode	<i>Scale degree rarity values for minor modes</i>							Sum of <i>scale degree rarity values</i>	Number of hyper-major or hyper-minor degrees
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th		
Common	Aeolian (dia6)	4	8	7	5	5	<u>10</u>	6	45	0
	Dorian (dia2)	4	8	7	5	5	<u>11</u>	6	46	0
	Phrygian (dia3)	4	<u>13</u>	7	5	5	10	6	50	1
	Phrygian natural 6 (mmin2)	4	<u>13</u>	7	5	5	11	6	51	1
	harmonic minor (hmin1)	4	8	7	5	5	10	<u>17</u>	56	0
	melodic minor asc. (mmin1)	4	8	7	5	5	11	<u>17</u>	57	0
	Romanian (hmin4)	4	8	7	<u>20</u>	5	11	6	61	1
	Phrygian $\flat 4$ (hmaj3)	4	13	7	<u>22</u>	5	10	6	67	2
Rare	Lydian $\flat 3$ (hmaj4)	4	8	7	<u>20</u>	5	11	17	72	1

Inferring unsounded scale degrees. When a mode instance does not sound every scale degree, and the unsounded scale degrees are not even held in the short-term memory (of the previous 15-30 seconds of music), how can the whole mode be determined? I have performed my analyses on the basis that the absence of a scale degree is – for the purposes of mode identification – tantamount to the sounding of the most common scale degree of the relevant number, relative to the overall tonic of a passage (or the best candidate for it, such as a current chord root). For instance, if the sounded scale degrees are $\{\hat{1}, \flat\hat{3}, \hat{4}, \hat{5}, \flat\hat{6}, \flat\hat{7}\}$, I will assume that the mode contains an implicit, unsounded $\flat\hat{2}$, as opposed to an unsounded $\flat\hat{2}$, because $\flat\hat{2}$ is the most common option for modes with minor tonic triads, as shown in Table 1.7.

This methodology is grounded in the “availability heuristic”, which was first proposed by cognitive psychologists Amos Tversky and Daniel Kahneman (1973, 207). They wrote that the availability heuristic is

a judgmental heuristic in which a person evaluates the frequency of classes or the probability of events by availability, i.e., by the ease with which relevant instances come to mind. In general, availability is correlated with ecological frequency, but it is also affected by other factors.

Returning to the example of an implicit, unsounded $\hat{2}$ in Aeolian, $\flat\hat{2}$ comes to mind with significantly greater ease than the far less frequent $\flat\hat{2}$, and therefore it makes more sense to infer $\flat\hat{2}$ as the unsounded degree.

Three common situations of inference of unsounded scale degrees are as follows:

1) Listeners withhold modal inference, because only non-modal scale degrees ($\hat{1}, \hat{5}, \hat{4}$ and/or $\hat{2}$) are sounded, and this is insufficient to distinguish between Ionian (DIA1) and Aeolian (dia6). The expressive result of this modal non-specificity is a kind of emotional neutrality or ambivalence. This is often the starting point of film music cues, including Desplat’s. It is a way of entering the soundtrack of the film without immediately making the emotional intent of the cue plain. It allows space for modal (and expressive) information to be added.

2) Ionian (DIA1) or Aeolian (dia6) is inferred, based on a subset of one of these being sounded, and Ionian-centric or Aeolian-centric expectations, discussed earlier.

3) A mode other than Ionian (DIA1) or Aeolian (dia6) is inferred, on the basis that at least one non-Ionian scale degree *and* at least one non-Aeolian scale degree is sounded, eliminating both modes. (This could be a single scale degree or a pair.) Any unsounded degrees can be inferred using the method already discussed, which allows the mode to be identified.

If the third situation – the sounding of at least one non-Ionian scale degree *and* at least one non-Aeolian scale degree – occurs within the duration of one chord, I call this a *vertically explicit* instance of the mode. For example, a $\flat\hat{3}\flat\hat{2}\hat{1}$ line over *i* is a *vertically explicit* instance of Phrygian, whereas an oscillation of $I \Rightarrow \flat II \Rightarrow I$ with no extra-triadic tones is not. The most direct use of a mode is when it is both tonicised and vertically explicit.

The rarest interval of a non-Ionian, non-Aeolian mode always contains the scale degree(s) necessary to make a mode vertically explicit. For example, in the rarest interval of Mixolydian, which is $\{\hat{3}, \flat\hat{7}\}$, the $\hat{3}$ eliminates Aeolian and the $\flat\hat{7}$ eliminates Ionian.

Some other examples of rarest intervals are:

- $\{\flat\hat{3}, \natural\hat{6}\}$ for Dorian (dia2);
- $\{\flat\hat{3}, \natural\hat{7}\}$ for melodic minor ascending (mmin1);
- $\{\flat\hat{6}, \natural\hat{7}\}$ for harmonic minor (hmin1);
- $\{\hat{3}, \flat\hat{6}\}$ for harmonic major (HMAJ1);
- $\{\sharp\hat{4}, \flat\hat{6}\}$ for Hungarian gypsy (nmin4) or Hungarian minor (gyp4);
- $\{\flat\hat{2}, \sharp\hat{4}\}$ for chromatic Lydian inverse (cli1);
- $\{\hat{1}, \sharp\hat{4}\}$ for Lydian (DIA4); and
- $\{\flat\hat{2}, \hat{5}\}$ for Phrygian (dia3).

1.4.5 Intervallic similarities between scale types

This section is concerned with what makes two different scale types similar or different in their expressive character, irrespective of mode or transposition. It considers questions such as which scale type is maximally similar in expressive character to the diatonic scale, and why. Such similarity needs to be considered before one can consider similarity of expressive character between *modes* of different scale type, which will be addressed in section 1.4.6. I will start by restricting the discussion to the eight heptatonic scale types that Desplat most commonly uses:

- Diatonic (DIA)
- Melodic minor (MMIN)
- Harmonic minor (HMIN)
- Harmonic major (HMAJ)
- Neapolitan minor (NMIN)
- Super-whole-tone (SWT)
- Double harmonic major (GYP)
- Chromatic Lydian inverse (CLI)

I found that the most elegant way of comparing the similarity of expressive character between these scale types is to compare their tonal interval class content. Unlike chromatic interval classes that do not distinguish, for example, between an augmented second and a minor third, and thus fail to acknowledge the obvious expressive difference in a tonal context between the solidity of $C \Rightarrow E\flat$ in contrast to the tension of $A\flat$ to $B\sharp$ in the same key, tonal interval classes can clearly quantify this distinction. Table 1.10 shows frequency of each tonal interval class for the scale types listed above, with the darkness of cell shading representing frequency.

Table 1.10: Tonal interval class content in heptatonic scale types.

	Tonal interval class	DIA	MMIN	HMIN/ HMAJ	NMIN/ NMAJ	GYP	CLI/ CHL	SWT
Common	P4/P5	6	4	4	4	4	4	2
	M2/m7	5	5	3	3	1	1	5
	m3/M6	4	4	4	2	2	1	2
	M3/m6	3	3	3	4	4	3	4
	m2/M7	2	2	3	3	4	4	2
	A4/d5	1	2	2	2	2	2	3
	A1/d8	0	0	0	0	0	0	0
	d4/A5	0	1	1	1	1	1	2
	A2/d7	0	0	1	1	2	2	0
Rare	d3/A6	0	0	0	1	1	2	1
	A3/d6	0	0	0	0	0	1	0

HMIN and HMAJ scales share a column because they have identical interval content due to being related by inversion. The same is true of NMIN/NMAJ and CLI/CHL. All heptatonic scales contain twenty-one intervals, not counting octaves and unisons: seven from each of these three categories: second/seventh, third/sixth and fourth/fifth. As in Table 1.3, tonal interval classes are presented from top to bottom in order of increasing rarity. Except for SWT, which will be discussed later, the scale types are presented from left to right in order of increasing difference from the diatonic scale. Moreover, except for SWT, neighbouring columns contain scale types that have nineteen of the twenty-one tonal interval classes in common and two that have been expanded or contracted by chromatic semitone²⁷. Arrows highlight the differences between the intervals in neighbouring columns. For instance, the arrows show that DIA differs from MMIN in that one of its P4/P5s becomes an A4/d5, and another becomes a d4/A5. Notice that as one moves further from the diatonic scale, rarer alternatives replace relatively common intervals.

In terms of tonal interval class content, there is thus quite a neat incremental evolution from DIA over to its most distant relative, CLI. SWT does not follow this pattern, but rather it branches out from NMIN and MMIN, and only has seventeen, rather than nineteen intervals in common with these two scales. These similarity and difference

²⁷ Throughout the thesis, when I use the phrase “chromatic semitone” in contexts where octave is unimportant, I am using it to denote a chromatic *ic1*, i.e. the tonal interval class A1/d8, which is not necessarily one literal semitone.

relationships are graphically represented in Figure 1.2, which also introduces the relationships between the heptatonic scales and the octatonic scale (OCT) and whole-tone scale (WT). It also includes the inversion-related scales of NMIN and CLI, which are NMAJ and CHL, respectively. Arrows show the differences in tonal interval class content between each scale type and its closest interval content relative(s). In the horizontal branch, the interval content becomes incrementally rarer from left to right. In the vertical and diagonal branches, interval content becomes rarer (on average, at least) in movements away from the horizontal branch. Also note that while the heptatonic scales have twenty-one intervals each, due to their differences in cardinality, the octatonic scale (OCT) has twenty-eight intervals and the whole-tone scale (WT) has only fifteen. This is why most of the interval content differences between these two scales and their heptatonic cousins are differences of omission versus inclusion.

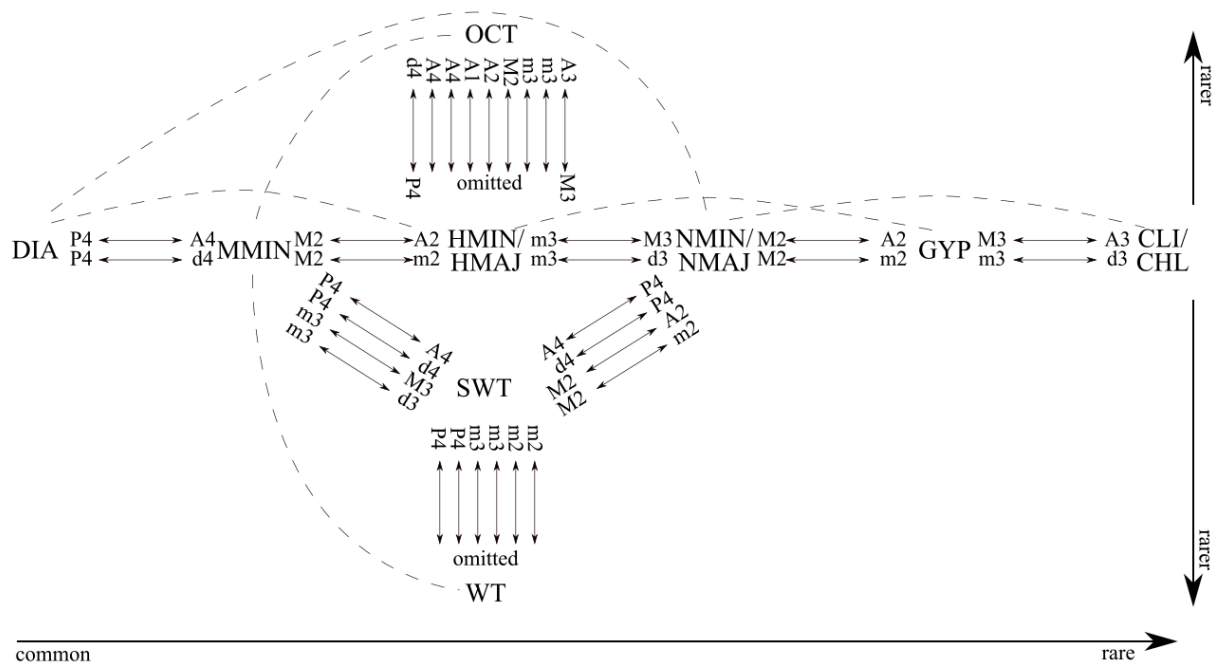


Figure 1.2: similarity space for scale types, based on tonal interval class content. N.B. the usual notation for tonal interval classes is abbreviated to minimise clutter, with P4/P5 becoming P4, etc.

Figure 1.2 reveals the diatonic (DIA), octatonic (OCT), chromatic Lydian inverse (CLI), chromatic hypolydian (CHL), and whole-tone (WT) scales to be somewhat extreme in their interval content relative to the entire spread scales. In the case of chromatic Lydian inverse (CLI) and its inversion (CHL), the extremity lies in the presence of two [012] trichords (3-1, i.e. chromatic clusters) which makes the scale divide the octave quite unevenly and provides an unusually large number of m2/M7 (four) and two of the very rare d3/A6 intervals. It has as many chromatic intervals as the octatonic scale (OCT),

which is remarkable in that the latter is not heptatonic and has a larger total pool of intervals. The octatonic scale (OCT) is also extreme in its large number of chromatic intervals, but also in its large number of m3/M6 (six), and A4/d5, i.e. tritones (four). The whole-tone scale (WT) is extreme in its complete lack of any P4/P5, m3/M6 and m2/M7, and relatively large number (three) of A4/d5. Lastly, the diatonic scale (DIA) is extreme in that its interval content is extremely familiar, including the largest number of P4/P5 (six), and the avoidance of any chromatic intervals. Because of the frequency with which acculturated Western listeners have heard the diatonic scale (DIA), scale types with intervallic differences from DIA – especially significant differences – will tend to evoke a sense of otherness or exoticism, which will be discussed in section 1.5.2.5. Rare scale types might also be used to evoke complexity,²⁸ comedy,²⁹ and/or negative emotional states,³⁰ with the surprise factor of the rare intervals being responsible for this wide range of interpretations, as will be discussed in section 1.5.2.6.

Pairs of scales that are connected by two or more solid line arrows in Figure 1.2 are not only strongly similar in interval content, but they share another similarity relationship: under certain transpositions, they can be what Tymoczko calls “maximally intersecting”.³¹ That is to say, they can be transposed such that the number of pitch-classes in common between the two scales is only one less than the cardinality of the smaller scale (if they are of different cardinalities). Two scales for which this is true, can – if their transposition is unspecified – only be related by *potential* maximum intersection.

Nevertheless, this in itself – regardless of transposition – is a noteworthy structural similarity, because much of the interval content (and trichord content, and tetrachord content, etc.) will consequently be the same. For the heptatonic modes that maximally intersect (which are of course identical in their cardinality), it is possible to go a step

²⁸ When rare scale types are used in *The Imitation Game*, they are often readily interpreted as expressing – among other things – the complexity of code breaking activities. For example, Aeolian b4 (nmaj6) is used when the Enigma code is first mentioned (0:10:28), in a variant of the “Enigma motif” discussed in section 2.4.3.4. The cue “Crosswords” (0:25:41) includes instances of Lydian dominant augmented (SWT3) and Neapolitan minor (nmin1). Lastly, the cue “The Machine Christopher” – whose title refers to the first computer – includes rare scale types such as octatonic (OCT).

²⁹ Some examples of this will be discussed on pages 163, 192, 201, 294. See also the discussion of linear chromaticism in section 2.4.7, as the chromatic scale (CHRO) is also a rare style type.

³⁰ Modes of rare scale types often evoke negative states (among other things), as will be explored in the sections on Lydian b3 (hmaj4), chromatic Lydian inverse (cli1), and Phrygian b4, all within section 2.3.

³¹ The super-whole-tone collection (SWT) and whole-tone collection (WT) share an even stronger relationship than maximal intersection in that SWT is a superset of WT.

further and say that they are *potentially* (transposition-dependent) related by what Richard Cohn (1996, 15) calls “maximally smooth” voice-leading. In this relationship, not only is there a maximal intersection, but also the remaining two pitch-classes (one in each collection) differ by only one semitone. For instance, in the case of C DIA {C, D, E, F, G, A, B} and A HMIN {C, D, E, F, G#, A, B}, the maximal intersection is {C, D, E, F, A, B}, and the remaining two pitch-classes that differ by semitone are G and G#. Regardless of transposition – that is, regardless of whether the voice-leading work between the two scales is in fact only one semitone – *potential* maximally smooth voice-leading ensures that the two scales divide the octave with a relatively similar degree of evenness.³² Again, this is a significant structural similarity between the two scales, regardless of transposition.

The curved dotted lines in Figure 1.2 connect scale types related by potential maximal intersection, but which are not already connected by solid arrows. The main point of including these lines is to show that not all relationships of maximal intersection result in equal tonal interval similarity. DIA and NMIN, for instance, only have fifteen out of twenty-one intervals in common, whereas DIA and MMIN have nineteen out of twenty-one in common. Perhaps the best way to understand this is that maximal intersection is a strong similarity feature connecting several pairs of scale types, but tonal interval class content is a kind of tiebreaker that provides a more detailed picture of how similar the two scales really are in terms of expressive character. This understanding will feed into our understanding of the expressive character between the various *modes* of the scales discussed, which is the subject of the next section.

1.4.6 Similarity of modes’ structural features

The twenty-one modes most commonly employed by Desplat are all modes of the heptatonic scales in the horizontal branch of Figure 1.2. These are compared with one another according to their structural features in Figure 1.3 (overleaf), which is a modified x/y plot. The motivation for such graphing is that structural similarities between modes

³² Illustrating this point, compare {C D E F G A B} and {C C# D E F A B}. They are maximally intersecting, both containing {C D E F A B}. But they are not maximally smooth in their voice-leading. Consequently, the second collection, even if transposed, is substantially less even in the way it divides the octave than the first, having a chromatic cluster at {C C# D} and a large 4 semitone step between F and A.

tend to translate to similarities of expressive potential. The graph is not concerned with individual transpositions of modes, but rather reveals pieces of information general to all transpositions of each mode, such as “Mixolydian has a flatter seventh than Ionian but is otherwise identical in scale degree content”. Such information about scale degree content is combined with the information about tonal interval class rarity shown in Figure 1.2.

The y-axis shows the total scale degree height of the mode, i.e. the sum of the number of semitones each scale degree is above the tonic. For instance, Lydian (DIA4) has a sum scale degree height of thirty-nine ($0 + 2 + 4 + 6 + 7 + 9 + 11$), making its scale degree content the highest of the modes represented in the graph. Modes at the other end of the y axis, such as Phrygian (dia3), tend to have a large number of scale degrees that are minor or hyper-minor. These minor and hyper-minor scale degrees tend to carry negative emotional connotations, as will be discussed in section 1.5.4.

The x-axis represents interval rarity, and is similar to the horizontal branch of Figure 1.2, as indicated by the box below the main graph referring to this branch. The interval rarity value of a mode is calculated by summing the spans (distances on the *line of fifths*) of its twenty-one tonal interval classes. Modes of the same scale type (or inversionally related types in the case of HMIN and HMAJ) vertically align on the graph, because they share the same tonal interval class content. Put simply, the x-axis is like the horizontal branch from Figure 1.2, but with some added metric detail, including the fact that the difference in rarity between the GYP and CLI scales is larger than the difference in rarity between DIA and MMIN.

Dotted lines connect pairs of modes that share the same scale degree content but for one scale degree. This one differing scale degree is a chromatic semitone lower in the mode represented at the lower end of the dotted line. For example, for the line connecting DIA1 and DIA5, the mode at the lower end of the line (DIA5) has a $\flat\hat{7}$ rather than a $\hat{7}$, as indicated by the label on the line. This does not *necessarily* mean that the $\flat\hat{7}$ is a semitone lower than the $\hat{7}$, but it would if the two modes had the same tonic.

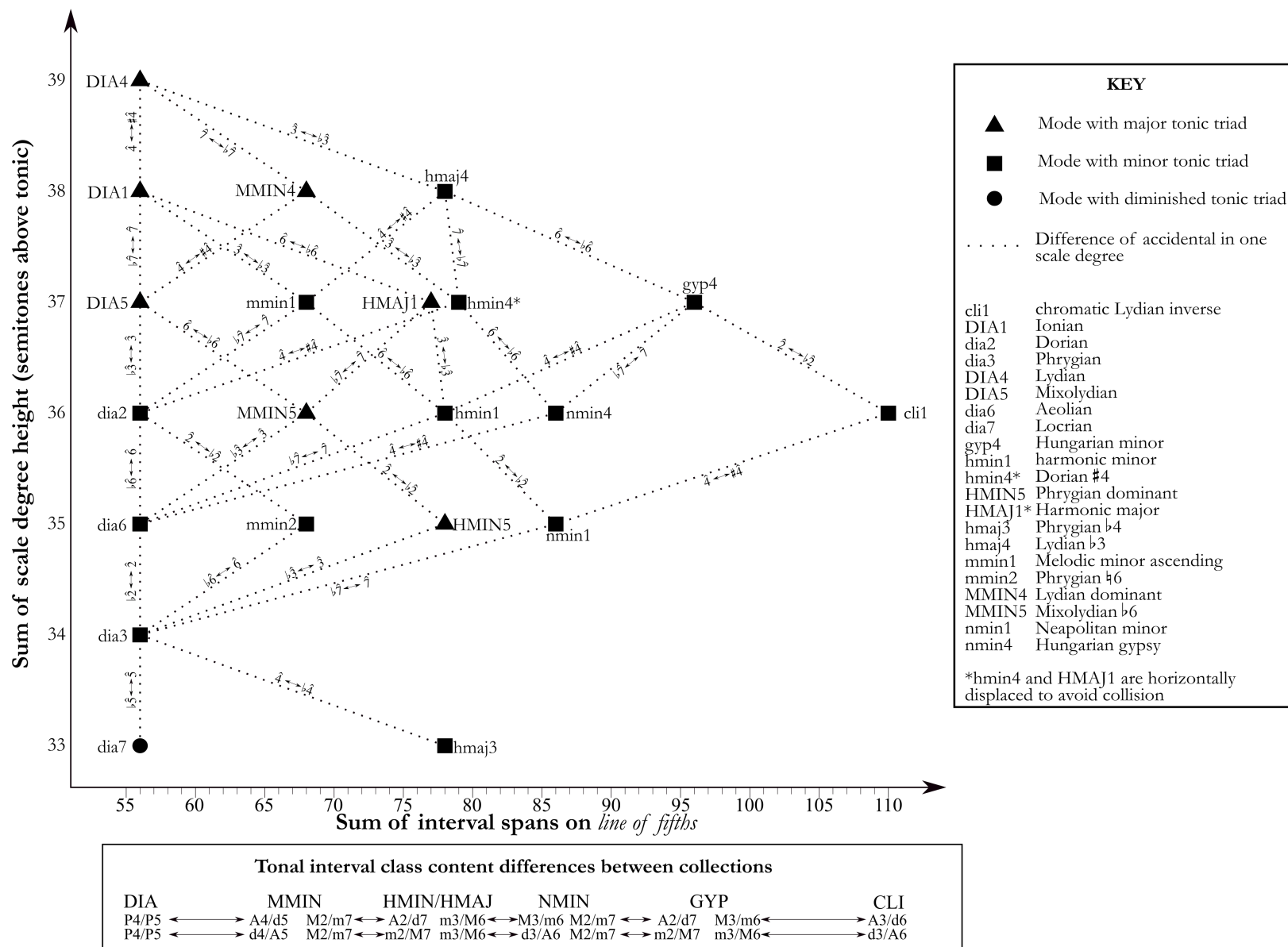


Figure 1.3: Similarity space for heptatonic modes commonly used by Desplat

Modes are structurally similar when they are connected by a small number of dotted lines on Figure 1.3, because the number of dotted lines equals the number of differences in scale degree content. The other measure of mode similarity shown in Figure 1.3 is proximity on the x/y plot, indicating similarity in scale degree height and/or interval rarity value. The most similar sounding pairs of modes are near one another in the x/y plot *and* connected by only one dotted line, such as DIA5 and DIA1.

A complicating factor is that the scale degrees in the tonic triad should ideally carry more weight than the other scale degrees because of the likely high frequency of the tonic triad. Rather than attempting to factor this into the position in which modes are plotted, I have opted to differentiate between tonic triad types by the shape of the plot point. Modes with major, minor, and diminished tonic triads are plotted using different shaped plot points, as shown in the key. The strongest similarities between two modes on Figure 1.3 are therefore short lines between plot points of the same shape.

1.4.7 Transformational Analysis

The “chord progressions” referred to in research question 2a, and the motions between scales mentioned in the introduction to section 1.4, will be explored through the lens of transformational analysis. This branch of music theory originates in the writings of nineteenth-century music theorist Hugo Riemann (1849-1919). Riemann’s ideas have been reimagined since the early 1980s in the Neo-Riemannian Theory (NRT) work of David Lewin, Brian Hyer, Richard Cohn, and Henry Klumpenhouwer.¹ Uniting these writings is the idea that chords may be regarded in terms of their relationships *to one another*, rather than in terms of their relationships to a tonic and diatonic scale, as is the case in Roman numeral analysis. Transformational theory scrutinises transformations that modify each chord, via voice-leading, into the next chord. Transformations between scales can also be studied in similar ways.

¹ The *Oxford Handbook of Neo-Riemannian music theories* (Gollin and Rehding 2011) gives a thorough introduction to various areas of inquiry within the field of NRT, and includes a translation of some of Riemann’s foundational work.

Another important concept in transformational theory is the notion of “tonal space”. Keys can be considered to be “close” one another (i.e. easily accessible to one another) if they have many pitch-classes in common, as is modelled in the well-known *circle of fifths* diagram. Similarly, triads can be described as being close one another if they have two pitch-classes in common – the maximum number without the triads being identical – as do A min and C maj. This type of triadic proximity is represented on the *LRP map*, which I discuss in the next section. Tonal spaces like the *Circle of Fifths* and the *LRP map* visualise proximity between musical objects, aiding the study of the various possible transformations from one object to another.

This transformational approach to harmony is especially useful in the analysis of the musical idiom often described as *triadic chromaticism*. This idiom blossomed in the late Romantic period – following innovations by Schubert and others – and occurs when triads move from one to another in ways not naturally rationalised by reference to a diatonic scale and tonic. In triadic chromaticism, coherence and intelligibility is usually achieved, in part, through parsimonious voice-leading between triads, and by networks of triads connected by these parsimonious voice-leading.

The inaugural work in neo-Riemannian theory is Lewin (1982b). An integral concept for neo-Riemannian theory was articulated by Ernst Kurth (1991), who wrote of *absolute progressions*, in which two chords are paired together primarily because the composer is seeking to exploit the expressive features and associations of that relationship. Of the neo-Riemannians who do not focus on film music, Richard Cohn is of special interest. Cohn is interested in exploring the nature and cause of the associativity surrounding *absolute progressions*. To use a helpful term coined by Philip Tagg, Cohn is interested in the “etymophony” of triadic progressions, meaning “the origin[s] and development of a non-verbal sound’s meaning” (Tagg 2013, 588). For instance, Cohn (2004) examines the etymophony of the *hexatonic pole* progression (e.g. C min \Leftrightarrow E maj), which he identifies as being associated with the uncanny in Wagner. Cohn’s book *Audacious Euphony* (2012) offers a good summary of his work.

Frank Lehman (2013c), one of the foremost scholars applying the methodology to film music,² explains why Neo-Riemannian theory is so well suited to the analysis of film music: “[C]ontemporary film music offers a confluence of features that NRT is singularly well-equipped to tackle: triadic chromaticism (often with smooth voice-leading) redolent of but distinct from nineteenth-century practice; clear associativity of *absolute progressions*; and a tendency to prioritise expressive local modulation over long-range tonal structure.” The features described by Lehman are true of Desplat’s music to a similar degree that they are true of most other contemporary film music, so a suitably adapted form of NRT is an ideal methodology for this study.

Guy Capuzzo (2004) was the first writer to demonstrate that NRT, usually employed to analyse late-Romantic progressions, are also applicable to certain progressions found in pop, rock and film music. Capuzzo’s approach focuses on the purely musical traits of the progressions such as voice-leading parsimony within both pitch space and pitch-class space. Other scholars who have contributed to this emerging field, which I will call Transformational Analysis of Film Music (TAFM), are Scott Murphy (2006, 2014b, 2014a), Matthew Bribitzer-Stull (2007; 2015), Jamie Webster (2009, 2012), and Tom Schneller (2014).

The approaches of Murphy, Lehman, Bribitzer-Stull, and Schneller, are all broadly similar in that they are interested in the etymophony of *absolute progressions*, much like Cohn. The first etymophony-focussed TAFM work is by Murphy (2006), who writes about an association between the “Major Tritone Progression” – MTTP, called M6M in his later work – and outer space. He focuses particularly on its use in James Newton Howard’s score for *Treasure Planet*, pointing to intratextual, intertextual,³ and intrinsic causes of association of the MTTP with outer space. In another article, Murphy (2014b) studies the etymophony of the triadic progression “M4m” (usually I ⇔ iii). This progression, he argues, has come to signify sentimental loss, in recent cinema and television, as is mentioned on page 17. In *Philomena* (Frears 2014), Desplat uses M4m in exactly this way

² To date, Lehman’s thesis *Reading Tonality Through Film: Transformational Hermeneutics and the Music of Hollywood* (2013b) is one of the most substantial works solely dedicated to TAFM.

³ An example of an *intertextual* cause of the association that Murphy cites is its use in various movements of Gustav Holst’s *The Planets*. *Intratextual* causes (i.e. causes within the film *Treasure Planet*) include the use of the MTTP to accompany key images of *Treasure Planet*. *Intrinsic* causes for the association relate to the structural qualities of the MTTP progression, such as its extremely non-parsimonious voice-leading work, which Murphy claims to be an analogy for the vast distances of outer space.

in a version of the leitmotif for the titular protagonist’s “long-lost son”.⁴ Murphy’s term “M4m” and others like it will be explained in section 1.4.7.2. The next section, however, will introduce a more conventional Neo-Riemannian nomenclature and some related models of tonal space.

1.4.7.1 Neo-Riemannian Operators and the LRP map

Transformational theorists use various nomenclatures to describe parsimonious voice-leading between triads. The following are the three most parsimonious transformations in that only one triadic tone moves by step. I have labelled them using the widely-accepted nomenclature developed by Richard Cohn.⁵ **P**(arallel) transformations change the mode of the triad by altering its third by a chromatic semitone, as in C maj \Leftrightarrow C min. **R**(elative) transformations occur between a major and a minor triad that share an ic4 interval and have roots an ic3 apart, as in C maj \Leftrightarrow A min. **L**(eittonwechsel) transformations are between a major and a minor triad that share an ic3 interval and have roots an ic4 apart, as in C maj \Leftrightarrow E min. *Leitton* is the German word for “leading-tone”, but can include $\flat\hat{6}$ in a minor key as well as $\hat{7}$, because both seek to resolve by semitone to a member of the tonic triad.

L, **R**, and **P** are the most basic Neo-Riemannian Operators (NROs), and triads connected by one of these operators are “close” in terms of voice-leading. Other transformations are conventionally expressed as compounds of these basic three operators. For example, an **LP** transformation performed on C maj triad would first transform the C to B (**L**) and then the G to G[#] (**P**), resulting in E maj. In the same way, a **PRP** performed on C maj would result in E \flat min. Transformations compounding an even number of **L**, **P**, and **R** operations preserve triadic mode and are called *Schritte* (steps) by Riemann. Those with an odd number change the triadic mode and are called *Wechseln* (changes).

⁴ An example is at 0:41:31, in “Landing in the USA”. The leitmotif also occurs in Aeolian (Figure 2.12).

⁵ This nomenclature is introduced in (Cohn 1997).

Movements to relatively “close” triads tend to be more frequent in tonal or post-tonal music, and therefore cause less surprise than movements to “distant” triads. One can visualise this as closeness in a two-dimensional voice-leading space, as shown in Figure 1.4. Neo-Riemannian theorists have named such a construct the “Chicken-wire Torus” (Jack Douthett and Peter Steinbach 1998) or the “LRP map” (Michael Siciliano 2002).

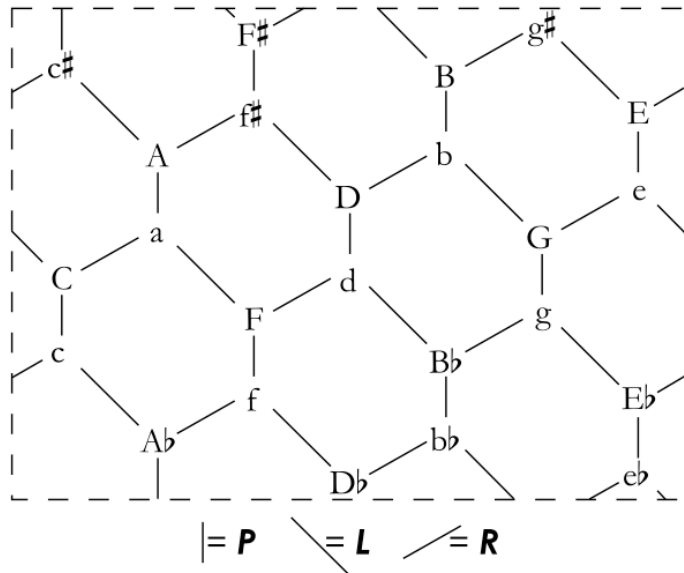


Figure 1.4: *LRP map* with vertical axis as circle of fifths and horizontal axis as circle of diatonic thirds.

The *LRP map* has a horizontal dimension and a vertical dimension, both of which are cyclic. If one brings the left and right edges of the map together to form a cylinder, and then the top and bottom edges together – twisted so that $A\flat$ and $g\sharp$ are vertically aligned – the map covers the surface of a torus, or doughnut shape. For those who prefer to think of a two-dimensional structure, imagine a brick pattern where each brick is an identical version of the map. (The limitation of the brick-pattern approach is that it results in each triad occurring multiple times).

If two triads are near two opposite edges of the map, they are closer than it appears, as with Alaska and the eastern cape of Russia in many two-dimensional world maps. In such cases the shortest possible path between the two points will likely cross the nearby edge, re-emerging at the appropriate position on the opposite edge. Crossings of the left/right edges works in the same way as in the world map example, whereas crossings of the bottom/top edges involve a horizontal displacement, because of the brick-like

tiling pattern. A useful rule to know is that if a transformation includes more than two **R** moves and/or more than three non-**R** moves,⁶ the shortest path is not being followed. Maximal transformations following the shortest path include **RLRLP** (e.g. G min \Rightarrow A maj), and the same move in the opposite direction: **PLRLR** (e.g. A maj \Rightarrow G min).

In my version of the *LRP map* (Figure 1.4) I have rotated and skewed it to emphasise the distinction between diatonic and chromatic voice-leading. Voice-leading in which one voice moves by chromatic semitone – **P** – are represented by vertical lines. This creates a column for each of the seven diatonic classes, for instance the leftmost column is of the diatonic class “C” (which includes C, C#, Cb, etc.). This arrangement means that a trajectory through the space is diatonic or chromatic depending on whether it avoids or follows or avoids these vertical **P** movements. Put another way, the more horizontal the trajectory, the more diatonic, and the more vertical, the more chromatic.

Precisely speaking, the vertical dimension traverses chromatic space via the chromatic circle of fifths. This does not mean that chromatic progressions are by fifth; rather, it means that the vertical ordering of triads in the space follows the chromatic circle of fifths. (D \flat is the major triad that is lowest in the map, followed by, A \flat , E \flat , etc.) The horizontal dimension traverses diatonic space via chains of **L** and **R**, i.e. diatonic voice-leading with root motion by third or sixth.

The *LRP map* is a descendant of a better-known, older and more generalised tonal space concept called the *Tonnetz*, which was first proposed by the Swiss mathematician Leonhard Euler (1739). This is another tonal space in which triads are neighbours if they are related by **L**, **P**, and **R**. Modern, equal-tempered versions of the *Tonnetz* recognise that it is toroidal in nature, in the same way as the *LRP map*.⁷ Unlike the *LRP map*, the *Tonnetz* represents each triad as a triangle rather than a point, and the triangles are arranged in a triangular lattice, touching one another at the edges. The corner of each triangle represents each pitch-class in the triad. Thus, triads related by **L**, **P**, and **R** are represented as two triangles sharing two corners, i.e. touching at the edge. The *Tonnetz* is a more versatile space in that it can describe relationships between pitch structures other than

⁶ A “non-**R**” move could be **L** or **P**.

⁷ According to Cohn (1997, 63), toroidal *Tonnetze* probably date back to Steven Lubin’s thesis (1974).

triads. But the *LRP map* is arguably more directly useful if triadic progressions in particular are being discussed, which is why I have focussed on it over the *Tonnetz*.

Both the *LRP map* and the *Tonnetz* are two-dimensional lattices that are isomorphic and based on a particular metric: in this case the metric of common tones. The advantage of this metric approach is, if an analyst maps multiple different passages against the same model of tonal space, he or she is able to compare the two passages using the same metric. The analyst will begin to learn what typical transformations look like, and consequently atypical transformations will stand out. For this reason, in this study I favour models of tonal space that are metric in this way.

This decision runs contrary to Lehman (2013b), who rejects *Tonnetz*-like tonal spaces as being too prescriptive and rigid, focussing too much on the metric of common tones and ignoring other factors he considers important. Because of Lehman's importance in the field of TAFM, I will briefly discuss his critique of *Tonnetz*-like spaces, his alternative to them, and my response to his approach. Lehman (2013b, 59) writes:

proximity [between chords] through common-tone content is, of course, an asset if the analyst desires such a uniform metric, but other contexts (such as, I will argue, film music) are better suited to spaces in which distance is not a fixed, but highly contingent and mutable property of ongoing musical discourse.

While I do not deny that metric tonal spaces are limited in scope, and inevitably identify one or two kinds of “distance”, ignoring other factors, I find it useful to be aware of what a metric tonal space *can* reveal, by graphing a passage in such a space, and then using prose to address any features of the passage that the graph ignores or distorts. The analyst is in a better position to comment on nuances such as the “contingent and mutable property of on-going musical discourse” after knowing the basic facts of voice-leading proximity that a metric tonal space can reveal.

Lehman's alternative to the *Tonnetz* is the “node and arrow” style diagram, following Lewin (1982a). A very simple example of such a diagram is provided in Figure 1.5, which graphs the transformations between three triads used in Desplat's “Enigma motif” from *The Imitation Game* (Figure 1.6). The double circle around the C# min node in Figure 1.5 denotes the tonic status of that triad.⁸ The double-sided black arrows denote movement

⁸ Steven Rings (2011) was the first to adopt this practice.

between two triads in both directions. The Neo-Riemannian operators “**RPR**”, and “**LPL**” both show the triadic voice-leading route taken to transform from C# min to G maj and F maj, respectively.⁹ **LPL** could also be labelled **H** for *hexatonic pole*,¹⁰ after Cohn (2004), but I have used **LPL** because it shows a symmetry of sorts between the two transformations, with both using a pair of **L** or **R** separated by **P**.

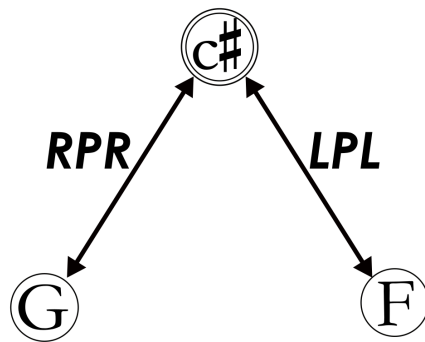


Figure 1.5: node and arrow network diagram for the “Enigma motif” from *The Imitation Game*



Figure 1.6: The “Enigma motif” from *The Imitation Game*, as heard in “Becoming a Spy” (1:22:39)

The crucial difference between node and arrow diagrams and Tonnetz-like spaces is that two chords are not necessarily distant in the space based on how many **L**, **P**, or **R** operations separate them. Moreover, there is no one single metric that is applied systematically to govern how closely chords are represented in the space. Nevertheless, the diagrams do purport to offer insights about implied distances between chords. Two chords might be positioned closely to one another merely by virtue of being played adjacently in the passage. Time is sometimes represented by the horizontal axis, or in a circular fashion, or not at all. The layout of each diagram is designed creatively to interpret and respond to qualities specific to the passage under analysis.

⁹ For example, C# min transforms into G maj via **R**, **P**, and **R**, in that order, following the route C# min \Rightarrow E maj \Rightarrow E min \Rightarrow G maj in the *LRP Map*.

¹⁰ The associative meanings of the *hexatonic pole* transformation in the “Enigma motif” will be discussed in section 2.4.3.4.

The node and arrow approach certainly gives the analyst the advantage of showing elements that a Tonnetz-based space cannot, and in particular, of custom-building each diagram to illuminate qualities specific to the passage under analysis. It does this, however, at the cost of not clearly and systematically measuring tonal distance in a way that allows easy comparison across all of the various passages under analysis. Rather than abandoning metric tonal spaces, my solution is to improve them, by making them metric in more ways than one, providing information about both the triadic and the scalar aspects of transformations – as will be explored in sections 1.4.7.3 and 1.4.7.4.

For now, however, some limitations of Cohn’s Neo-Riemannian operators must be addressed. The first problem is that **LP** could equally refer to the transformations $C \text{ maj} \Rightarrow E \text{ maj}$ and $C \text{ min} \Rightarrow A^b \text{ min}$. The rationale for this is mathematically sound insofar as an **L** operation followed by a **P** operation takes place in both transformations, and one transformation is the precise inversion of the other.¹¹ However, there is a problem for the analyst of a dramatic form such as film music, in that $C \text{ maj} \Rightarrow E \text{ maj}$ and $C \text{ min} \Rightarrow A^b \text{ min}$ have radically different expressive potential. This is for the simple reason that major and minor triads have very different affective connotations in Western culture, as will be discussed further in section 1.5.4. It therefore becomes problematic for the two expressively different progressions to share the same label, if the purpose of analysis is to investigate expression. The same problem applies to all *Schritte*.

In addition to this problem, no distinction is made by any of the NROs (*Schritte* or *Wechseln*) based on which of the two triads is tonicised. This is problematic because there is a real, audible difference in connotation between, for example, the **R** transformation $I \Rightarrow vi$ and the **R** transformation $^bIII \Rightarrow i$. The former implies Ionian (DIA1) and the latter Aeolian (dia6). Consequently, the extra-musical connotations of the two progressions will tend to be quite different, in which case a different label would be useful for the analyst interested in expressive differences between progressions.

¹¹ This is an example of the “dualistic” thinking in the work of Riemann and his followers, in which every tonal function or triadic progression has an equal/opposite in the form of its inversion.

1.4.7.2 Murphy's "Tonal Triadic Progression Classes"

Scott Murphy, in his chapter outlining TAFM in *Oxford Handbook of Film Music Studies* (2014), proposes a nomenclature that solves both problems described above for the film music analyst. Under Murphy's system, C maj \Leftrightarrow A min, if the C maj was the more tonicised of the two chords, would be referred to as "M9m". This is spoken as "major nine minor". "M9m" denotes a Major tonicised triad adjacent to a minor triad whose root is 9 semitones higher in pitch-class space. To give another example, C maj \Leftrightarrow F maj, if the C major was the more tonicised of the two chords, would be classed as "M5M" (spoken as "major five major"). "M5M" denotes a Major tonicised triad adjacent to a Major triad whose root is 5 semitones higher in pitch-class space. Each of these transformation types is a *Tonal Triadic Progression Class* (TTPC), and forty-eight TTPCs are possible. Unlike conventional Neo-Riemannian operators, the order of the progression does not affect the TTPC's label, but the tonal hierarchy and triadic mode does.

Because Murphy's TTPC nomenclature solves two significant limitations with the more conventional NROs, I will adopt this system, except when tonicisation and/or triadic mode are unimportant. For the benefit of those accustomed to the nomenclature of transformations used by Neo-Riemannian scholars since Richard Cohn, Table 1.11 and Table 1.12 provide a guide to conversion between the two nomenclatures.¹² According to Murphy (2014), summarising his own work and that of other scholars in TAFM, about a dozen of these forty-eight TTPCs have particularly consistent associations in recent Hollywood film music. These findings are an excellent starting point in my analysis of Desplat's use of TTPCs to express extra-musical meaning, and will be explored as they become relevant.

¹² The third and fourth columns provide the *most likely* operator to be used. I acknowledge that there is often a transformation can often have multiple possible descriptors.

Table 1.11: Conversion of *Wechseln*, from TTPCs to more conventional operators used in Neo-Riemannian theory

TTPC	Example More tonicised triad \Leftrightarrow Less tonicised triad	Operator for transformation in \Rightarrow direction (relative to example)	Operator for transformation in \Leftarrow direction (relative to example)
M0m	C maj \Leftrightarrow C min	P (arallel)	
m0M	C min \Leftrightarrow C maj		
M4m	C maj \Leftrightarrow E min	L (eittonwechsel)	
m8M	C min \Leftrightarrow A \flat maj		
M9m	C maj \Leftrightarrow A min	R (elative)	
m3M	C min \Leftrightarrow E \flat maj		
m1M	C min \Leftrightarrow D \flat maj	LRL	
M11m	C maj \Leftrightarrow B min		
m2M	C min \Leftrightarrow D maj	RLR	
M10m	C maj \Leftrightarrow B \flat min		
M5m	C maj \Leftrightarrow F min	N (ebenverwandt) ¹³	
m7M	C min \Leftrightarrow G maj		
m5M	C min \Leftrightarrow F maj	M (odalverwandt) ¹⁴	
M7m	C maj \Leftrightarrow G min		
M1m	C maj \Leftrightarrow C \sharp min	S (LIDE) ¹⁵	
m11M	C min \Leftrightarrow C \flat maj		
M8m	C maj \Leftrightarrow A \flat min	H (exatonic pole) ¹⁶	
m8M	C min \Leftrightarrow A \flat maj		
M3m	C maj \Leftrightarrow E \flat maj	PRP	
m9M	C min \Leftrightarrow A maj		
M6m	C maj \Leftrightarrow F \sharp min	T6P	
m6M	C min \Leftrightarrow G \flat maj		
M10m	C maj \Leftrightarrow B \flat min	T10P	T2P
m2M	C min \Leftrightarrow D maj	T2P	T10P

¹³ **N**(ebenverwandt) was brought into modern use by Cohn (2000), following the concept of nineteenth-century German theorist Carl Friedrich Weitzmann. It is equivalent to **RLP** (in the major to minor direction) or **PLR** (in the minor to major direction).

¹⁴ **M**(odalverwandt) was coined by Lehman (2013b). It is equivalent to **LRP** (in the major to minor direction) or **PRL** (in the minor to major direction). Note that **N**(ebenverwandt) and **M**(odalverwandt) both include a simple **LR/RL** progression (i.e. a Schritte changing the chord root by a P4/P4), but one of the triads is modified by **P** to make it a Wechsel.

¹⁵ **S**(LIDE) was coined by Lewin (1987). It is equivalent to **RPL** (in the major to minor direction) and **LPR** (in the minor to major direction). Note that **S**, **M**, and **N** all include **L**, **R**, and **P** in some order.

¹⁶ **H**(exatonic pole) was coined by Cohn (2004) and is equivalent to **LPL** and **PLP**.

Table 1.12: Conversion of *Schritte*, from TTPCs to more conventional operators used in Neo-Riemannian theory

TTPC	Example More tonicised Triad ⇔ Less tonicised triad	Operator for transformation in ⇔ direction (relative to example)	Operator for transformation in ⇔ direction (relative to example)
M0M	C maj ⇔ C maj	<i>IDENT</i> _(ity)	
m0m	C min ⇔ C min		
M7M	C maj ⇔ G maj	<i>LR</i>	<i>RL</i>
m5m	C min ⇔ F min		
M5M	C maj ⇔ F maj	<i>RL</i>	<i>LR</i>
m7m	C min ⇔ G min		
M3M	C maj ⇔ E♭ maj	<i>PR</i>	<i>RP</i>
m9m	C min ⇔ A min		
M9M	C maj ⇔ A maj	<i>RP</i>	<i>PR</i>
m3m	C min ⇔ E♭ min		
M4M	C maj ⇔ E maj	<i>LP</i>	<i>PL</i>
m8m	C min ⇔ A♭ min		
M8M	C maj ⇔ A♭ maj	<i>PL</i>	<i>LP</i>
m4m	C min ⇔ E min		
M1M	C maj ⇔ D♭ maj	<i>T1</i>	<i>T11</i>
m1m	C min ⇔ D♭ min		
M11M	C maj ⇔ B maj	<i>T11</i>	<i>T1</i>
m11m	C min ⇔ B min		
M2M	C maj ⇔ D maj	<i>T2</i>	<i>T10</i>
m2m	C min ⇔ D min		
M10M	C maj ⇔ B♭ maj	<i>T10</i>	<i>T2</i>
m10m	C min ⇔ B♭ min		
M6M	C maj ⇔ G♭ maj	<i>T6</i>	
m6m	C min ⇔ F♯ min		

Some of the forty-eight TTPCs are improbable in tonal music and therefore surprising – at least relative to *schematic* expectations¹⁷ – so film composers such as Desplat will tend to reserve these for moments when they are making a strong expressive point. Other TTPCs have little surprise value, and will be useful in expressively neutral or quotidian passages. The extent of the movement on the *LRP map*, especially in the vertical (chromatic) dimension is a good predictor of the degree of surprise. However, this is complicated somewhat by style-specific schematic expectations. Corpus studies of popular and classical music by scholars such as David Huron (2006) and David Temperley (de Clercq and Temperley 2011) shed light on the probability of chord progressions in those styles. Such studies will inform my judgements of the predicted surprise value of each TTPC.

1.4.7.3 Transformations between scales

In sections 1.4.7.1 and 1.4.7.2 I have been addressing the “chord progressions” of research question 2a by writing about transformations between triads, as is typical of neo-Riemannian theory. The goal is to understand – with the help of semiotics and metaphor theory in section 1.5 – how these progressions can be used expressively by Desplat to support narrative contexts. The triad-only approach is limited, however, because it ignores non-harmonic tones such as neighbour tones, passing tones, suspensions, appoggiaturas, and anticipations. It also overlooks extensions to the triads such as sevenths, ninths, fourths, and sixths. Triad-focussed analysis has the advantage of relative simplicity – concepts such as the *LRP map* and TTPCs can be explored without the added clutter of extra-triadic tones (non-harmonic tones and chordal extensions). But when considering Desplat’s harmonic practices, I realised that much could be gained by drawing the extra-triadic tones back into the equation, and the way to do this is to consider transformations between *scales*, while retaining –and integrating – the triad-focussed concepts of the *LRP map* and TTPCs.

¹⁷ See section 1.4.4.

Before I explain how this works in technical detail, it is worth considering whether extra-triadic tones are worth the added analytical effort. Non-harmonic tones are hierarchically subordinate to harmony tones, occupying the scalar level only, while harmony tones occupy both scalar and chordal levels, as demonstrated by music theorist Fred Lerdahl (2001) and others. This does not, however, imply lower *expressive* importance of the non-harmonic tones. To the contrary, they, along with chordal extensions, are likely to be highly expressively salient, because of the dissonance they form with their accompanying triads.¹⁸

Extra-triadic tones are therefore well worth considering in an analysis of Desplat's work. Thankfully, Tymoczko (2004, 2011) has already laid the ground-work by mapping transformations between the Pressing scales. My only reservation about his work is that he tends to either focus on scalar transformations *or* chordal transformations, whereas scalar transformations and chordal transformations are in reality experienced *together* as one transformation with two hierarchical levels (scalar and chordal).

The most important argument for including both hierarchical levels in the transformational analysis is that it gives a more accurate picture of tonal distance. For instance, according to the *LRP map*, D min and E maj are maximally distant relations. While this is an accurate measure of the voice-leading distance between the two triads, it seems intuitively wrong, from a scale-focussed perspective, to say they are tonally “distant”, since the progression does not require the scale to change; D min \Rightarrow E maj could simply be iv \Rightarrow V within A harmonic minor, for instance, *if* the extra-triadic tones were within that scale. In this example, the large voice-leading at the triadic level is considerably mitigated by the potential absence of *any* voice-leading at the scalar level. Conversely, it seems intuitively wrong from a scale-focussed perspective to consider, as the *LRP map* does, A min to be “closer” to F min than it is to E maj. Again, this is because A min \Rightarrow F min forces a change of scale (A must be chromatically altered to Ab), whereas A min \Rightarrow E maj could simply be i \Rightarrow V within A harmonic minor, *if* the extra-triadic tones were all within that scale.

¹⁸A good example of this from opera is the “Prelude” to Wagner’s *Tristan und Isolde*, which is rife with expressive appoggiaturas.

Some readers might object to the above assertion, claiming that $A \text{ min} \Rightarrow F \text{ min}$ does *not* force a change of scale, as the two triads cohabit the Hexatonic scale $\{A, C, C^\sharp, E, F, G^\sharp/Ab\}$. However, in the case of Desplat's style, there will often be extra-triadic tones that invalidate such a hexatonic hearing, as I will now demonstrate. The most likely non-harmonic tones in the context of an $A \text{ min}$ triad include $\{B^\flat, B, D, D^\sharp\}$, which are passing-tones between the triadic pitches. The use of any *one* of these four pitch-classes to decorate the $A \text{ min}$ triad would invalidate the hearing of a hexatonic scale $\{A, C, C^\sharp, E, F, G^\sharp/Ab\}$. Similarly, the most likely non-harmonic tones in the context of an $F \text{ min}$ triad include $\{G^\flat, G, B^\flat, B\}$. Again, the use of any *one* of these pitches would invalidate the hearing of a hexatonic scale $\{A, C, C^\sharp, E, F, G^\sharp/Ab\}$. Thus, the chances of a hexatonic hearing of $A \text{ min} \Rightarrow F \text{ min}$ being invalidated by simple passing-tones is quite high, at least in Desplat's style, in which passing-tones are quite common. Moreover, even if there are *no* extra-triadic tones, listeners familiar with tonal music arguably have expectations that have a strong bias towards hearing music heptatonically. In other words, when listeners hear $A \text{ min}$, they *expect* that the chord that follows will be one that cohabits a heptatonic scale with $A \text{ min}$, because most music they have heard remains within one heptatonic scale. Thus, $A \text{ min} \Rightarrow F \text{ min}$ will almost certainly be heard as a progression that forces a change of (heptatonic) scale, unless the extra-triadic tones actively direct listeners towards a hearing of $\{A, C, C^\sharp, E, F, G^\sharp/Ab\}$ as the underlying scale.¹⁹ Of course, this principle does not just apply to $A \text{ min} \Rightarrow F \text{ min}$. By the same logic, any progression of two triads that exhibits at least one chromatic ic1 ($A1/d8$) between its members – i.e. a *chromatic* progression – will very likely be heard as a progression that forces a change of heptatonic scale, unless the non-harmonic tones suggest that a single non-heptatonic scale is being adhered to throughout the progression.

To return to my earlier discussion of the limitations of the *LRP map*, this model does not always make observations about tonal space that are intuitively accurate, because it fails to acknowledge that some progressions – the chromatic progressions described above – force a change of (heptatonic) scale, while others do not. So, even for passages with no extra-triadic tones, a transformational analysis that considers both triadic and scalar levels

¹⁹ See section 4.6 for an example of this exception in action in one of my own scores.

gives a more intuitively accurate way to quantify tonal distance, including the level of musical surprise. Lerdahl (2001) proposes a model of tonal space that considers the two levels together, but it is optimised for common-practice tonality, and – while the concept is adapted to account for octatonic and hexatonic passages – it cannot easily be adapted to account for the large vocabulary of different *heptatonic* scales that Desplat employs. The model of tonal space that I develop in this study is like Lerdahl's in its equal emphasis of the triadic and scalar dimensions, but – as will be discussed in section 1.4.7.4 – it is more indebted to Tymoczko's scale lattices in the way it emphasises voice-leading between scales.

There are advantages to considering the extra-triadic tones that go beyond the notion of tonal space, and encompass considerations of affect and associativity. Ignoring such tones might seem relatively inconsequential for some passages, but for many passages in Desplat's music they are essential to the articulation of scales and their modes. And the modes are a key aspect of musical expression, which is a claim that I touched on in section 1.4.4, and which I will substantiate and develop further in section 1.5.4. In the case of non-harmonic tones, their importance is inversely proportional to the speed of the harmonic rhythm, because longer chord durations create space for a more significant contribution from non-harmonic tones. Desplat's harmonic rhythm, in keeping with twenty-first-century film music trends, is quite frequently slower than one chord per bar, and on occasion he may sustain the tonic triad for a whole cue. In cases of such slow harmonic rhythm, non-harmonic tones become an essential means of maintaining pitch variety and articulating scales and their modes in the durations between chord changes.

So, how can transformational analysis reflect both scalar and triadic levels together? A first step I will take is to propose a new transformational nomenclature that extends Scott Murphy's Tonal *Triadic* Progression Classes (ITPCs) into Tonal *Scalar* Progression Classes (TSPCs). Then, in section 1.4.7.4, I will propose a model of tonal space that improves the *LRP map* to better reflect scalar considerations.

In my Tonal *Scalar* Progression Class nomenclature, the triads in Murphy’s system are replaced with modes of scales.²⁰ The letters denoting triadic mode (M and m) are replaced with the mode codes introduced in section 1.4.3 (DIA1, dia2, etc.). For example, “dia6-8-DIA4” denotes a transformation between an instance of Aeolian (dia6) and an instance of Lydian (DIA4) whose first degree is eight semitones higher in pitch-class space than the dia6, and is less tonicised.

One transposition of dia6-8-DIA4 is A Aeolian (dia6) \Leftrightarrow F Lydian (DIA4), where A is the most tonicised pitch-class overall. Because A is the most tonicised pitch-class throughout the TSPC, the music is only ever *locally* Lydian, as distinct from being globally Lydian, where the first degree of a Lydian mode becomes a stable tonic. In other words, I am sometimes using the mode names in a similar sense to jazz musicians, when an improviser might play in F Lydian for a bar and later in G Mixolydian for a bar, while not necessarily thinking of the whole piece as being *in* F Lydian or *in* G Mixolydian. However, if the harmonic rhythm is slow, there is a sense in which the long-held “local” mode begins to be heard somewhat more like a global mode, because the contextualising power of the tonic chord diminishes over time, thus a long-held “local” F Lydian can, to some extent, evoke the same expressive character and associations as a global Lydian.

There are 368 TSPCs that I counted at least three times in the corpus, and over 1600 others counted only once or twice. Obviously, this is too many to learn in the way one would learn the forty-eight TTPCs. The TSPC nomenclature is not intended to replace Murphy’s TTPC system, rather, it adds many sub-categories to each TTPC, for added descriptive precision. For instance, here are some of the sub-categories of m8M used by Desplat:

- dia6-8-DIA4
- dia2-8-DIA4
- dia3-8-DIA1
- hmin1-8-HMIN6
- hmaj3-8-DIA4

²⁰ The suggestion to take an approach along these lines came from Murphy, after some feedback on an early stage of my research.

When reading these names, it is still possible to tell that they are m8M, because of the lower-case code followed by “-8-” followed by an upper-case code, echoing “m8M”. Both TTPC and TSPC descriptors therefore have their uses in my analysis: the former as a broad category and the latter as a precise sub-category that incorporates information about extra-triadic tones.

Another way to categorise TSPCs (as opposed to by TTPC) is based on an observation by Tymoczko (2011, 131) that two distinct operations contribute to scalar transformations: *change of scale* and *change of tonal centre*. A change of scale is when one or more of the scale degrees is altered by a chromatic semitone. A change of tonal centre is when the same pitch classes are preserved, but a new one becomes the tonal centre. Depending on which of these operations occurs (either or both), TSPCs can be divided into three categories:

Change of tonal centre (CoTC)

In this category of TSPC, the tonal centre changes, but the scale does not. This could be subdivided into scale-preserving chord changes and scale-preserving modulations, depending on whether there is a sense of the *tonic* (not just the chord root) changing. Regardless of this distinction, the two most frequent examples of CoTC in the corpus are dia6-8-DIA4 (e.g. A Aeolian \Leftrightarrow F Lydian) and dia6-5-dia2 (e.g. A Aeolian \Leftrightarrow D Dorian). At the triadic level, these are instances of m8M and m5m, respectively. For multiple examples represented in notation, see bars 1-38 of Figure 1.7. This presents the most frequent sixty-four TSPCs used by Desplat, with one transformation represented per bar. Hollow note-heads represent the two triads in each transformation, while black note-heads complete the mode that provides the extra-triadic tones that might decorate each triad. Each TSPC example is presented in a transposition with A min or C maj as the tonicised triad. Octave is irrelevant in the notated examples, as is the chronological order of each transformation. The examples are further divided into the categories *Major Schritte*, *Minor Schritte*, *Major Wechseln*, and *Minor Wechseln*. Within each of these categories, transformations are ordered according to the number of semitones between triadic roots, which appears between the hyphens in the TSPC name.

Change of scale (CoS)

In this category of TSPC, at least one scale degree is altered by chromatic semitone. Russian music theorist Lev Mazel²¹ calls CoS transformations “common degree” relationships. C Ionian (DIA1) and C Aeolian (dia6) have more than mere tones in common, they share four “common degrees”: {C-as- $\hat{1}$, D-as- $\hat{2}$, F-as- $\hat{4}$, G-as- $\hat{5}$ }.²¹ The CoS category can be further subdivided into “tonic-preserving” and “tonic-altering”, the latter being where $\hat{1}$ is one of the chromatically altered degrees. In either case, the pairings of scale degree to diatonic class is preserved. The two most frequent examples of the tonic-preserving kind in the corpus are dia6-0-dia3 (e.g. A Aeolian \Leftrightarrow A Phrygian) and DIA1-0-mmin1 (e.g. C Ionian \Leftrightarrow C melodic minor ascending). At the triadic level, these are instances of m0m and M0m, respectively. The two most common examples of the tonic-altering kind are dia3-11-DIA4 (e.g. A Phrygian \Leftrightarrow A \flat Lydian) and dia6-11-HMIN6 (e.g. A Aeolian \Leftrightarrow A \flat Lydian #2). At the triadic level, these are both instances of m11M, a kind of SLIDE. Bars 39-48 of Figure 1.7 provide notated examples of the most frequent CoS transformations in the corpus.

Change of tonal centre and scale (CoTCaS)

This category of TSPC involves the simultaneous application of the above two operations (CoS and CoTC). Like CoTC, this could be subdivided into inflected chord changes and modulations, depending on whether there is a sense of the tonic changing. Regardless of this distinction, the two most frequent examples of CoTCaS in the corpus are dia6-1-DIA4 (e.g. A Aeolian \Leftrightarrow B \flat Lydian) and dia2-8-DIA4 (A Dorian \Leftrightarrow F Lydian). At the triadic level, these are instances of m1M and m8M, respectively. For these and other examples in notation, see bars 49-64.

²¹ A full English translation of Mazel’s work is not yet published, however the most relevant chapters have been translated by Christopher Segall, who wrote extensively about Mazel’s ideas in his thesis (2013).

Figure 1.7: examples of the sixty-four most frequent TSPCs used by Desplat in the corpus. Hollow note-heads represent the two triads in each transformation, with the first triad in each pair being the more tonicised one. Black note-heads complete the modes that provide any extra-triadic tones accompanying the triads.

MAJOR SCHRITTE CoTC
HMIN5-1-HMIN6

DIA4-2-DIA5

DIA1-5-DIA4

DIA5-5-DIA1

5 DIA1-7-DIA5

DIA5-10-DIA4

MINOR SCHRITTE CoTC
h maj3-1-h maj4

dia2-2-dia3

9 dia6-5-dia2

h min1-5-h min4

dia3-5-dia6

dia6-7-dia3

13 dia2-7-dia6

dia3-10-dia2

h maj4-11-h maj3

MAJOR WECHSELN CoTC
DIA1-2-dia2

17 DIA1-4-dia3

DIA4-4-dia6

HMAJ1-5-h maj4

AC2-5-ac5

21 DIA5-7-dia2

DIA4-9-dia2

DIA1-9-dia6

DIA5-9-dia3

25 DIA4-11-dia3

MINOR WECHSELN CoTC
dia3-1-DIA4

h min4-2-HMIN5

dia2-3-DIA4

29 dia6-3-DIA1

dia2-5-DIA5

ac5-5-AC1

h min1-7-HMIN5

33 ac5-7-AC2

dia6-8-DIA4

dia3-8-DIA1

h min1-8-HMIN6

37 dia6-10-DIA5

dia2-10-DIA1

TONIC-PRESERVING CoS
DIA1-0-HMAJ1

dia6-0-dia3

41 dia3-0-dia6

dia6-0-dia2

h min1-0-dia6

DIA1-0-ac5

45 DIA5-0-dia2

dia3-0-HMIN5

TONIC-ALTERING CoS
dia3-11-DIA4

dia3-11-DIA4

49 **MAJOR SCHRITTE CoTCaS**
DIA5-3-DIA4

DIA4-5-DIA4

DIA1-10-DIA4

DIA4-10-DIA4

53 **MINOR SCHRITTE CoTCaS**
h maj4-4-dia6

dia2-5-dia2

ac5-5-h min4

dia6-8-h maj4

57 dia6-8-h maj4

dia6-10-dia2

MINOR WECHSELN CoTCaS
dia6-1-DIA4

dia6-2-HMIN5

61 dia3-6-DIA4

dia6-6-DIA4

dia6-7-HMIN5

dia2-8-DIA4

1.4.7.4 Scalar transformations and tonal distance

The idea of tonal distance was touched on in relation to triadic progressions when I introduced the *LRP map* (Figure 1.4), which measures “closeness” in terms of number of pitch-classes in common. It was also mentioned in the previous section in relation to scales, when I observed that a scale-focussed analysis could yield more intuitively accurate measures of tonal distance than the *LRP map* could on its own. As was implicit in this argument, one can discuss tonal distance between scales by considering the number of pitch-classes in common, just as the *LRP map* does for triads. Of the TSPCs shown in Figure 1.7, the CoS and CoTCaS ones – which have fewer than seven pitch-classes in common – are more “distant” than the CoTC transformations, which retain all seven pitch-classes. This kind of “pitch classes in common” metric is at work in a simple circle of fifths diagram showing distances between the twelve major keys, in which “close” keys have six of their seven pitch-classes in common. Two neighbouring scales on the circle of fifths are what Tymoczko (2004) calls “maximally intersecting” scales, because they could not have any more pitch-classes in common without being identical. He also speaks of maximally intersecting scales as being related by parsimonious voice-leading, borrowing the term from its more typical application to chordal voice-leading. This makes the circle of fifths a voice-leading space for diatonic scales, much like the LPR map is a voice-leading space for triads.

One can also make voice-leading spaces for modes. For instance, a simple voice-leading space for diatonic (DIA) modes with a tonic of C is provided in Figure 1.8. It shows that, for example, C Lydian is accessible to C Ionian via a voice-leading of F# to F. Figure 1.8 is a simple example of what I will call a “CoS space”, because any transformation within the space is a CoS transformation, meaning the scale changes but the tonal centre remains within the same diatonic class. Observe that upward movement in the space corresponds upward scalar voice-leading such as $F \Rightarrow F^\sharp$.

Figure 1.9 is the same as Figure 1.8 except that it adds the seven modes of melodic minor (MMIN). A horizontal axis is now introduced to show tonal interval class rarity. This makes the space similar to Figure 1.3 (the similarity space between modes), however Figure 1.3 is not a voice-leading space, because it does not represent specific transpositions of each mode, and therefore cannot represent voice-leading. Like in Figure 1.3, the shape of the plot point indicates the quality of the mode’s tonic triad: a triangle for major, square for minor, circle for diminished, or plus sign for augmented.

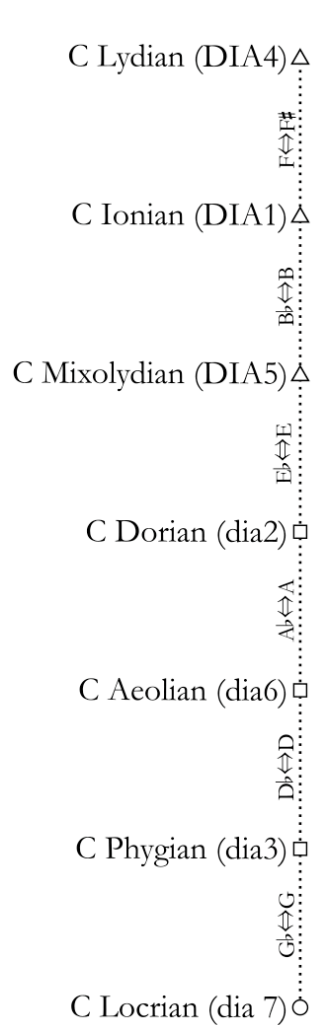


Figure 1.8: CoS space for DIA modes with a tonic of C

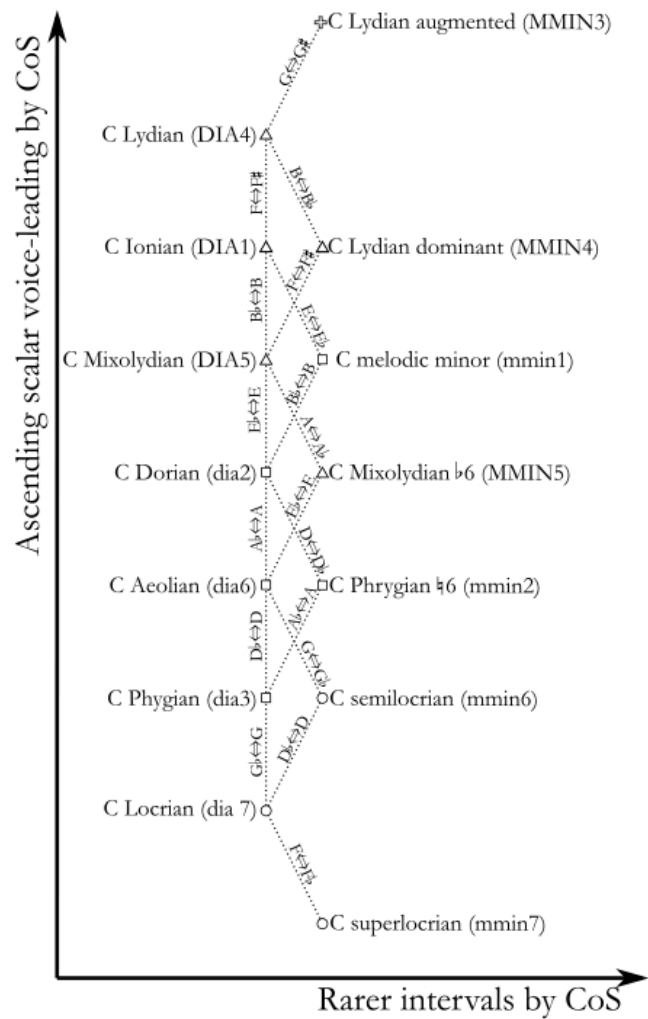


Figure 1.9: CoS space for DIA and MMIN modes with a tonic of C

In Desplat’s score for *The Queen*, the cue “A New Prime Minister” is primarily based on tonic-preserving CoS transformations. The relevant excerpt is notated in Figure 1.11, with the transformations graphed in Figure 1.10. It only moves through four neighbouring modes, so it is possible to exclude all other modes. The passage includes modes from three scale types: DIA, MMIN, and HMAJ. Of these, DIA has the least rare intervals so is furthest to the left, while HMAJ has the rarest intervals and is furthest to the right. The passage starts in C Ionian, with all scale degrees but the D-as- $\hat{2}$ and F-as- $\hat{4}$ being sounded. (Listeners will infer that the complete mode is Ionian based on Ionian-centric expectations, discussed in 1.4.4). In bar 8, there is a descending scalar voice-leading from A to Ab, transforming the mode into C harmonic major (HMAJ1). In Figure 1.10, this transformation is represented by a diagonal arrow that points downward – signifying the descending scalar voice-leading – and rightward – signifying an increase in interval rarity. The introduction of the Ab causes the increase in interval rarity, for

instance it introduces the A2/d7 {A♭, B} and the d4/A5 {A♭, E}. The graph does not show which specific intervals are introduced, but it does show that the interval content becomes significantly rarer as a result of the $A \Rightarrow A♭$ scalar voice-leading. My identification of the next transformation – the return to C Ionian – is a subjective inference. The A♭ of bars 8-9 is not replaced by an A until bar 21, so one interpretation is that the perception of harmonic major lingers until the B♭ is introduced in bar 20. However, material from bars 1-4 returns at bar 16, which leads me to hear this passage as I first heard it, in C Ionian.

The next CoS transformation is brought about by the B♭ in bar 20 replacing the B♮, transforming C Ionian into C Mixolydian. This is represented on the graph as a downward pointing arrow, signifying the descending scalar voice-leading $B \Rightarrow B♭$. There is no rightward or leftward movement, because Ionian and Mixolydian are both diatonic (DIA) modes, and there is therefore no change in interval rarity. The final CoS transformation is brought about by the F♯ in bar 26 replacing the previous F♮. This is represented in Figure 1.10 by a diagonal arrow that points upward – signifying the ascending scalar voice-leading $F \Rightarrow F♯$ – and rightward – signifying an increase in interval rarity. The F♯ introduces rare intervals such as {F♯, B♭}¹ and {F♯, C}.

This example should serve to exemplify how a CoS space can be used to shed light on a passage. The graph shows what the nature of each transformation is, visualising information about whether interval rarity is increased, decreased, or unchanged, and whether a scale degree is raised or altered. The question of why and how this all matters to musical expression cannot be answered properly until I have outlined my methodology in regard to semiotics and metaphor theory in section 1.5.

¹ The {F♯, B♭} interval is not experienced directly, as the B♭ stopped sounding about 8 seconds previously, however this is well within the range of short-term memory (15-30 second), and the memory of this pitch remains strong until the end of the passage, as I hear it.

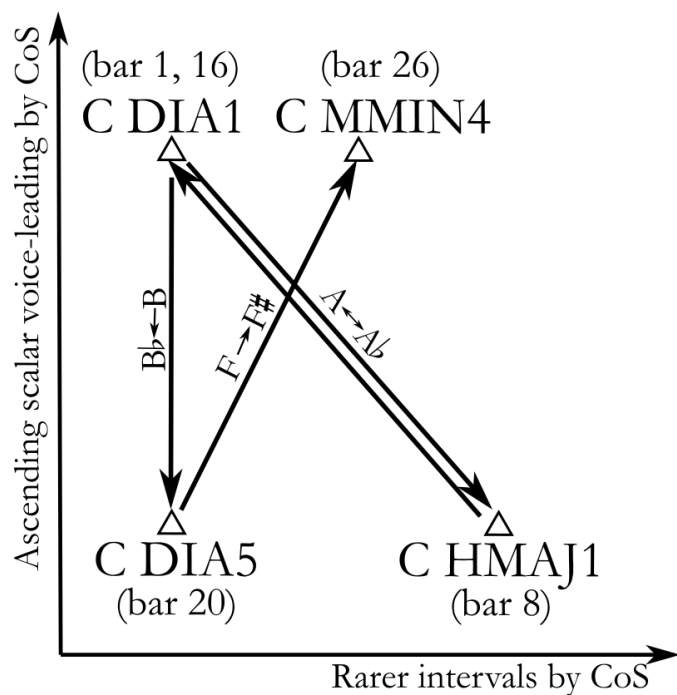


Figure 1.10: CoS transformations in "A New Prime Minister", from *The Queen* (0:04:56)

Figure 1.11 is a musical score excerpt from "A New Prime Minister". The score is written for piano, timpani, celeste, harp, and violins. The tempo is marked as $\text{quarter note} = 180$. The score is divided into three sections: C Ionian (DIA1) from bar 1 to 19, C harmonic major (HMAJ1) from bar 20 to 24, and C Lydian dominant (MMIN4) from bar 25 to 29. The piano part features a series of chords and melodic lines, while the timpani, celeste, and harp provide rhythmic and harmonic support. The violins enter in bar 15, playing a melodic line.

Figure 1.11: Excerpt from "A New Prime Minister", from *The Queen* (0:04:46)

However, I will now provide the narrative context and a brief interpretation. Bars 1-19 play as Tony Blair arrives at Buckingham Palace on the morning after he is elected. He is excited but admits to his wife that he is "rather nervous" about his first meeting with the Queen as Prime Minister. The most salient musical event of this passage, as highlighted by Figure 1.10, is the A to $A\flat$ descent in bar 8, which introduces both rarer intervals and a new flat degree. As I will be discussed in section 1.5.4, flat scale degrees tend to carry negative affect. Rare intervals can carry associations of various things, but most relevant to this narrative context is psychological tension, especially fear (see section 1.5.2.6). This transformation occurs just as Blair expresses his nervousness, so it is clearly reinforcing

his emotion of unease. Importantly though, the $A\flat$ -as- $\flat\hat{6}$ is a temporary intrusion on an otherwise Ionian passage. Ionian mode has positive connotations (see section 2.3.9), which help to emphasise the overall mood of the post-election morning as one of optimism and excitement. An interpretation of the Mixolydian (DIA5) passage of this cue is offered during the discussion of Mixolydian in section 2.3.11. The final transformation, to C Lydian dominant, is similar to the first transformation in that it increases interval rarity, but it is not charged with negative affect in the same way, because it does not introduce a flat degree. Lydian dominant has connotations of offbeat comedy, (see section 2.3.12), so the brief diversion to this mode arguably adds a dash of wit to the slant of the cinematic narrator.

So far, the CoS spaces I have introduced only allow tonic-*preserving* CoS transformations, and they have only included up to three scale types. Figure 1.12 shows a much larger CoS space in which tonic-*altering* CoS transformations may also be graphed. It includes nine scale types. The CoS space now includes modes with a tonic of C^\times , C^\sharp , C, or $C\flat$, i.e. modes on the diatonic class of C. The plotting points are black and white: black if the tonic of the mode is a flat or sharp and white if it is a natural, double flat, or double sharp. In this way, tonic-*preserving* CoS transformations are always shade-preserving on the graph (black-to-black or white-to-white), while tonic-*altering* CoS transformations are shade-altering (black to white or vice versa).

To reduce clutter, only the digit of the mode code is provided next to the plotting points, with the scale type code (e.g. “DIA”) is given at the top of the graph. (So “1” in below the column heading “DIA” means “DIA1”). Other features of Figure 1.12 not found in earlier CoS spaces are explained in the key. This includes a colour-coding system that highlights the eight modes that avoid hyper-major and hyper-minor scale degrees, and are thus more naturally prone to stability and tonicisation than other modes. Four of these modes have major tonic triads, and are joined by red dashed lines. The other four have minor tonic triads, and are joined by blue dashed lines. This is a way of including some information in the graph about scale degree rarity. Modes that are a long way from these blue and red lines (e.g. those horizontally aligned with C^\sharp Locrian) can be assumed to be very unusual, containing multiple scale degrees that are hyper-major or hyper-minor.

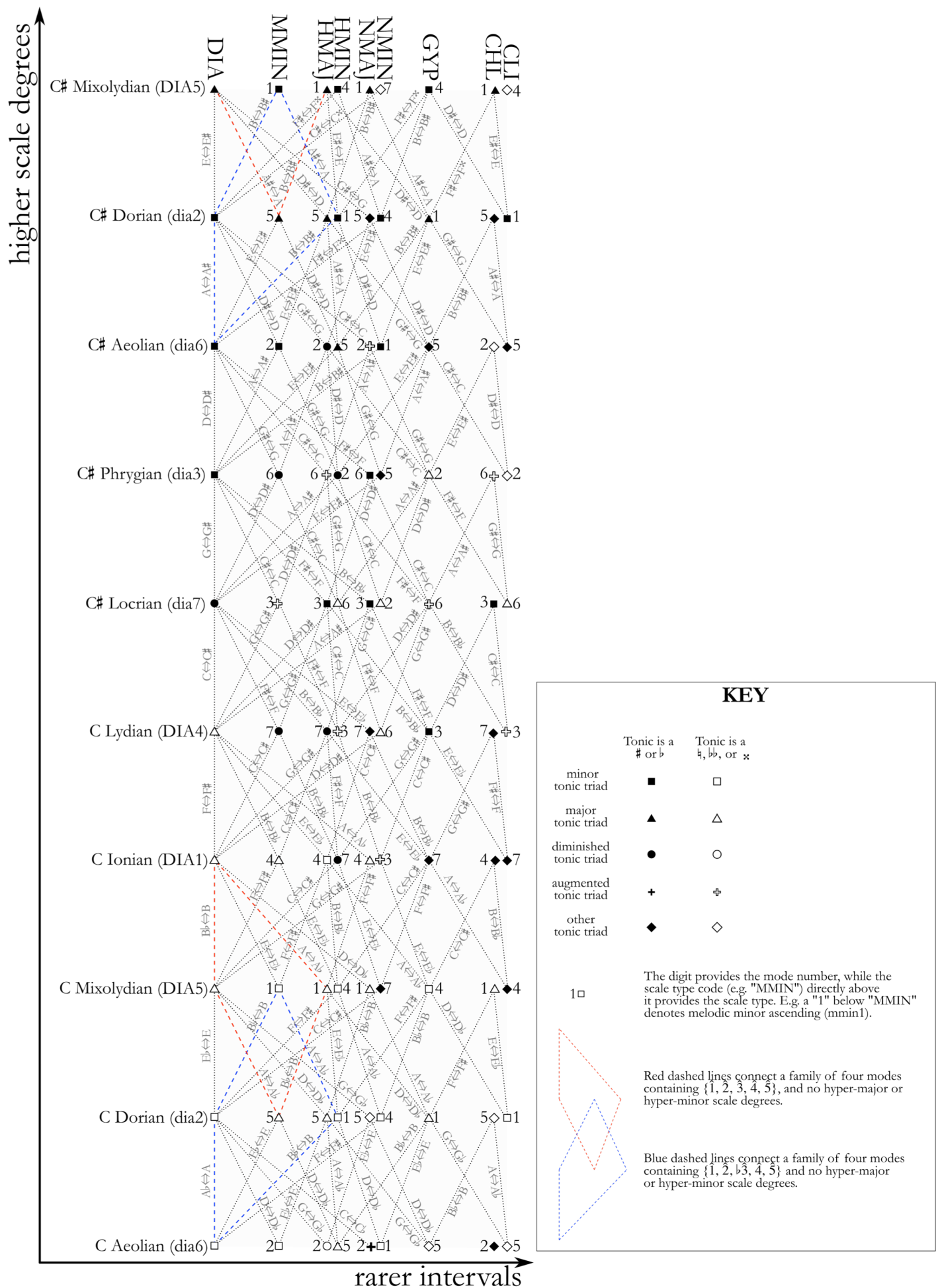
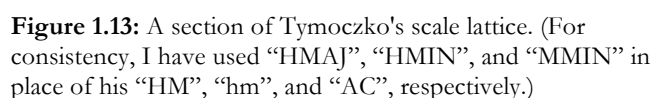


Figure 1.12: a section of the CoS voice-leading space for modes whose tonic is from the diatonic class “C”. Nine scale types are included.



The CoS voice-leading space in Figure 1.12 is two-dimensional, as opposed to Tymoczko’s two-dimensional projections of 3-D or 4-D geometries, such as his voice-leading lattice concept (Figure 1.13). My decision to diverge from Tymoczko’s graphing practice is mostly to preserve the “similarity space” functionality I have described. The 2-D approach also has other advantages. First, it makes the space simply isomorphic, meaning a given mode is always in the same position relative to any other given mode, regardless of its transposition. (By contrast, in Tymoczko’s scale lattice, zigzagging patterns mean that a given scale type – such as DIA – is not found in a consistent position in the 2-D projection.) Second, if one wishes to add or omit modes from the CoS space, the only changes to the graph structure needed are additions or omissions, as opposed to a complex re-working of the geometric structure. Third, the 2-D approach means that a third dimension can be reserved for another purpose, namely the Change of Tonal Centre (CoTC) dimension – another important aspect of tonal distance.

I will now outline how the Change of Tonal Centre (CoTC) dimension will be incorporated into my model of tonal space. There are seven CoS voice-leading spaces like the one in Figure 1.12: one for each of the seven diatonic classes, {A, B, C, D, E, F, G}. There are only three ways in which these can be ordered in a linear fashion. They can be ordered according to the circle of diatonic seconds (C, B, A, G, F, E, D, and circling back to C), the circle of diatonic fifths (C, F, B, E, A, D, G, and circling back to C), or the circle of diatonic thirds (C, A, F, D, B, G, E, circling back to C). All three orderings have their advantages, depending on the kind of music under analysis and the analytical priority. I find that the ordering according to the circle of diatonic thirds is best for most triadic passages of music, if one is interested in demonstrating voice-leading parsimony (or lack thereof) between the triads. This is because triads whose roots are a diatonic third apart have two pitch-classes in common – unless a change of scale operation alters this slightly – making for highly parsimonious triadic voice-leading. Therefore, the change of the tonal centre by diatonic third is the most incremental change of tonal centre, in terms of the resulting sense of tonal “closeness” via triadic voice-leading parsimony. Under this arrangement, the tonic triads of the modes wonderfully arrange themselves into an *LRP map*, in which **L** and **R** transformations are horizontal leaps from one rectangular CoS space to the neighbouring one (because the tonal centres change by diatonic third), and the **P** transformations are vertical movements within each CoS space. To illustrate this, Table 1.13 shows the *LRP map* behind the “Circle of diatonic thirds” arrangement of CoS spaces. Here, I include only the diatonic modes, so each CoS space is a simple one-dimensional column of diatonic modes similar to the one in Figure 1.8. As the axes show, upward movements in the space correspond to ascending scalar voiceleadings by CoS transformation; to move up one row is to chromatically raise one scale degree. Rightward movements in the space correspond to ascending triadic voiceleadings by CoTC transformation; to move right one column is to raise one triadic tone by diatonic step.

Table 1.13: Seven CoS spaces (columns), arranged according to the circle of diatonic *thirds*. There are twelve rows: one for each diatonic (DIA) collection. The hexagonal lattice in the background shows that an *LRP map* connects each consonant tonic triad represented.

C# DIA5	a# dia3	F# DIA1	d# dia6	B DIA4	g# dia2	e# dia7
c# dia2	a# dia7	F# DIA5	d# dia3	B DIA1	g# dia6	E DIA4
c# dia6	A DIA4	f# dia2	d# dia7	B DIA5	g# dia3	E DIA1
c# dia3	A DIA1	f# dia6	D DIA4	b dia2	g# dia7	E DIA5
c# dia7	A DIA5	f# dia3	D DIA1	b dia6	G DIA4	e dia2
C DIA4	a dia2	f# dia7	D DIA5	b dia3	G DIA1	e dia6
C DIA1	a dia6	F DIA4	d dia2	b dia7	G DIA5	e dia3
C DIA5	a dia3	F DIA1	d dia6	Bb DIA4	g dia2	e dia7
c dia2	a dia7	F DIA5	d dia3	Bb DIA1	g dia6	Eb DIA4
c dia6	Ab DIA4	f dia2	d dia7	Bb DIA5	g dia3	Eb DIA1
c dia3	Ab DIA1	f dia6	Db DIA4	bb dia2	g dia7	Eb DIA5
c dia7	Ab DIA5	f dia3	Db DIA1	bb dia6	Gb DIA4	eb dia2

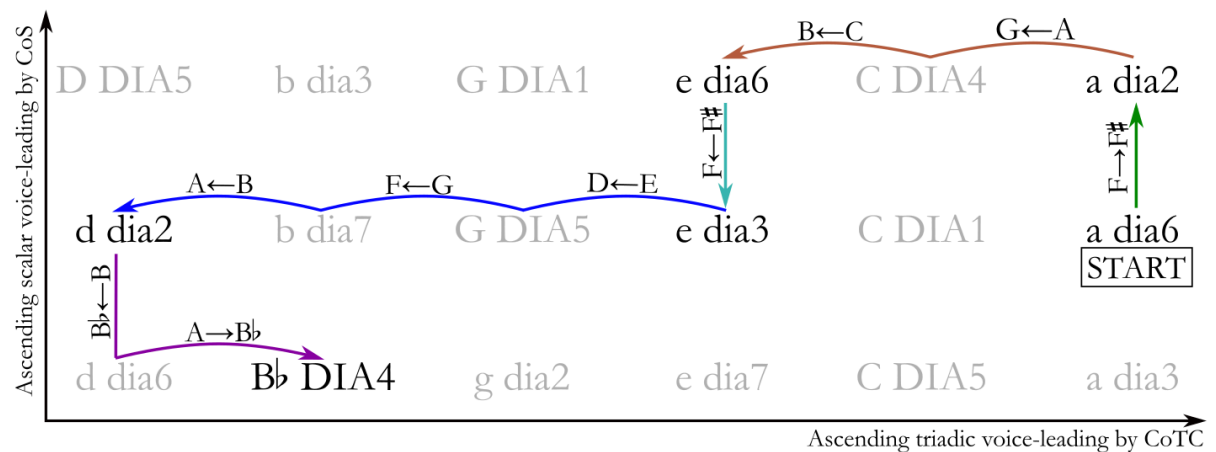


Figure 1.14: Transformations in bars 1-22 of Philomena's theme, from *Philomena* (0:03:50).



Figure 1.15: Philomena's theme, from *Philomena* (0:03:50)

To demonstrate how a tonal space like Table 1.13 can be used to analyse Desplat’s music, I will now analyse the transformations in Desplat’s main theme from *Philomena*, which is notated in

Figure 1.15 and graphed in Figure 1.14, both on the previous page. At this stage I will omit the last three bars, because they contain harmonic minor (HMIN) modes, which presents a challenge that I will address later. This figure uses a convention already introduced in the CoS spaces: straight vertical or diagonal arrows denote CoS transformations. It also introduces a new convention: horizontal curved arrows denote CoTC transformations. The number of curved line segments in an arrow (one, two, or three) indicates the number of diatonic thirds by which the tonal centre changes (octaves aside), which is equal to the number of triadic tones that are displaced upward or downward by diatonic step. Each curved line segment is given a label such as “A⇒G” to show how pitches are displaced in the triadic voice-leading. For instance, in the CoTC transformation A Dorian ⇒ E Aeolian (represented by the brown arrow in the upper row of Figure 1.14), A and C both move down a diatonic step to G and B, respectively, in order to transform A min to E min.

The final convention to introduce is that if an arrow is a fusion of curved and straight line segments, it denotes a CoTCaS transformation. See, for example, the D Dorian ⇒ B♭ Lydian transformation, which is represented in both Figure 1.14 and

Figure 1.15 by a purple arrow. The straight and curved parts of the arrow denote the CoS and CoTC components of the transformation, respectively. In the arrows representing CoTCaS transformations, I always attach the straight line to the more tonicised of the two modes. This is a way of showing that, while the transformation travels between two tonal centres (represented by two columns), it is more “at home” in one of those tonal centres than the other.

I will now discuss each transformation in the figure, in chronological order. *Philomena*’s theme begins in A Aeolian (dia6),¹ which is plotted at the right of the space. In bar 9, there is CoS from A Aeolian to A Dorian, achieved through an ascending scalar voice-

1

leading ($F \Rightarrow F^\sharp$) and represented by an upward dark green arrow. The next transformation (the brown arrow) occurs only one beat later. It is a CoTC transformation from A Dorian (dia2) to E Aeolian (dia6), achieved through two descending triadic voice-leadings ($A \Rightarrow G$ and $C \Rightarrow B$) represented by the two curved line segments in the arrow. The change of triad changes the tonal centre from A to E, i.e. up two diatonic thirds, octaves aside. This is a moderately parsimonious triadic voice-leading: not as parsimonious as CoTC by one diatonic third, but more parsimonious than a CoTC by three diatonic thirds (i.e. diatonic step). In bar 12, there is a CoS transformation (the teal arrow) from E Aeolian (dia6) to E Phrygian (dia3), by the descending scalar voice-leading $F^\sharp \Rightarrow F$. This is a return to the scale of C DIA (middle row) in which the theme began, but in the new context of an E tonal centre (third column from the right).

The transformation in bar 16 (the blue arrow) is another CoTC, this time from E Phrygian (dia3) to D Dorian (dia2). Like the earlier CoTC (in the upper row), this is a leftward movement on the graph showing descending triadic voice-leading, but this time all three triadic pitches are lowered – as indicated by the arrow's *three* curved lines. The transformations are beginning to become less parsimonious as the theme progresses.

The last transformation shown on Figure 1.14 is the CoTCaS transformation from D Dorian (dia2) to B \flat Lydian (DIA4). This involves one descending scalar voice-leading ($B \Rightarrow B^\flat$, represented by the downward movement in the graph) and one ascending triadic voice-leading ($A \Rightarrow B^\flat$, represented by the rightward movement). This progression has an audibly surprising quality for four reasons that are shown in the graph:

- it provides the first ascending triadic voice-leading (rightward movement);
- it ventures for the first time into F DIA (the lower row), by introducing B \flat ;
- it is the first CoTCaS transformation; and
- it introduces the first major triad.

The resultant surprise² is striking and therefore helps the music to build towards an emotional climax. The last two transformations in Philomena's theme involve harmonic minor (HMIN) modes, and therefore cannot be represented with only the horizontal and

² See section 1.5.2.6 for a discussion of musical surprises and their possible meanings.

vertical dimensions of Figure 1.14. A third dimension – depth – is required, to show that HMIN scales have rarer intervals than DIA scales. To incorporate this dimension, one must expand each of the one-dimensional CoS spaces (the columns of Figure 1.14) into two-dimensional CoS spaces similar to Figure 1.12. These two-dimensional spaces are lined up in three-dimensional space like a row of dominos, as shown in Figure 1.16. Readers are encouraged to pause at this point to become familiar with this graph's three dimensions, as indicated by the three-way axis given in the bottom left-hand corner. Observe that the first five transformations in Philomena's theme look the same as they did in Figure 1.14. Diatonic (DIA) modes occur on the near edges of these dominos, so the two-dimensional space of Figure 1.14 is the plane that touches these near edges. In this graph, the HMIN and HMAJ scales are the rarest ones that need to be represented; therefore, HMIN modes occur as points on the far edges of each domino.

It is now possible to discuss the last two transformations. In bar 23, the CoTCaS transformation $B\flat$ Lydian (DIA4) \Rightarrow E Phrygian dominant (HMIN5) occurs, and is represented by an orange arrow in Figure 1.16. In purely triadic terms, it is an M6M in which the Neapolitan chord (\flat II) precedes the dominant. The transformation involves two ascending scalar voice-leadingings: $B\flat \Rightarrow B$ and $G \Rightarrow G\sharp$. The latter introduces $G\sharp$ for the first time and along with it some rare intervals: the A2/d7 {F, $G\sharp$ } and the d4/A5 {C, $G\sharp$ }. Because this scalar voice-leading makes the intervals rarer, it is a movement in the depth dimension. It leaves the near edge of the domino where diatonic (DIA) modes reside for the far edge where harmonic minor (HMIN) modes reside and intervals are rarer. At the same time, it moves upward like all ascending scalar voice-leadingings. The transformation also includes two *triadic* voice-leadingings: $F \Rightarrow G\sharp$ and $D \Rightarrow E$. These upward voice-leadingings continue the rightward trajectory that leads back towards the A min tonic triad. By employing four voice-leadingings in total – two triadic, two scalar – and moving in all three of the graph's dimensions – modifying scale degree height, interval rarity, and tonal centre – this is the most surprising and significant transformation yet, and this significance is visually obvious in the graph, especially when one compares it to the more incremental transformations.

The final transformation (a red arrow) is a simple perfect cadence, and a CoTC from E Phrygian dominant (HMIN5) to A harmonic minor (hmin1). The graph visualises two factors that make this progression sound like a satisfying resolution. First, it continues and completes a rightward trajectory towards the tonic triad established at the beginning

of the theme (A min), albeit arriving at a different mode (harmonic minor rather than Aeolian). Second, it is a movement from an unstable mode type to a relatively stable mode type. A harmonic minor (hmin1) is stable due to having no hyper-major or hyper-minor scale degrees – a fact shown by it being plotted on a blue dashed line – whereas E Phrygian dominant (HMIN5) contains a hyper-minor degree ($\flat\hat{2}$) – a fact shown by it being plotted at a point disconnected from any red or blue dashed lines.

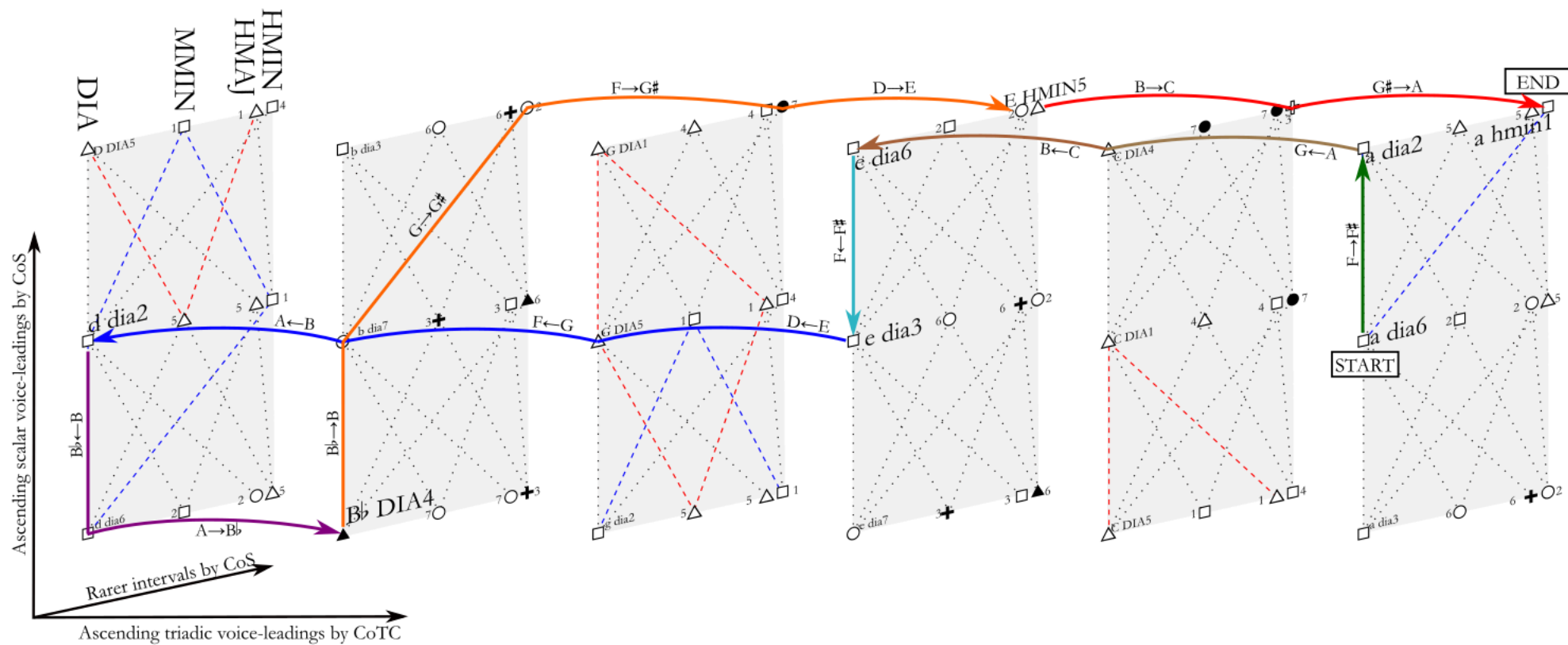


Figure 1.16 Chord progression of Philomena's theme, graphed in the Circle of diatonic thirds arrangement of CoS spaces.

The goal of this analysis is to reveal the nature of the path through tonal space, which can then be interpreted for extra-musical meaning by way of metaphor theory and semiotics. I will provide a metaphorical interpretation for this theme in section 1.5.3, once the relevant concepts have been properly introduced.

The arrangement of the CoS spaces according to the circle of diatonic thirds fulfils my goal of considering (and graphing) both scalar and triadic parsimony in one unified model. The third-centric arrangement also represents the most conventionally neo-Riemannian perspective. In fact, Riemann himself proposed¹ the continua of harmonic functions shown in Table 1.14, in which triads related by diatonic third (**L** or **R**) are argued to have similar functions. The sense of it being a continuum arises in that it progresses from left to right from pure subdominant function to a blend of subdominant and tonic function (submediants) to pure tonic function to a blend of tonic and dominant function (mediants) to pure dominant function.²

Table 1.14 Riemann's tonal continua

	Subdominant function			Tonic function	Dominant function		
Major key:	ii	IV	vi	I	iii	V	vii
Minor key:	♭II	iv	♭VI	i	♭III	v	♭VII

While my model does not impose the concept of functions in this Riemannian sense, it is founded on the broader idea behind Riemann's functional continua, which is that triads related by diatonic third are very close relations and can function in similar ways. The fact that common cadence $ii^6 \Rightarrow V \Rightarrow I$ is very similar (functionally speaking) to $IV \Rightarrow V \Rightarrow I$ is a simple example of this. Tymoczko would say that ii^6 and IV are related by third-substitution, because their roots are related by third and their common bass note adds an additional affinity. In fact, Desplat often uses third-substitution to inject subtle variety into what would otherwise be a repeated chord sequence. Because the substitution alters

¹ See Riemann (1916, 250), cited by neo-Riemannian theorist Bryan Hyer (2011, 106).

² Riemann uses a different nomenclature for harmonic functions, but I translate his idea here into the more widely known roman numeral notation.

the triadic mode, it also arguably injects a subtle change in affect, since minor triads have more negative associations than major triads, as will be discussed in section 1.5.4.

The second arrangement of CoS spaces orders them according to the circle of diatonic fifths. Ian Bates (2012) takes this fifths-based approach to graphing distances between all seven types of diatonic (DIA) modes.³ However, this arrangement is not ideal if triadic voice-leading parsimony (or its subversion) is an analytical priority, because triadic progressions by fifth are not maximally parsimonious as are progressions by third. This arrangement is best suited to the analysis of passages in which tonal centres (either chord roots or long-range tonics) frequently move by fifth but never move by third. In other words, it is suited if the progression by fifth is *in practice* the most incremental harmonic step.

Modulations by fifth have been given importance in music theory largely because of the importance of the ic5 interval as the first non-ic0 interval in the harmonic series. (Not all diatonic fourths and fifths are ic5, but most are.) If a composer wishes to modulate in such a way that only minimally alters the scale and keeps the mode constant, a change of tonal centre by P4/P5 is the incremental harmonic change that allows this. The modulation C major to G major exemplifies this. Or, less traditionally, if a composer wishes to modulate in such a way that only minimally alters the mode while keeping the scale constant, a change of tonal centre by P4/P5 is the incremental harmonic change that allows this. The modulation C major to G Mixolydian exemplifies this. In summary, changes of tonal centre by P4/P5 can be considered incremental movements in tonal space in the sense that they allow for minimal change to mode and scale.

As mentioned, a limitation of the arrangement of CoS spaces based on the circle of fifths is that it gives too little importance to CoTC by third, which can be important at both a triadic and a modulatory level, such as in a modulation to the relative major or minor. If the analyst wishes to acknowledge the importance of modulations by fifth, as well as relative and parallel progressions, the widely accepted Chart of the Regions is still the

³ Bates' graphs are similar to my two-dimensional graphs such as Figure 1.14, in that the modes are arranged into rows and columns and there are arrows showing how the music moves between various modes, with unused modes shown in grey. In his graphs, the equivalent of my rows are columns, and the equivalent of my columns are diagonal rows, but despite these differences of presentation, his model is essentially the same as arranging a CoS space according to the circle of diatonic fifths.

best analytical tool. Eighteenth-century French music theorist François-Guillaume Vial (1767) was the first to propose this model of tonal space, and it has been variously championed and/or slightly modified by Gottfried Weber (1851), Arnold Schoenberg (1969), and Fred Lerdahl (2001). Part of it is shown in Table 1.15. Like the Tonnetz and *LRP map*, it is toroidal, with opposite edges meeting one another, albeit with a displacement.

Table 1.15: Section of the Chart of the Regions. Vertical movements are by fifth. Horizontal movements alternate between relative and parallel key relationships.

E major	E minor	G major	G minor	B♭ major	B♭ minor
A major	A minor	C major	C minor	E♭ major	E♭ minor
D major	D minor	F major	F minor	A♭ major	A♭ minor
G major	G minor	B♭ major	B♭ minor	D♭ major	D♭ minor
C major	C minor	E♭ major	E♭ minor	G♭ major	G♭ minor

However, if one is prepared to concede that a motion by fifth is merely the combination of two third motions, then my proposed arrangement of CoS space by diatonic thirds does everything that the Chart of the Regions does and more. By “more” I am referring to the expanded vocabulary of modes, the modal “similarity space” functionality, and the acknowledgement of tonic-altering CoS transformations as a relatively close, albeit untraditional, tonal relationship. In summary, the best model needs to be selected to suit the analytical priorities and nature of the passage, but the thirds-based model will be a good option in many cases.

The third and final arrangement of CoS spaces orders them according to the circle of diatonic seconds. This is the perfect space in which to graph sequences of modulations or chord sequences whose tonal centres ascend and/or descend by step. This includes chromatic planing, modal planing, and sequences where the music keeps modulating by step upwards or downwards to create a sense of direction in the two-dimensional space of pitch-height.

One caveat regarding charts like the one shown in Figure 1.16 and Table 1.13 is that the horizontal dimension is not to scale with the vertical dimension. The horizontal dimension is extremely elongated for legibility reasons, giving an exaggerated impression of the magnitude of horizontal CoTC moves relative to vertical or near-vertical CoS moves. *Within* each of these two dimensions, however, comparisons are to scale. In other words, the spaces provide an accurate comparison between different magnitudes of

CoTC and different magnitudes of CoS. Additionally, the magnitude of CoS relative to CoTC is arguably context-dependent. It is likely that the rarity of each dimension within a passage increases its perceived magnitude, because it becomes more surprising in terms of dynamic expectations. In conventional diatonic music, in which CoS is rarer than CoTC, the former is the more surprising event. However, in passages in which CoTC is rarer than CoS, the CoTC may actually be more surprising than the more normalized CoS.⁴ Context-dependent factors such as these have led some analysts, including Lehman, to prefer less rigid graphing systems, such as the node and arrow diagrams discussed earlier in section 1.4.7. However, to reiterate a sentiment expressed earlier, any graph of tonal space need only serve as the start of a more nuanced conversation. Arguably, the graphs discussed in this section are worthwhile because of the many aspects of harmonic transformation that they *do* show. Anything of significance that they do not show can be discussed in the accompanying text.

While all of this is theoretically interesting, readers may be wondering how transformational theory, the structure of modes and other musical features may be applied to the expression of extra-musical meanings in filmic narratives. This is the subject of the next section.

⁴ Desplat's score for *Birth* is contains many such passages.

1.5 Film music, semiotics, and metaphor theory

Having introduced pertinent terms and concepts from narratology and music theory, I now come to the most important, difficult, and ultimately rewarding part of my methodology: the interface between music and the extra-musical meanings of filmic narratives. In this section, I explore various ways in which film music integrates with the four other cinematic modalities – images, speech, sound effects, and text – to convey meanings that a spectator can infer. Some key concepts from Peircean semiotics will be introduced first. This will be followed by a more detailed exploration of five ways music can be used as a symbol. The remainder of the section will then turn to the notion of music as metaphor, drawing insight from cognitive linguistics. The next section will focus on applying the above concepts to the musical parameters that are of special interest to this study: scalar mode and triadic harmony of the sort found in contemporary film scores.

1.5.1 Peirce's Trichotomies

Semiotics is a study or theory of signs, and Charles Sanders Peirce (1839-1914) is one of its founders. It is well beyond the scope of this thesis to fully explore Peircean semiotics and its applicability to Desplat's music. Nevertheless, it is important to mention some of his foundational concepts that are still commonly referred to today in the study of musical meaning.

The first such concept is Peirce's trichotomy of semiotic elements: the *representamen* (sign), *object*, and *interpretant*. In Peirce's writings, "representamen" is synonymous with "sign". I opt to use the latter, because it is more widely used and understood than the former. Peirce defines a sign as "something which stands to somebody for something in some respect or capacity". The signs of greatest interest in this study are musical sounds. Signs from cinema's other sensory modalities – words, non-musical sounds, and visual images – will also be encountered and discussed.

The "object" is that thing in the real world to which the sign refers in the intention of the communicator. The interpretant, by contrast, is a meaning that the spectator infers from the sign, and exists in their mind. When writing about Desplat's work I will focus on interpretants of objects rather than the objects themselves. This is partly because the objects themselves may not be known except through explanation from Desplat himself,

or study of communications between him and the director. It is also because a focus on interpretants acknowledges the important role that the spectator plays in constructing meaning from the film. When discussing my own film music, I will be better equipped to take a poietic rather than esthetic stance, which focuses on composer intention over spectator interpretation, objects over interpretants.

The second important concept from Peirce is another trichotomy, this time distinguishing between three sign functions. The three sign functions may be briefly defined as follows:

- 1) Icons relate sign to object through resemblance.
- 2) Indexes relate sign to object through a cause and/or contiguity. Smoke is an index of fire because the latter causes the former. Black clouds are an index of rain because the former cause the latter. In both examples, there is contiguity between sign and object as well as a causal relationship.
- 3) Symbols relate sign to object by established convention. Words are generally symbols because they are conventions, but onomatopoeic words are also icons.

To be clear, these are not sign *types* but sign functions, because they are not mutually exclusive. The same sign might have two or three sign functions. For instance, the onomatopoeic word “crash” functions both as an icon of the noise of a crash, and as a symbol of a car accident or of the noise of some collision or other. Similarly, a tubular bell tone can function both an icon of a church bell’s sound, and as a symbol that might have interpretants such as “funeral”, “wedding”, “church” and “death”, depending on which meaning is the most corroborated by other factors in the context. The concepts of interpretants being understood based on context and corroborating factors is extremely important.

The finer points of the definitions of the sign functions differ somewhat between writers. One contentious issue is the question of whether an iconic sign and its object may belong to two different sensory domains. Can a musical sound *resemble* and therefore be an iconic sign of something that is not a sound, such as a motion in space, a colour, a temperature, a tactile texture, or an odour? I suspect that for *some* people at least – I am thinking especially of those with some form of synaesthesia – the answer might be “yes”.

Scholars as well respected as transformational theorist Richard Cohn – mentioned in section 1.4.7 – have implicitly answered the question with a “yes”.⁵ Nevertheless, even if cross-modal iconicity is psychologically real for some, it is difficult to compellingly argue that such perception is universal. I therefore concur with scholars such as Juan Chattah, who holds that music can only be an icon of *another sound* (musical or otherwise), and that when a musical sound appears to “resemble” something non-sonic – for instance when an increase in pitch frequency is thought to “resemble” an ascent in vertical space – a metaphor is at work, as opposed to any of the three Peircean signs. Such use of metaphor will be explored in section 1.5.3. There are therefore two categories of iconicity used in film music: that which relates music to other music, and that which relates music to non-musical sound. The former is of course ubiquitous in all music, while the latter is relatively rare, although not entirely absent from Desplat’s work, as will be seen in some of the analyses.

The applicability of indexical sign functions to music is also contentious.

Ethnomusicologist Thomas Turino understands indexical functions as follows:

Indices signify through co-occurrence with their object in real-time situations. Once such indexical relations have been established, however, actual co-presence of sign and object is no longer required; the index may still call to mind objects previously experientially attached.

I concur with Turino but would add that, once the “actual co-presence of sign and object is no longer required”, the sign is beginning to function as a *symbol* as well as – and perhaps eventually instead of – an index. This is because a relationship has been established that comes to rely on convention more than anything else, which is essentially the definition of a Peircean symbol. Turino is right to emphasise the way in which many musical-sign-to-object relationships are established through indexicality, but at some point, such relationships outgrow the need for co-occurrence and become symbols.

Chattah goes a step further than this, claiming that this makes indexical functions redundant; to him, they are *merely* a means through which symbols are established. This is perhaps a step too far.⁶ For instance, it means he does not directly acknowledge the *indexical* link between the speed of musical events and the speed of physical motion. Fast

⁵ See (Cohn 2012, 22).

⁶ See (Chattah 2006, 5).

music is necessarily caused by and contiguous with fast physical motion; motion of the musicians who played it, and/or of the diaphragm of a speaker that amplifies it.

Admittedly, this causal relationship is less obvious in a film, where the motion of the speakers and musicians is invisible, but spectators are arguably still unconsciously aware of the indexical relationship between fast music and fast physical motion, through their experiences of seeing and/or playing live music. This is one example of why I believe indexical sign functions are not redundant.

1.5.2 Musical associativity

1.5.2.1 The process of musical associativity

Of the three sign functions, the most directly important to this study is the symbol. When Peircean symbols are in use, a more widely used term for what is occurring is association. Chattah (2006) emphasises two categories of musical symbol, or musical associativity, used in film music: the *leitmotif* and the *topic*. Like Peter Burkholder (2006), I include three other categories: *quotation*, *allusion to a specific piece*, and *stylistic allusion*. Before exploring each of these individually, the following four-step process is general to all five categories of musical symbol:

- 1) Symbol establishment, via indexicality: Repeated co-occurrence between a musical work, feature or category and some extra-musical object results in an association between the two. In other words, a symbolic sign function arises through indexicality. As musicologist David Cooper (2005) observes, the association may have “been established by another composer or creative artist” (extraopus intertextuality) or by the composer and often within the scope of the film (intraopus).
- 2) Specific symbol occurrence calls to mind the symbol in general, via synecdoche: When a film composer articulates an established musical symbol, spectators who have learned the symbol can recognise this specific occurrence as *part* of the *whole* symbol. Such part-for-whole relationships are called synecdoche. Synecdoche entails music-to-music iconicity of various degrees between a specific occurrence and other remembered occurrences of the symbol.
- 3) The symbol calls to mind its extra-musical object: The symbol, established in step 1 and called to mind in step 2, now calls to mind the extra-musical object that was associated with it in step 1.

- 4) Interpretants are formed based on the relevance of extra-musical objects to the narrative context: The spectator will make sense of the extra-musical object of step 3 by relating it to the overall narrative context, including any contiguous musical signification. Scantly corroborated (and therefore apparently irrelevant) extra-musical objects will likely be ignored by most spectators. Extra-musical objects that *can* be construed as relevant will accrue greater specificity of meaning by attaching themselves to specific elements of the narrative, such as a setting, character trait, event, or narrator's slant.

Steps two and three, are presented similarly as a two-step process by both Chattah (2006, 144) and Tagg (2013, 238). Step one relates to ideas expressed by scholars including Chattah and Turino, as previously discussed. Step four, emphasising the importance of context in the formation of interpretants, is an emphasis of Chattah (2006), drawn from the field of pragmatics.


1.5.2.2 Five categories of musical symbol

Having established the four-step process that is common to all five categories of musical symbol, I turn now to the differences between them. The following list approaches each with minimal explanation, although certain complexities will be explored further in due course.

1. Quotation: This is a synecdoche of a specific work or passage thereof. There is a high degree of iconicity making the quotation recognisably linked to the quoted work, although the quotation need not be exact or complete. The work or passage (not the quotation itself) must be a symbol of at least one extra-musical object for the quote to be meaningful.

2. Allusion to a specific piece: The same as quotation, except that there is a lower degree of iconicity between an allusion and alluded work than between a quotation and quoted work. In other words, it is a more veiled reference than a quotation.⁷
3. Topic: A specific occurrence of a topic (its token) is a synecdoche of a “topic”. A topic is a category of musical work (or passage) based on similarities (iconicity) across multiple musical parameters, such as tempo, metre, mode, instrumentation, and articulation. Waltz, march, and fanfare are all topics used in Romantic music, for instance. The topic must be a symbol of at least one extra-musical object for the token to be meaningful.
4. Stylistic allusion: This, at least as I use it, is a broader category than topic. This can be confusing, because topics are sometimes referred to as “style topics”, when in fact a composer can use multiple topics within one style. I am not usually referring to a *composer’s* style by “stylistic allusion”, but to practices transcending individuals, such as 1930s swing, Baroque music, Irish music, French impressionism, etc. A specific allusion to a musical style is a synecdoche of that style. The musical style is a symbol of at least one extra-musical object.
5. Leitmotif: A leitmotif is a self-quotation within the scope of a film or franchise. (Only the first instance of the leitmotif cannot be considered a quotation). A specific occurrence of a leitmotif is a synecdoche of the leitmotif. The leitmotif is a symbol of at least one extra-musical object within the scope of the film’s narrative. It will also tend to have additional symbolic value, via allusion and/or topic. I include under the banner of leitmotif two related concepts: *leitharmonie* and *leit-timbre*,⁸ which are primarily harmonic and timbral, respectively, rather than motivic. Leitmotifs that are unambiguously associated with a tangible object (a place, physical object, or character) are more common in comedies and adventure

⁷ For example, Desplat’s motif for a cowboy-like character, Scoresby, in *The Golden Compass* (e.g. 0:48:36) helps to characterise him as a cowboy by alluding to a famous motif from a Western: Morricone’s coyote motif from *The Good, the Bad and the Ugly*.

Scoreby’s motif:  Coyote motif: 

⁸ Nikolai Rimsky-Korsakov (1923, 204) was probably the first to coin the term *leitharmonie*, when writing about his opera *The Snow Maiden* in 1905. Lehman (2013b, 107, 141, 186-187) exemplifies its use in relation to recent film music. *Leit-timbre* is also a term used especially by Russian writers, including Mikhail Cheremukhin (1939, 143), who uses the term in relation to film music of the Soviet era.

films, especially those intended for younger audiences. Leitmotifs with intangible or otherwise difficult to identify objects are favoured in the other film genres.

There are often blurred boundaries between pairs of closely related categories, such as quotation and allusion to a specific piece, quotation and leitmotif, allusion to a specific piece and topic, and topic and stylistic allusion. This is not necessarily problematic; it simply means that the analysis is necessarily highly subjective in nature and at times somewhat speculative. The question for me as analyst is less “which category is being used here?” and more “which category or categories will be most useful and efficient in describing my interpretation of the composer’s expressive strategy?”

1.5.2.3 Style flags and topic flags

An important consideration about stylistic allusion is that the styles are usually only articulated *in part*, for increased subtlety and musical unity. Such partial articulations of a style are functioning as a synecdoche of that style, meaning that the part stands for the whole. Any stylistic allusion consists of at least one style-alluding factor that is limited to one musical parameter, such as timbre, rhythm, harmony, or melody. After Philip Tagg (2013), I call these single-parameter stylistic ingredients “style flags”. The uilleann pipes can function as a style flag of Celtic music, just as saxophone can function as a style flag for jazz. Similarly, the “scotch snap” rhythm can function as a style flag for Celtic music, and swung eighths can function as a style flag for jazz. Importantly, while these attributes *can* function as style flags, it does not follow they always *do*. Context (both musical and narrative) determines whether they will be interpreted in that way or not, as per step four of the associative process outlined above. The uilleann pipes are not functioning as a style flag for Celtic music in *Argo*, because the narrative and musical contexts do not corroborate that interpretation. The saxophone *does* function as a style flag for jazz in *The Curious Case of Benjamin Button*, because the setting (jazz-era New Orleans) and other musical features (jazz-associated chords and other jazz-associated timbres) corroborate this interpretation.

Tagg divides style flags into two sub-categories: those that help to establish a home style for a piece of music, and those that borrow from some other style. This is a useful distinction, but rather than adopting Tagg’s somewhat confusing terms for these sub-categories (“style indicator” and “genre synecdoche”, respectively) I will simply use “borrowed” to modify the label “style flag” where attributes are clearly borrowed from

another style. Another modification of Tagg's concept that I propose is the addition of the category "topic flags", which are to topics what "style flags" are to musical styles. Since I am distinguishing between stylistic allusion and topic, it follows that I should also distinguish between "style flag" and "topic flag".

While the term "topic flag" might be new, the same concept has arguably been explored before under different guises. For instance, music theorist Raymond Monelle (2000, 71) writes about "the topic of the *pianto*", this being a sighing descending semitone gesture associated with grief and originating through iconicity to a mournful sigh. Because this only involves a single musical parameter (melody), I would prefer to call this a topic flag, rather than an entire topic, but the analytical intention is the same. Style flags and topic flags are useful in that they offer a more fine-grained approach to musical associativity than if I was merely describing the music in terms of whole styles and whole topics. In practice, composers including Desplat routinely mix flags from a variety of styles and topics. Desplat also routinely refrains from using *all* flags for a topic or style, often preferring a more veiled approach to musical associativity. Style flags and topic flags offer a nuanced way for the analyst to describing such strategies.

If all of this sounds somewhat complicated, the fact that the music unfolds as part of a cinematic discourse makes interpretation a lot more straightforward than if absolute music were being analysed. The filmmakers' intended meanings are often over-determined across multiple sensory orders within the cinematic discourse. This brings us back to the all-important fourth step in the process of musical associativity outlined above: interpretants of the music are formed based on their relevance to – and level of corroboration within – the narrative and musical contexts. I will now take a closer look at topics.

1.5.2.4 Topic theory and film music

Topics, sometimes referred to as “style topics” were first discussed by musicologist Leonard Ratner (1980), in relation to music of the Classical era. He defines topics as “subjects for musical discourse. Topics appear as fully worked-out pieces, i.e., types, or as figures and progressions within a piece, i.e., styles”. Ratner’s use of the word “style” should not be confused with the concept of musical style as I use it in my fifth category of association. Multiple topics exist within any one musical style; indeed, Ratner’s topics are all within the musical style of Classical music (in the narrowest sense of the term). A prominent example of Desplat’s use of a topic is his various uses of the topic “waltz”. For instance, his “River Waltz” is the love theme for *The Painted Veil*, and it exploits the waltz topic for its associations with romance. Another example is his use of the topic “fanfare”, as in “Fanfare of the Elves” in *Rise of the Guardians*. This topic is exploited for its associations with pompous ceremony.

According to Ratner, style topics in the Classical era “were associated with various feelings and affections; others had a picturesque flavour”. Ratner’s concept of style topic in Classical music was further developed by Kofi Agawu (1991), who was particularly concerned with the “region of play” between topics (“extroversive semiosis”) and harmony (“introversive semiosis”). Agawu also coins a useful term – “listener-competence” – to describe the ability of a listener to recognise associations. Composers assume a degree of listener-competence when exploiting associations, and train listener-competence when they establish new associations. Robert Hatten’s work on meaning in Beethoven (1994) seeks to further systematise topic theory, emphasising oppositions such as historical versus current styles, or sacred versus secular.

One of the pioneers of film music studies, Claudia Gorbman (1988) writes of “cultural musical codes”, which later writers in the field, James Buhler and David Neumeyer (2001) identify as synonymous with topics. Buhler and Neumeyer briefly cite a few well-known film music topics, for example “an anguished atonal cluster portends the monster behind the door”. This topic is indirectly referenced by Desplat in the four adventure films covered in this study, although such clusters tend to be played *in* the moment of horror rather than portending it. An example of this is moment in *The Golden Compass*

when Mrs Coulter’s evil monkey-dæmon⁹ violently ambushes Billy and Roger (0:17:59). Or they may portend a horror that is realised in the film *eventually*, but not immediately, such as in *Godzilla* when scientists discover an enormous trail to the ocean left by an enormous monster (0:06:21). These examples show that in Desplat’s practice at least, well-established topics are often exploited *indirectly* rather than directly; this achieves a balance between predictability and legibility.

As Buhler and Neumeyer note, “In the sound film era, style topics blur significantly with [film] genre in the sense that certain topics become closely associated with particular film genres”. A similar idea is the basis for a book by literary scholar Timothy Scheurer (2007). Some of the film-genre-associated topics that Scheurer identifies are exemplified in Desplat’s work, for example:

- main title music in science fiction, emphasising alien threat via dissonant music inspired by modernist composers – realised in the opening titles of *Godzilla* (although the “aliens” in *Godzilla* are terrestrial);
- music in film noir representing a *femme fatale*¹⁰ character via minor key, chromatic melodies, and sighing gestures – realised in the Ruth’s theme in *The Ghost Writer* (see section 2.3.8);
- main title music in adventure film emphasising the heroic tenor of the film via fanfare topic flags and martial rhythms – realised in the opening titles of *Rise of the Guardians* (Figure 2.61);
- music in historical romance representing the heroine as “soft, elegant, and beautiful” via “gently flowing melodies” – realised in Kitty’s theme from *The Painted Veil*;
- music in historical romance representing the antagonist via minor harmony, melodic dissonance, aggressive or primitive rhythm – realised in music associated with Van Ruyven in *Girl with a Pearl Earring* (see section 2.3.3); and
- music in historical romance with borrowed topic flags (Scheurer calls these “filtered borrowings”) from a topic suggestive of an exotic setting – realised in the opening titles and other cues from *The Painted Veil*, set in 1920s China.

⁹ In Pullman’s fictional universe, a dæmon is an animal incarnation of a person’s soul.

¹⁰ Scheurer calls this a “femme noir”, after Thomas Schatz.

In some respects, Scheurer’s approach of grouping topics by film genre is helpful. In other respects, it can be problematic, because film genre is not always easy to define, and because some topics transcend the boundaries of film genre. For instance, most antagonistic characters in the corpus are represented by music meeting the description of Scheurer’s antagonism topic to some degree, regardless of whether the film genre is historical romance. Similarly, there are resemblances between the musical characterisations of femme fatale characters in *The Ghost Writer* and *The Golden Compass* (Ruth Lang and Mrs Coulter, respectively), despite the radical difference in film genre.¹¹ Finally, the use of topic flags to represent exotic locales is certainly not exclusive to historical romance, as will be explored in the next section.

1.5.2.5 Exoticist topics, orientalism, and otherness

A specific category of topic – what I will hereafter call an *exoticist topic* – merits discussion, due to the frequency of such topics in the corpus films. An exoticist topic is one that, to some degree, engages in musical exoticism, which musicologist Ralph Locke (2007, 483) defines as

the process of evoking in or through music ... a place, people, or social milieu that is not entirely imaginary and that differs profoundly from the “home” country or culture in attitudes, customs, and morals. More precisely, it is the process of evoking a place (people, social milieu) that is *perceived* as different from home by the people making and receiving the exoticist cultural product.

The “home” culture of the corpus films is the West, since the films’ directors are from the USA, the UK, and France, and the films are in English or French. Exoticist topics in the films include music evoking: China in *The Painted Veil*; Japan in *Godzilla*; Russia in *The Curious Case of Benjamin Button*; Iran in *Argo*, Pakistan in *Zero Dark Thirty*, and an unspecified Arab state in *Syriana*. Other corpus films use exoticist topics for peoples or places that are fictional, but have a basis in real-world peoples or places. Examples of this include the fictional country Zubrowka in *The Grand Budapest Hotel* (see section 3.2.2) and the Romani-like Gypsies in *The Golden Compass* (see section 2.3.12).

¹¹ The leitmotifs for these two characters will be discussed in sections 2.3.8 and 2.4.4, respectively.

As is typical of film music, Desplat approaches musical exoticism with a high degree of artistic licence, often incorporating just one or two exoticist topic flags into an otherwise Western musical language. For instance, during the cue “To the Q Zone” in *Godzilla*, he accompanies a shot of Mount Fuji (0:24:06) with taiko drums as well as orchestra. The taikos and the image of the mountain together communicate a stereotypically Japanese setting. In the opening titles of *The Painted Veil*, some pentatonic melodic phrases played by flutes emphasise the Chinese setting, while the cue is otherwise Western.

Authenticity is necessary for the film composer’s communicative ends only insofar as it helps to make the topical association recognisable to the listener. The origin of an association need not be music from place or time being represented; it may have arisen, at least in part, through opera, or even from earlier film scores. For instance, consider the duduk, an ancient Armenian oboe that Desplat uses to evoke the Gypsies in *The Golden Compass* and Eastern locales in *Syriana* and *Zero Dark Thirty*. According to music historian Eric Hung (2010) the duduk has been used by film and television composers “to denote otherworldliness, loneliness, and mourning or to supply a Middle Eastern/Central Asian atmosphere.” Through its extensive use in films, since Peter Gabriel’s score for *The Last Temptation of Christ* (1988),¹² its associations have extended far beyond its origins in Armenia, and these *broadened* and now *conventional* associations are what Desplat is evoking when he uses the duduk.

Locke (2011, 302–3) notes that exotic musical sounds can sometimes be used in film music “subliminally ... keeping short of the specifics that might lead filmgoers to identify the culture in which the instrument or style is used, yet managing to remind us of the feeling-tones and other associations that have become attached to that culture.” For instance, in *Harry Potter VIII* the Japanese shakuhachi provides “feeling-tones” of esoteric and exotic mysticism, perhaps because the flute is associated with Zen Buddhism.¹³ When this sense of mysticism is combined with dissonant accompanying chords, an element of dread and malevolence is added, making an apt underscore for

¹² For a longer list of films using the duduk, see https://en.wikipedia.org/wiki/Duduk#Film_soundtracks

¹³ Steven Casano (2005, 29) attributes the popularity of the shakuhachi in the West since the 1960s to the popularity of Zen Buddhism, with which the instrument has been associated since its origins in the Fuke-shū sect.

scenes in which the dark magic of Voldemort is described.¹⁴ As with the duduk, previous film music would have played a role in broadening the shakuhachi's associations. For instance, James Horner has used the shakuhachi in several films, including *Willow* (1988), often to signal the threat of fantastical antagonists.

The use of exoticist topic flags does not necessarily imply a condescending or critical attitude towards the culture whose music is being evoked. When it does, the music could be described as *orientalist*. Claire Mabilat (2008) explains a distinction between exoticism and orientalism:

whilst exoticism enables artists ... to broaden their artistic palette and to explore new artistic mediums, images, and styles, orientalism depicts another culture in such a way as to create comment, or to highlight (often negative) difference. The former appreciates and embraces cultural diversity, whereas the latter (generally) disparages or criticizes it.

In my opinion, Desplat's use of exoticist topics does not usually amount to orientalism, because it is rare that a specific, non-fictional culture is clearly identified, *and* a negative difference in that culture is highlighted. A rare case of possible orientalism will be discussed in section 2.3.6, in relation to the representation of Iran in *Argo*. Musicologist Richard Taruskin (1992, 254) describes orientalism as “the East as sign or metaphor, as imaginary geography, as historical fiction, as the reduced and totalised Other against which we construct our (no less reduced and totalised) sense of ourselves”. The concept of an *Other*, or the quality of *otherness*, is broader than that of exoticism and orientalism and is therefore useful, especially when the terms “exotic” or “oriental” seem inapt. According to the Sage Encyclopedia of Qualitative Research Methods (Given 2008, 587), “Otherness is the condition or quality of being different or ‘other’, particularly if the differences in question are strange, bizarre, or exotic.” A character who is an Other might be “different” in terms of: species, as in the monsters in *Godzilla* (see section 2.4.3.5); class and religion, as in the Vermeer's in *Girl With A Pearl Earring* (section 2.4.3.1); ideology, as in the Nazis in *The Imitation Game* (section 2.4.3.4); or gender and morality, as in the *femme fatale* characters (section 2.3.8). Some Others are benevolent but have supernatural qualities, such as the Man in the Moon in *Rise of the Guardians* (section 2.4.3.5), Iorek the armoured polar bear in *The Golden Compass* (section 2.3.13), or the ghost of Lily Potter in *Harry Potter VIII*.

¹⁴ See 0:09:36 and 0:47:33 in the film.

Otherness is also a quality that can be exhibited by settings, happenings, and objects in the narrative. The otherness of settings usually involves exoticism, as in the examples mentioned earlier. Happenings that exhibit otherness include supernatural events, such as the defeat of the Sandman in magical combat in *Rise of the Guardians* (see section 2.4.3.1). In the fantasy films, magical objects are endowed with otherness, such as the Golden Compass in *The Golden Compass* (section 2.4.4), the Deathly Hallows and *horcruxes* in *Harry Potter VIII* (see sections 2.4.3.2 and 2.3.5, respectively), and the backwards-running clock in *The Curious Case of Benjamin Button* (section 3.1.1). Items of new, esoteric technology can also be given a sense of otherness, such as the *camera obscura* in *Girl With A Pearl Earring* (section 2.4.3.1), and the codebreaking machines in *The Imitation Game* (section 2.4.3.4).

Of course, such diverse incarnations of otherness and exoticism demand an equally diverse set of musical expressions. These are best discussed on a case-by-case basis, which I do in the sections mentioned above. However, one generalisation can be made here: the degree of otherness in a scene tends to be correlated with the degree to which Desplat employs musical resources that are unfamiliar to Western ears. Certain film genres have their own traditions and practices regarding the use of unfamiliar musical resources to evoke otherness. See for example Lisa Schmidt's (2010) work about the use of atonal and electronic sounds used in science fiction films, or Mark Brill's (2016) work on orientalism in the music of the fantasy films of Ray Harryhausen. In terms of pitch relationships, the unfamiliar resources connoting otherness include rare tonal interval classes, rare scale degrees, and the many modes, chord types, and chord progressions that emphasise these. This assertion is similar to one made by Frank Lehman (2013b, 146), who writes about "Diatonic as familiar, chromatic as 'other'", as one of the "background tendencies" governing the perception of film music.

1.5.2.6 Rare tonal interval classes, surprise, and associativity

Rare intervals and their associated pitch structures tend to be somewhat surprising, therefore the notion of surprise provides an additional lens through which their perception might be understood. I mentioned in section 1.4.4 that musical surprises are an important factor in musical expression. Musical surprises readily accrue associations – topical or otherwise – because their distinctiveness gives them salience in the listeners' attention. I propose that there are two main interactions between musical surprise and musical associativity. First, a learned association between normality and frequently heard

musical features (such as Ionian mode) is necessary for musical surprises to exist. Second, typical emotional responses to these musical surprises have probably contributed to the formation of various topics to do with *abnormality* of some kind.

As was mentioned in section 1.4.4, Huron observes that musical surprises, when extreme, can invoke the responses “fear, laughter, frisson, or awe” (2008, vii). The veracity of this is observable throughout the corpus. In particular, I will now discuss two particular kinds of musical surprise: the rare tonal interval class and the rare scale degree, introduced in section 1.4.4. Desplat often uses these in narrative contexts where the intended response of the audience seems to be “fear, laughter, frisson, or awe”.

Scenes in which characters are fearful – or the slant of the cinematic narrator encourages a fearful response from the audience – are often accompanied by music containing many rare intervals and/or rare scale degrees. In the most extreme examples, the music is atonal, or nearly so. Table 1.16 provides eight examples of narrative contexts in which Desplat uses atonality to invoke fear.

Table 1.16: Some examples of atonal or near-atonal passages in *Harry Potter VIII* to invoke fear

Cue	Timecode	Narrative context
“Ollivander”	0:09:28	Ollivander recalls being tortured by Voldemort.
“Outside Gringotts”	0:11:13	Hermione fearfully approaches Gringotts Bank, disguised as Bellatrix Lestrange.
“Underworld and Vault”	0:19:14	Harry and friends are in a vault full of magically multiplying treasure that threatens to engulf them. Griphook reveals he is not going to help them out of the vault.
“Snape and Harry”	0:37:14	The tense showdown in which Professor McGonnagall expels Headmaster Snape from Hogwarts.
“Grey Lady and Battle”	0:44:45	Harry approaches the ghost of Helena Ravenclaw.
“The Diadem”	0:59:43	Draco and friends confront Harry, threatening to attack him with their wands.
“Snape’s Demise”	1:09:01	Voldemort murders Snape.
“Showdown”	1:44:47	In Harry’s final showdown with Voldemort, who is prevailing, bringing the roof down on Harry.

Similar tables could be created for the other three adventure films. Modes containing rare intervals and rare scale degrees can also be used to invoke fear or similar emotions. See, for example section 2.3.5 on Desplat’s uses of Lydian $\flat 3$ (hmaj4), or section 2.3.7 on his uses of chromatic Lydian inverse (cli1). If one broadens “fear” to psychological tension more generally, then all of the forms of chromaticism described in section 2.4 are relevant to some degree, at least when negative affect is signalled through other means,

such as minor triads and/or flat scale degrees, whose associations are discussed in section 1.5.4.

As Huron said, musical surprises can trigger reactions of laughter as well as fear. Analysis of several scenes in the corpus (indicated in footnote 29 on page 46) shows that rare intervals and scale degrees can also contribute to humour: sometimes the very same modes that contribute to tension in one scene arguably contribute to humour in another. Providing that the musical and narrative context corroborates an inference of humour, rare intervals and scale degrees can easily be interpreted as amusing idiosyncrasies rather than (or sometimes as well as) invocations of tension or otherness. Desplat told Vanity Fair (Miller 2013) that “there is no way to be comedic with music. For me, music is not comedic ever.” While this may be best understood as hyperbole, it probably indicates that Desplat seldom consciously attempts to make music funny in the sense that the music *alone* is funny. However, Desplat would surely agree that certain musical choices are more idiosyncratic than others, and that musical idiosyncrasy can work together with other elements of the cinematic discourse to encourage an interpretation of comedy.

Frisson, also known as “thrills”, “shivers”, “chills”, and “goose flesh” is another response to surprise explained by Huron. He cites experimental studies to argue that frisson is a frequent response to musical surprises, particularly unexpected modulations and chromatic mediant chords, both of which rely on rare intervals. Awe, magic, and the supernatural are all closely related to frisson. Lehman (2013b, 40) observes that passages of triadic chromaticism containing transformations spanning large tonal distances (i.e. connected by rare intervals) are particularly apt to express awe. The passages discussed in sections 2.4.2, 2.4.3, and 2.4.6 are all instances of triadic chromaticism, and their emotional impact is certainly indebted to the element of musical surprise, invoking a frisson-like response.

The extent to which tension, humour, frisson, and/or awe are evoked depends on how well each is corroborated in the wider musical and narrative context. For example, the expression of tension could be corroborated by some of the other musical indicators of tension I will later discuss on page 108. Specific examples of how rare intervals convey certain expressive results will be explored in 2.2 and beyond.

Rare intervals and scale degrees – whose importance to musical associativity should now be apparent – are shown on the CoS space introduced in Figure 1.12 in the following ways. First, interval rarity is most extreme to the right of the space. Second, rare degrees on the flat side (hyper-minor) and sharp side (hyper-major) tend to be found in modes located below and above the blue and red dashed lines, respectively. Third, in situations where the rare intervals are generated by transformations *between* triads/scales, this will show itself in many and/or large leaps between different points on the CoS space. (This includes the CoS branches of CoTCaS transformations.)

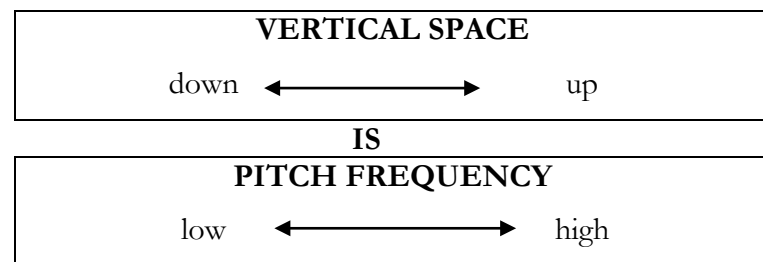
1.5.3 Music as iconic metaphor

My discussion of musical associativity was concerned with one of the Peircean signs: the symbol. In section 1.5.1, I contemplated whether music could be an iconic sign. I concluded that it could only be an iconic sign of another sound, and that when *apparent* resemblances exist between a musical sound and non-sound, a metaphor is usually the best explanation.

Before describing ways in which film music can function metaphorically, it will be useful to consider what metaphor is. The most common use of the word metaphor is in relation to linguistic metaphors. However, to cognitive linguist George Lakoff and his co-author, philosopher Mark Johnson, linguistic metaphors are but one outward manifestation of something conceptual. Consequently, a metaphor does not require words; it might just involve music and images, for example. According to Lakoff and Johnson (1980, 5), “The essence of metaphor is understanding and experiencing one kind of thing in terms of another”. They are describing a *target domain* being understood or experienced in terms of a *source domain*, to use terms they introduce elsewhere in the text. In this study, the source domain is always music, and the target domain that it sheds light on is some extra-musical aspect of the cinematic discourse. To paraphrase Lakoff and Johnson, the essence of film music metaphor is understanding and experiencing an aspect of the film in terms of music.

The application of conceptual metaphor theory to film music was first explored in depth by Juan Chattah (2006). It is beyond the scope of this study to cover his work in detail, but I will provide explanations of some key concepts. With this done, I will then explore ways to synthesise the transformational analysis discussed in section 1.4.7 with conceptual metaphor theory, informed by other music theoretical texts.

In *Harry Potter and the Deathly Hallows: Part 2* (hereafter abbreviated to *Harry Potter VIII*), there is a scene (0:22:26) in which a flying dragon descends towards a lake, with the heroes flying on its back. During the descent, Desplat's score descends in pitch height. There is a well-known metaphor at work here that correlates movement in vertical space with fluctuation in pitch frequency. Music theorist Lawrence Zbikowski (2005) refers to this metaphor as "PITCH RELATONSHIPS ARE RELATIONSHIPS IN VERTICAL SPACE".¹⁵ The metaphor is even built into the way we describe pitch and frequency in terms of high and low. There is no real similarity (no iconicity) between descending in pitch and descending in physical space. Rather, the key thing is that vertical height and pitch frequency are both one dimensional and continuous (i.e. linear) spaces. One linear space is mapped onto the other, as represented by the following diagram that appears in Chattah (2006):



In metaphor theory, any metaphor that can be represented by a diagram of this kind, mapping a linear source domain onto a linear target domain, is based on a LINEARITY image schema. If it were a cyclic source domain mapped onto a cyclic target domain, as in a circle of fifths diagram, it would be a CYCLE image schema. Johnson (1990) describes an image schema as “a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience.” Although they are called *image* schemata and are often visually represented in diagrams, they are not specific to vision, but are conceptual structures. Their relevance to the study of metaphors is that in a metaphor, the two domains (target and source) need to share an image schema in common, such as linearity or cycle. In other words, the image schema provides the means by which one domain can be mapped onto the other.

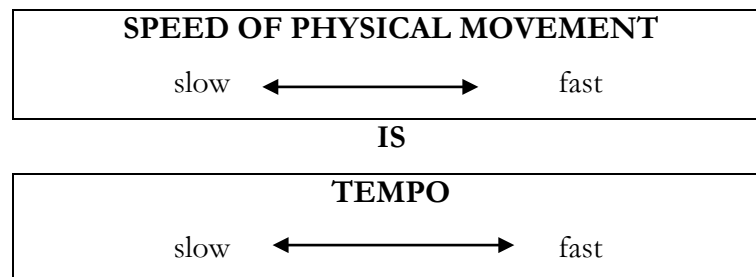
¹⁵ It is conventional in publications on metaphor theory to represent metaphors in upper-case letters.

Returning to the specific metaphor VERTICAL SPACE IS PITCH FREQUENCY, it is a key component of the practice known as Mickey Mousing, in which musical events are metaphorically related to the onscreen motion to give the motion emphasis. As the name suggests, Mickey Mousing is most extensive in animation to this day, however it was used more broadly in early sound film, notably by Max Steiner and his imitators. Even in the animation *Rise of the Guardians*, Desplat uses VERTICAL SPACE IS PITCH FREQUENCY sparingly. For instance, when Jack Frost tumbles clumsily from the sky into a tree after his first flight (0:02:23), there is no hint of descent in the music. Desplat's decision not to emphasise this descent may be because the fall is less important than the successful flight that came before it; the emphasis of the scene is that Jack can fly. Desplat seems more inclined to use VERTICAL SPACE IS PITCH FREQUENCY for instances when there is also an *emotional* justification for ascending or descending in pitch as well as a visual one. There seems to be another metaphor at work here: EMOTIONAL STATE IS PITCH FREQUENCY, in which an ascent in pitch can function as a metaphor for emotional “uplift”. For instance, when Jack first rockets *upwards* on his first flight (0:02:21) Desplat uses a melodic line with a generally ascending contour (Figure 1.17), perhaps because this is a physically *and* emotionally “uplifting” moment. Conversely, returning to the earlier example of the dragon’s descent in *Harry Potter VIII*, the music arguably descends because the characters’ emotions drop from elation to worry at this point, so there is an emotional and a physical descent.



Figure 1.17: the trumpet phrase accompanying Jack Frost’s first flight, in *Rise of the Guardians* (0:02:21)

While the VERTICAL SPACE IS PITCH FREQUENCY is not a particularly prominent metaphor in Desplat's work, it nevertheless serves as a good initial example of the LINEARITY image schema. Another LINEARITY image schema that Chattah cites is the following:



This metaphor is certainly present in Desplat's work, as in most film music, but it is arguably symptomatic of a broader metaphor: **ACTIVITY LEVEL IS TEMPO**. Activity can include mental activity as well as actual physical activity. In *The Imitation Game*, Desplat has said that he wrote the fast ostinati that accompany the main theme “to convey the fast mind, the brilliant mind of Alan Turing.”¹⁶ A reprise of the title cue (0:18:20) accompanies a montage that intercuts between images of Turing jogging (physical activity) and busily designing his pioneering computer (mental activity). The ostinati bubbling beneath the slow melodic lines emphasises both kinds of activity. In *The Queen*, a cue (1:14:47) reprising material from “People's Princess” uses strikingly fast tempo over an almost still image of an enormous lake of flowers outside Buckingham Palace, left in the wake of Princess Diana's death. The leitmotivic significance of the reprise is that it recalls the montage that intercut Diana's fatal car ride with images of media hysteria about her. But the fact that it is presented with similarly fast tempo arguably emphasises that the lake of flowers represents a continuation of this high degree of activity of those interested in the Princess. In both examples, the fast tempo is attributable to the slant of the cinematic narrator, although in the montage of Alan Turing the tempo is also attributable to the character's interiority.

¹⁶ This is said at 2:00 of (Hirway 2015).

Chattah does not explicitly identify ACTIVITY LEVEL IS TEMPO as a metaphor involving the LINEARITY image schema, although he implies this idea when he writes, “tempo may indicate activity level (fast tempo for drive and vitality, slow tempi for relaxed conditions)”.¹⁷ “Drive” is closely related to a sense of urgency, which is a very common in film, whether it is representative of a character’s emotional state, or the slant of the cinematic narrator, or both. The ACTIVITY LEVEL IS TEMPO metaphor is also related to Rebecca Leydon’s (2002) proposal that post-minimalist repetition can evoke “kinetic ... collectivity of dancing bodies”, or “motoric ... indifferent mechanised process”.

Other metaphors that Chattah proposes to be used by film composers and are based on LINEARITY image schemata are to do with psychological tension versus relaxation.

These include:

- “PSYCHOLOGICAL TENSION IS VOLUME” (tense is loud)
- “PSYCHOLOGICAL STATE IS INSTRUMENTAL TIMBRE”
(tense/disturbed is distorted timbre)
- “PSYCHOLOGICAL TENSION IS REGISTER” (tense is high register)
- “PSYCHOLOGICAL/PHYSICAL STATE IS HARMONIC CONSTRUCT”
(tense/disturbed is dissonant)

For tense emotional states such as fear and anger, composers are likely to employ all or most of these four metaphors simultaneously. Different combinations and levels within each metaphor are prone to result in different kinds and levels of psychological tension. For instance, fear appears to differ from anger mostly in that fear is more likely to be expressed softly. This is unsurprising in that anger is the more active and therefore the more energetic of the two states, just as loud music is more active and energetic than soft music.

Another image schema that Johnson (1990) identifies is the CONTAINER schema. Whenever words meaning “in” or “out” are used in language, the CONTAINER image schema is being invoked, regardless of whether there is a physical or conceptual container. The sentence “Desplat’s scoring style is in vogue” is referring to a conceptual

¹⁷ (Chattah 2015, 87)

container regarding cinematic and musical fashion. Chattah identifies sectional musical forms as another manifestation of the CONTAINER schema, with structural units such as “cue” “introduction” or “B-section” being containers. The same could be said of structural units of the film such as “scene”, “sequence”, “episode”, and “act”. The relevance of this to film music analysis is that a container within the musical structure may become metaphorical for a container within the narrative structure. For instance, in *The Curious Case of Benjamin Button*, the fifteen-minute romantic episode set in Murmansk has a self-contained musical structure that is metaphorical for the self-contained narrative episode. (This episode will be explored in section 3.1.5.) Categories are also containers, such as “non-diegetic music”, “diegetic music” and “diegetic sound”. Although as Chattah notes, and as was discussed in section 1.3.2, the boundaries between these containers and their exteriors do become blurred at times.

Yet another image schema identified by Johnson (1990) is the PATH schema. This is like the linearity schema in that it involves a one-dimensional continuum that can be traversed, but has additional features associated with movement along a path, such as an origin, a goal, and the potential for resistance to reaching the goal. Linguistic metaphors like “life is a journey” are one manifestation of the PATH schema. Music theorists including Janna Saslaw (1996) and Candace Brower (2000) have written about the relevance of this schema to music. As Brower (2000) identifies, tonal music casts the tonic pitch-class as the goal of melodic “paths”, which traverse the one-dimensional space of pitch height. There is a sense of reaching a goal (i.e. resolution) when the final tonic is reached, and conversely there is a sense of the goal being eluded when a phrase comes to rest on a non-tonic pitch. Chattah identifies this kind of metaphor as CLOSURE IN NARRATIVE IS CLOSURE IN MUSIC. Lehman covers it under the background tendency “tonal tension and release” (2013b, 146).

A tonic *chord* could also be the goal of a path, and chords, like individual pitches, can be the trajectors that traverse a path. Triads, for example, can be shown to traverse the *LRP map*. If they are planing, i.e. if their root motions are mostly secondal, they can be shown to traverse two-dimensional pitch-height space, much like the paths of individual pitches in melodic lines. Such a synthesis of image schemata and neo-Riemannian transformations was first proposed by Saslaw (1996), and later developed by Brower (2000). Scales and their modes can also be trajectors through spaces provided by

transformational analysis. The paths of heptatonic modes and their tonic triads may be mapped in one of my tonal spaces exemplified by Figure 1.16.

As Brower explains, chords and scales have a double role: they are both trajectors along a path, and containers. Chords contain pitches, while scales contain pitches and chords. They are therefore best understood as **CONTAINERS FOR MOTION**, analogous to vehicles in the physical world. CoS transformations are movements of the scale container. CoTC are movements of the chord container within the scale container. CoTCaS transformations are movements of both the scale and chord container. Western listeners are accustomed to chords changing frequently, so they are likely to be experienced as run-of-the-mill, perhaps relatively superficial path-motions. By contrast, scales normally change far less frequently, so they will be experienced as more marked, significant, deep-level path motions.

The metaphorical usefulness of this image schematic view of harmony and modulation is rich and multifaceted. A musical passage organised by a **PATH** schema can easily become a metaphor for a narrative situation that is also organised by a **PATH** schema. The shared image schema provides the enabling similarity across the two domains, which enables one to be experienced as metaphorically linked to the other.

In Figure 1.16 I graphed the **PATH** of *Philomena*'s theme through tonal space, so this will serve as a useful example. The harmony followed a departure and return trajectory in which each transformation was different to the last and arrived at a new mode that had not been used before. The transformations started incremental and became increasingly substantial, building to a dramatic climax just before the return home was completed. The **PATH** followed by the music is similar in nature to the **PATH** followed by *Philomena* throughout the film. Geographically speaking, she starts in England and goes on a journey in search of her long-lost son, first searching close to home (in Ireland), then further from home (in the USA) before returning to the British Isles. Emotionally speaking, she goes on a "journey of discovery" in which increasingly significant revelations about her son take her to increasingly new and dramatic "places" emotionally. In one sense, at the end of the film she is back where she started, without a son and without the hope of meeting him. While it would be wrong-headed to push this comparison too far, I would certainly argue that *part* of the theme's aptness for this film is that it is not static, and does not remain close to the tonic; instead it goes on an increasingly dramatic journey and returns home, much like *Philomena* does.

In general, modulatory passages, involving path-motion at both scalar and chordal levels, make excellent metaphors for narrative situations that involve a high degree of flux, especially game-changing, significant flux. This will be explored in sections 2.4.6, 3.1.1, and 4.5. Conversely, I propose that passages of harmonic stasis – a quality frequent in Desplat’s post-minimalist style – make excellent metaphors for either rest or entrapment (physical or psychological), depending on which interpretation is more corroborated in the musical and narrative context. In a similar vein, Rebecca Leydon (2002) argues that post-minimalist repetitiveness (of which harmonic stasis is a typical component) can also evoke a “maternal ... holding environment” or a “totalitarian ... involuntary state of unfreedom”.

Harmonically static passages may also help to provide a sense of singularity of communicative purpose – an intense focus of attention. They can also mitigate and disguise the disjointed nature of film editing, especially in montage sequences. Passages can be harmonically static even if they involve an oscillation between two chords, or perhaps changes between three or four chords. This is because the scale container is static, while the motion of chords within that container is relatively superficial. A sense of stasis is often reinforced by Desplat using a tonic pedal.¹⁸

The metaphorical potential of individual TTPCs can also be evaluated with the help of the CONTAINER image schema. Scott Murphy proposes that M6M is an apt harmonic metaphor for the expansiveness of outer space because it is a very non-parsimonious voice-leading. The CONTAINER schema accounts for this effect very well. An oscillating M6M suggests a very large pitch container bounding the two oscillating chords. This is not only because M6M involves six pitch-classes (because there are no pitches in common between the two triads); it is also because M6M stakes out a large plot of real-estate on the *LRP map*, in both diatonic (horizontal) and chromatic (vertical) dimensions. This can be seen in the distance between D maj and A \flat maj in the section of the *LRP map* in Figure 1.18. This distance is almost as far as F \sharp min \Leftrightarrow A \flat maj, which exemplifies the maximal distance between two triads on the complete *LRP map* (assuming the shortest possible path is being followed).

¹⁸ On a practical level, harmonically static passages are minimally distracting behind dialogue. Thomas Newman – whose music is frequently characterised by harmonic stasis – makes this observation in an interview (Oxford Union 2016).

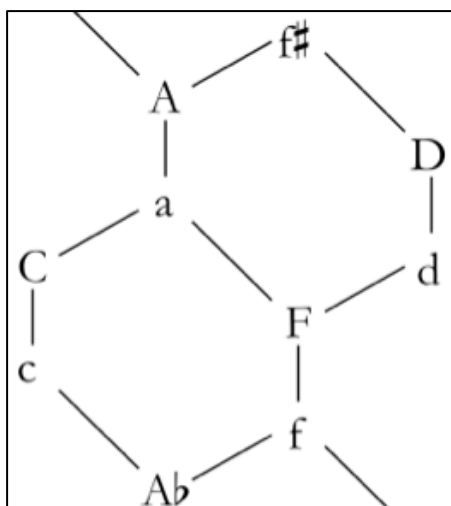


Figure 1.18: section of *LRP map* showing the distance between D maj and A \flat maj.

One might express this metaphor as PHYSICAL SIZE IS TONAL SPACE CONTAINER SIZE. The case of M6M, I argue, is one manifestation of a broader principle relating to container size in tonal spaces. M2M and m2M can also be exploited for their suggestion of a large pitch container, becoming a metaphor for expansiveness and/or a condition of being unfettered. This metaphor could be expressed as UNRESTRICTED TRAVEL IS LARGE TONAL SPACE CONTAINER. This metaphor is particularly important in *The Golden Compass*, which has a theme of travel to far-flung places, even other worlds.

This raises the potential that highly parsimonious TTPCs (which stake out a small plot of real-estate on the *LRP map*) might sometimes be used in just the opposite way. They may function as metaphors for rest or entrapment, much like the harmonically static passages already discussed. This could be expressed as ENTRAPMENT IS SMALL TONAL SPACE CONTAINER or REST IS SMALL TONAL SPACE CONTAINER. The TTPC m8M, which has a minimal *LRP map* footprint and therefore suggests a small pitch container, is often used by Desplat as a metaphor for psychological entrapment, as will be argued in section 2.3.1. As always, the fact that TTPCs have the *potential* for such use does not mean they always function thus. But they certainly can be interpreted thus if the musical and narrative context corroborates it.

One final image schema that will be useful in my analysis is the ATTRACTION schema, which Johnson (1990, 47) proposes as a subcategory of the FORCE schema. He uses magnets, vacuum cleaners, gravity, and physical attraction as examples of this schema in action. Essentially, A is attracted towards B by some force, which may or may not result

in A moving to B. A number of music theorists have written about forces of attraction between tones. Notably, Lerdahl (2001, 161–66) develops a method for quantifying what he calls “melodic attraction”, building on previous work by Steve Larson (1994), and framing it with reference to Johnson’s ATTRACTION schema. His idea, in brief, is that listeners hear pitches as being “attracted” to neighbouring pitches that are more tonally stable in the musical context. The most stable degree is $\hat{1}$, followed by the remaining degrees in the current triad, followed by the remaining degrees in the current scale, followed by the remaining degrees in the chromatic scale. For example, in the context of a tonic triad in C major, {C} is the most stable scale degree, followed by {E, G}, then {D, F, A, B}, then {C \sharp /D \flat , D \sharp /E \flat , F \sharp /G \flat , G \sharp /A \flat , A \sharp /B \flat }. Scale degrees are attracted to more stable scale degrees, and the larger the difference in stability, the stronger the attraction. D-as- $\hat{2}$ is attracted more to C-as- $\hat{1}$ than to E-as- $\hat{3}$ in this context, because $\hat{2} \Rightarrow \hat{1}$ is a more significant improvement in stability. The attraction also works like magnetism in that attraction increases with proximity. F-as- $\hat{4}$ is more attracted to E-as- $\hat{3}$ than to G-as- $\hat{5}$, because E-as- $\hat{3}$ is closer in pitch-height. A maximal attraction in the context of I in Ionian is $\flat\hat{2} \Rightarrow \hat{1}$, because this combines maximal improvement in stability (chromatic level to tonic level) with maximal closeness in pitch height (one semitone). Similarly, a maximal attraction in the context of a tonic triad in C Aeolian is $\flat\hat{4} \Rightarrow C$.

Tonal attractions can be resolved, left unresolved, or resolved after delay, which may relate metaphorically to some tension in the narrative being resolved, left unresolved or resolved after delay. The full set of semitonal attractions to members of the tonic triad (which tend to be the strongest attractions) is { $\flat\hat{6} \Rightarrow \hat{5}$, $\sharp\hat{4} \Rightarrow \hat{5}$, $\hat{4} \Rightarrow \hat{3}$, $\sharp\hat{2} \Rightarrow \hat{3}$, $\flat\hat{4} \Rightarrow \flat\hat{3}$, $\hat{2} \Rightarrow \flat\hat{3}$, $\flat\hat{2} \Rightarrow \hat{1}$, $7 \Rightarrow \hat{1}$ }. All of these semitonal attractions occur in Desplat’s work, with $\flat\hat{6} \Rightarrow \hat{5}$ being particularly important. This and other descending semitonal attractions can also function as the grief-laden *pianto* topic discussed in section 1.5.2.3.

I mentioned earlier that limited mobility in tonal space is suggestive of a small CONTAINER and therefore entrapment, rest, or singular focus, depending on the context. Similarly, if Desplat emphasises strong melodic attractions to the tonic triad or tonic pitch, he is emphasising the tonic’s strong magnetism as a destination that the harmony seems to be pulled towards and deterred from leaving. The magnetic tonic might become a metaphor for psychological entrapment. I will hereafter refer to this metaphor as ENTRAPMENT IS MAGNETIC TONIC. A strongly magnetic tonic is

often doubled with the inescapable persistence of the tonic in the form of a pedal. As I will demonstrate in section 2.3.1, Desplat often combines ENTRAPMENT IS MAGNETIC TONIC with ENTRAPMENT IS SMALL TONAL SPACE CONTAINER. The TTPC m8M, which I mentioned earlier, combines these two metaphors very effectively, especially when combined with a tonic pedal as in $i \Leftrightarrow \flat VI$.⁶

In summary, metaphor provides a rich means through which film music can become meaningful through the way in which it is correlated to aspects of the narrative it accompanies. Unlike much musical associativity, metaphorical processes can only be understood when the film music is experienced and interpreted in the context of the filmic narrative. There is much room for subjectivity in interpreting potential film music metaphors, however metaphor theory provides some very useful devices – primarily image schemata – for structuring the discussion.

1.5.4 Mode, affect, and topic

I return now to an aspect of musical associativity. It is an aspect of particular import to this study: the associativity of modes. The conventional wisdom of Western musical expression is that minor mode *tends* to be associated with negative emotions such as sadness, and tension more so than major mode. Of course, there are exceptions to this broad generalisation, and Philip Tagg helpfully lists some topics external to Western Art Music, in which lively tempo and other factors mean the overall valence tends to be positive despite minor mode: “*chalga, cueca, hornpipe, jenka, jig, klezmer, lambada, malagueña, polska, reel, syrta, tarantella* or *verbunkos*”.

Film music scholar Frank Lehman acknowledges the relevance of the positive/negative associations of major/minor to the interpretation of meaning in contemporary Hollywood film music, albeit cautiously. To him, the major/minor duality is one of the six “background tendencies” mentioned in the previous section. His caveat is that the background tendencies are “semiotic inclinations, not hard facts of harmonic meaning-generation”.

While Lehman does not relate the major/minor dichotomy to topic theory explicitly, his perspective can be re-framed in relation to topic, in the following way. I propose that the two characteristic features of minor keys – prominence of minor triads¹⁹ and prominence of flat scale degrees – tend to function as topic flags for negative topics including (in the broadest of terms) sadness, tension, antagonism, and agitation. This allows for the possibility of a composer expressing a topic similar to one of these with *no* minor triads and *no* flat scale degrees, so long as the desired topic is identified sufficiently by its other topic flags. Individual topic flags such as these are never *essential* to the expression of a topic, which is why Lehman is correct to say that they are “not hard facts of meaning-generation”.

My focus on the prominence of flat scale degrees as a topic flag for various negative states is well supported. Music psychologist Richard Parncutt hypothesises that “Minor music may tend toward negative valence simply because scale degrees 3 and 6 [i.e. $\flat\hat{3}$ and $\flat\hat{6}$] sound lower than expected, consistent with emotional cues in speech”. Speech tends to be pitched higher when the speaker is happy and lower when (s)he is sad or angry.²⁰ Consequently, when scale degrees are lower than expected, based on the expectation of Ionian (DIA1) – which is by far the most frequent and familiar mode in Western music – there is an implication of negative affect. If what Parncutt says is true of $\flat\hat{3}$ and $\flat\hat{6}$ in the traditional minor key tonality about which he is writing, I see no reason why it cannot also be true of $\flat\hat{1}$, $\flat\hat{2}$, $\flat\hat{4}$, $\flat\hat{5}$, and $\flat\hat{7}$. These are frequent in Desplat’s post-tonal language, and are one semitone lower than expected based on Ionian-centric expectations, just like $\flat\hat{3}$ and $\flat\hat{6}$. Moreover, $\flat\hat{1}$, $\flat\hat{2}$, $\flat\hat{4}$, and $\flat\hat{5}$ (hyper-minor scale degrees) are surely *more* extreme in their implication of negative affect than $\flat\hat{3}$, and $\flat\hat{6}$, because they are lower than expected even relative to Aeolian-centric expectations.²¹

¹⁹ Minor triads are prominent in minor keys because the tonic and subdominant chords are minor, and these tend to be more frequent than the major secondary triads.

²⁰ Parncutt cites music cognition expert David Huron (2008) regarding the relationship between music perception and speech prosody.

²¹ Scale degrees $\flat\hat{1}$ and $\flat\hat{4}$ most commonly occur in Desplat’s music as the minor thirds of $\flat\nu\flat$ and $\flat i\flat$, respectively, where they are unambiguously chromatic alterations of $\hat{1}$ and $\hat{4}$.

Understanding the seven diatonic modes as incremental shades on the major/minor spectrum provides a more nuanced perspective to work with than a simple major/minor dichotomy. The spectrum becomes still more fine-grained when one considers subsets and supersets of these modes. A chord or scale that could belong to two near-identical modes falls between those two modes on the major/minor spectrum. For example, the scale degree set $\{\hat{1}, \hat{2}, \flat\hat{3}, \hat{4}, \hat{5}, \flat\hat{7}\}$, used in Desplat’s harp ostinato from *The Curious Case of Benjamin Button* (Figure 1.19), falls between Aeolian and Dorian on the spectrum, because it is a subset of both.²² Similarly, the set $\{\hat{1}, \hat{2}, \flat\hat{3}, \hat{4}, \hat{5}, \flat\hat{6}, \natural\hat{6}, \flat\hat{7}\}$ raises a different kind of ambiguity to do with Aeolian and Dorian in that it is a superset of both. The scale with no sixth degree is a step towards being what I call “modally neutral”, while the scale with two kinds of sixth degree is an instance of modal mixture.²³



Figure 1.19: Harp ostinato from *The Curious Case of Benjamin Button*

To recap, prominence of minor triads and prominence of flat scale degrees can function as topic flags for negative topics. Similarly, prominence of major triads and prominence of non-flat scale degrees *can* function as topic flags for positive topics, including happiness, joy, serenity, tenderness, and gracefulness. Given Parncutt’s rationale that being lower than expected can result in negative affect, could it be argued that being *higher* than expected results in the expression of positive affect? Temperley and Tan suspect that this explanation is valid, but there is no scholarly consensus on the subject as yet. The difficulty is that, whereas flattening a scale degree relative to Ionian (DIA1) decreases both pitch height and familiarity – both of which tend towards negative perception – sharpening a scale degree relative to Ionian raises pitch height but *decreases* familiarity, sending mixed affective signals. I conclude that no generalisations can easily be made about the affective tendencies of sharp (i.e. hyper-major) scale degrees; their

²² If forced to choose one, I would describe it as Aeolian because of Aeolian-centric expectations, but it nevertheless leaves out $\flat\hat{6}$ and is less negative in affect for this reason.

²³ There are multiple levels of modal neutrality and multiple levels of modal mixture, creating a modal mixture/modal neutrality spectrum, with “modal specificity” falling in the middle.

expressive value can only be assessed on a case-by-case basis, guided by the following two rules of thumb:

- 1) If the sharp scale degree appears as the third, causing a triad to be unexpectedly major (as in $\#4$ in II \sharp , $\#5$ in III \sharp , $\#1$ in VI \sharp and $\#2$ in VII \sharp) it is usually best interpreted as a topic flag for positive affect tinged with unfamiliarity. (However, if this chord functions as a secondary dominant, it is probably better interpreted as a style flag for common-practice tonality.)
- 2) If the sharp scale degree is a cause of dissonance, it is usually best interpreted as an agent of *negative* affect tinged with unfamiliarity. A common example of this in Desplat's writing is the melodic use of $\#4$ against chord i.

Frank Lehman (2013b, 32) touches on the dual nature of Lydian (DIA4) and its distinctive sharp degree ($\#4$), observing:

The hint of alterity native to this resource allows for a wide range of applications, from a mixture of sentiment with wonder or amazement, to the intimation of sardonic, even devilish intentions behind a sweet façade (tapping on the potential “wrong-note” hearing and/or a not-so-stealthily embedded diabolus in film musica).

The associative and affective qualities of scalar modes are in part a result of the factors explained above. Each mode's scale degree content constrains the ability of a passage using that mode to make flat scale degrees or minor triads prominent. Whole modes (as opposed to their components) can also function as style flags or topic flags, often with ethno-geographic associations. In a footnote of his thesis, Juan Chattah (2006, 51) claims that, in *The Red Violin*, “The Gypsy/Hungarian mode acts as a musical symbol (i.e. topic) that triggers the westernized (and thus conventionally established) association of exoticism”. I agree, but would prefer to call the mode itself a topic *flag*, as it involves but one musical parameter. To give another example, Mixolydian (DIA5) can function as a style flag for rock, jazz, English folk, Scottish folk, or Irish folk, depending on which is corroborated by other style flags. The topical associations and other expressive qualities of fifteen modes will be discussed in section 2.3, in relation to Desplat's use of these in the corpus films.

1.5.5 TTPC, affect, and topic

The associative features of Murphy's forty-eight TTPCs draw on all the factors discussed above. In Table 1.17 I propose a division of them into twelve categories, with category 1 being the most negatively valenced and category 12 the most positive. The most basic division is between TTPCs whose tonic(ised) triad is minor (categories 1-6) and those for whom it is major (categories 7-12). The former are more negatively valenced than the latter, at least when at rest on their tonic(ised) triad. Ignoring the influence of all other musical parameters such as tempo, timbre, pitch register, the affective value of the two groups of six categories may be described as are "negative at rest" and "positive at rest", respectively.

These two groups may then be bisected based on whether the non-tonic(ised) triad is minor or major, which impacts how positive or negative they are when *not* at rest. These categories can be represented as mXm (categories 1-3), mXM (categories 4-6), MXm (categories 7-9), and MXM (categories 10-12). Broadly speaking, if a TTPC is more positive when at rest than otherwise, the overall affect implied might be interpreted to be positive overall but with some secondary affective element that is negative. For instance, this might include a feeling that mingles love and loss, but with love being to the fore, for instance. Conversely, if a TTPC is more negative when at rest than otherwise, the overall affect implied might be interpreted to be negative overall but with some secondary affective element that is positive, such as a desire, hope, or ambition that is hitherto unrealised.

Within each of these four groups, the three categories are based on scale degree height relative to expectation. The tonic(ised) triad, *to the extent that it is tonicised*, arguably establishes expectations of Ionian (DIA1) or Aeolian (dia6) scale degrees, as measured from its root. These scale degrees are most expected because they minimise interval rarity. Therefore, certain TTPCs are labelled "Ionian" or "Aeolian" if they meet these expectations, while others are labelled "flat-degree" or "sharp-degree", depending on whether the Ionian-centric or Aeolian-centric expectations are denied due to flattening or sharpening. If the non-tonic(ised) triad is both minor and has a "flat degree", it is negatively-affected for two independent reasons. Similarly, if it is both major and has a "sharp degree", it is positively-affected for two independent reasons. In such cases, I hear the affect (positive or negative) as being considerably more marked than if there was only one reason for the affect, such as triadic mode.

Table 1.17: twelve categories of TTPC

Category number	Category name	Type of mixture	TTPCs in category	Affect description for more tonicised triad (i.e. affective state of TTPC when at rest)	Affect description for less tonicised triad
1	Flat-degree mXm	P	m1m, m3m, m8m, m10m, and some m6m	Negative due to minor triad	Negative due to minor triad <i>and</i> flat degree
2	Aeolian mXm	none	m0m, m5m, and m7m		Negative due to minor triad and simple due to meeting Aeolian-centric expectations
3	Sharp-degree mXm ²⁴	S	m2m, m4m, some m6m, m9m, and m11m		Negative due to minor triad but somewhat positive due to sharp degree
4	Flat-degree mXM	S	m1M, m4M, m6M, and m11M		Positive due to major triad but somewhat negative due to flat degree
5	Aeolian mXM	none	m3M, m8M, and m10M		Positive due to major triad and simple due to meeting Aeolian-centric expectations
6	Sharp-degree mXM ²⁵	P	m0M, m2M, m5M, m7M, and m9M		Positive due to major triad <i>and</i> sharp degree
7	Flat-degree MXm	P	M0m, M3m, M5m, M7m, M8m, M10m, and some M1m	Positive due to major triad	Negative due to minor triad <i>and</i> flat degree
8	Ionian MXm	none	M2m, M4m, M9m		Negative due to minor triad and simple due to meeting Ionian-centric expectations
9	Sharp-degree MXm	S	M1m, M6m, M11m		Negative due to minor triad but somewhat positive due to sharp degree
10	Flat-degree MXM	S	M1M, M3M, M6M, M8M, M10M		Positive due to major triad but somewhat negative due to flat degree
11	Ionian MXM	none	M0M, M5M, M7M		Positive due to major triad and simple due to meeting Ionian-centric expectations
12	Sharp-degree MXM	P	M2M, M4M, M9M, M11M		Positive due to major triad <i>and</i> sharp degree

²⁴ The chromatic TTPCs in this category are arguably more negative overall than the *Aeolian mXm* category above.

²⁵ This category is arguably more positive, overall, than *flat-degree MXm* TTPCs below, although not when at rest.

These situations of double-dosed affect in the non-tonicised triad generally arise through what Lehman (Lehman 2014) calls **P**-mixture, meaning an expected triad has had its mode altered by **P** transformation, i.e. its third is displaced by chromatic semitone. If a non-tonic(ised) triad is major and has a flat degree, I consider it positive, mitigated by a subtle negative, and if it is major and has a flat degree, I consider it positive, mitigated by a subtle negative. These situations of mitigated affect are, generally speaking, resultant from what Lehman calls **S**-mixture or SLIDE mixture. That is to say that non-tonic(ised) triad is related to its more expected counterpart (according to Ionian-centric or Aeolian-centric expectations) by SLIDE.²⁶

The mitigated affect is a kind of mixed message, giving a sense of paradox. Additionally, **S**-mixture, more so than the more traditional **P**-mixture, was rare until Schubert. It is therefore able to function as a style flag for Romantic music, twentieth-century styles involving triadic chromaticism, and stereotypically cinematic music.

The overall expressive potential of each TTPC is a product of four factors. The first factor relates to the information conveyed in Table 1.17 about triadic mode and scale degrees. These are the “intrinsic” elements of associativity in Lehman’s model of associativity of *absolute progressions* in film music. The second factor relates to mode implication: if they clearly outline a scalar mode, including its rarest interval, and being limited to the scale degrees of the mode, they may borrow the associations of that mode. For instance, m5M evokes the associations of Dorian (dia2), M10M and M7M evoke the associations of Mixolydian (DIA5), m10m and m1M evoke the associations of Phrygian (dia3), and so on. The third factor is the metaphorical factor of container size, discussed in section 1.5.3. The final factor is any associations the TTPC may have accrued through specific uses, such as Wagner’s use of m8m in his leitmotif for the evil, magical “Tarnhelm”. These are the “extrinsic” elements of associativity in Lehman’s model.

Finally, I argue that the expressive potential of harmonic progressions comprising multiple TTPCs is a product of three main factors. The first factor is affective and associative information resulting from its TTPC content. The second factor involves the image schemata discussed in section 1.5.3, especially PATH-GOAL. The third factor involves associations that the whole progression (or large sections of it) may have accrued, relating to allusion to a specific piece, stylistic allusion, or topic.

²⁶ Table 1.14 (page 84) provides a good reference for understanding **S**-mixture and **P**-mixture. If an expected triad is replaced by the one that appears above it or below it in this table, (borrowed from the parallel major or minor key), **S**-mixture or **P**-mixture has occurred.

Chapter 1 has introduced and discussed a wide range of selected concepts from narratology, music theory, semiotics, and metaphor theory. As well as developing an elaborate new model of tonal space, I have explored how each of these disparate disciplines can interact in the analysis of film music. The next chapter will put this into practise as I analyse Desplat's expressive use of chords, modes, and various forms of chromaticism across the corpus of twenty films.

Chapter 2 Findings of the Corpus Study

This chapter applies the methodology outlined in Chapter 1 to the whole corpus of twenty Desplat film scores. In section 2.1, I will reveal the relative frequency of each TTPC in each of the twenty films, and discuss what factors might have motivated Desplat's choices. Section 2.2 explores Desplat's use of various chord types, and explores some of their associations. Section 2.3 discusses how Desplat expressively employs modes in his scores. It is divided into fifteen sections: one for each of the most commonly used modes in the corpus. Finally, in section 2.4, I investigate Desplat's expressive use of various forms of chromaticism, including bimodality, modal mixture, chromatic TTPCs, tonic-preserving CoS progressions, modulatory passages and linear chromaticism. The whole chapter provides an overview of Desplat's musical language, scrutinizing individual musical devices, and tracing any consistent metaphors or associations that give these devices expressive value within the context of filmic narratives.

2.1 TTPC content in the corpus films

This section partly addresses research question 2a: "What chords, scales, and harmonic progressions does Desplat typically employ in the twenty scores in the corpus?" TTPCs were counted in the corpus films, so that the scores could be compared to one another and to a corpus-wide norm, in terms of their TTPC content. The findings are charted Figure 2.1 through Figure 2.7. The charts show relative, not absolute frequency, so that scores with higher volumes of music (such as the four adventure films) do not unduly skew the statistics. In all seven graphs, the films (in the horizontal axis) are grouped according the basic genre categories shown in Table 0.1, so that comparisons can be made within and between these categories.

Figure 2.1 graphs relative frequency data for all forty-eight TTPCs across all twenty films, providing a broad perspective on how common each TTPC is per film, per film genre and across the corpus. It is noteworthy how different the scores are from one another in terms of their TTPC profile, even within the genre categories. This shows that Desplat varies his harmonic approach considerably to reflect the expressive and aesthetic needs of each film. Only a few TTPCs approach the status of being ubiquitous across the corpus and therefore pillars of Desplat's harmonic tendencies. These include m8M, m5m, and to a lesser extent, m1M. Interestingly, all of these include $\flat\hat{6}$ in the less

tonicised chord (if the more tonicised triad is considered to be *i*), which may highlight the importance of $\flat\hat{6}$ to Desplat as an alternative leading-tone to $\sharp\hat{7}$ in minor contexts.

T*TPCs based on root motion by P4/P5 are also frequent, as they are in most tonal music. These include M5M, m7m, M7M, and m7M, however, the last two are used rather selectively. M7M is almost completely absent from the four thrillers (shown at the right of the graph), and from other films with a mostly dark tone, such as *De battre mon cœur s'est arrêté*, *Harry Potter VIII*, and *Godzilla*. This is probably because its extreme familiarity and positive affect are of little utility in these films that focus on negative emotional states, especially unease.¹ The other frequent but selectively used T*TPC is m7M. Its associations are similar to those of the mode it strongly implies – harmonic minor (hmin1) – which is discussed in section 2.3.3. The two Wes Anderson film scores are rich in a variety of fifth progressions, including m7M, as is discussed in section 3.2.1.

Figure 2.1 also reveals that m0m and M0M are common in the corpus. These indicate a CoS transformation that does not change the triadic pitches (e.g. C Aeolian \Rightarrow C Phrygian) or a change to the added tones or bass note of a chord (e.g. V \Rightarrow V⁷ or *i* \Rightarrow *i*⁶). A high frequency of m0m and/or M0M indicates a high frequency of harmonic stasis. *Birth* and the four thrillers are particularly noteworthy for their frequent harmonic stasis. Further discussion of tonic-preserving CoS transformations is provided in section 2.4.5.

In Figure 2.1, T*TPCs are grouped vertically into the twelve categories specified in Table 1.17, so that the most positively-valenced category (*sharp-degree MXM*) is at the top of the graph, and the most negatively-valenced (*flat-degree mxm*) is at the bottom. Dotted diagonal lines separate out four broader categories, which from top to bottom are: Major Schritte (MXM), Major Wechseln (Mxm), Minor Wechseln (mXM), and Minor Schritte (mxm). These lines act as a guide to indicate what proportion of the T*TPCs in a film fall into each of these categories. For instance, in the column for *Birth* (at the left of the graph), one can see that over 60% of the T*TPCs are Major Schritte. By contrast, in half of the scores, fewer than 20% of the T*TPCs are Major Schritte. The thrillers feature particularly low numbers of Major Schritte and high numbers of Minor Schritte.

¹ M7M usually occurs in Ionian mode (DIA1), the associations of which are discussed in section 2.3.9.

Within the four adventure films, Desplat appears to be sensitive to the age of his audience in the degree to which he employs Minor Schritte versus Major Schritte. *Rise of the Guardians* – the film most suitable for young children – has the most Major Schritte and the fewest Minor Schritte of the four adventure films. At the other end of the spectrum, *Godzilla* – a Blockbuster with a wide audience rather than a specifically young audience – has the most Minor Schritte and the fewest Major Schritte. *Harry Potter III* and *The Golden Compass* lie between these two extremes, with the latter being closer to *Rise of the Guardians* in the age of its audience and number of Major Schritte.

Overall, Minor Wechselsn (mXM) are more frequent than Major Wechselsn (MXm). A particularly common category of Minor Wechselsn is *sharp-degree mXM*, which is most pronounced in the two Wes Anderson comedies, with their large counts of m7M, m5M, and m2M. My assertion in Table 1.17 that the *flat-degree mXM* category is more negatively-valenced than *sharp-degree mXM* is consistent with its frequent use in serious dramas (biopics or romances) such as *Girl With A Pearl Earring*, *Philomena*, and *The Imitation Game*, and in thrillers such as *The Ghost Writer* and *Zero Dark Thirty*. Of particular importance in this category is m1M (to be discussed in section 2.3.6) and m11M (to be discussed in section 2.4.3.1).

The most negatively-valenced category of TTPC, the *flat-degree mxm*, are most frequent in *The Ghost Writer*, *Philomena*, and the two fantasy films, *Harry Potter VIII* and *The Golden Compass*. These are all films that plumb the depths of evil, corruption, and/or despair in some way. TTPCs with such extreme negative associations are not for every film, however; they are avoided altogether by the two Jaques Audiard films, for instance. This is not to say that these films do not deal with strongly negative emotions, but it does suggest that Desplat relies less on associative harmony in Audiard's films. The TTPCs m10m, m1m, and m8m are important in this category, and will be discussed in sections 2.3.6, 2.3.8, and 2.4.3.2, respectively.

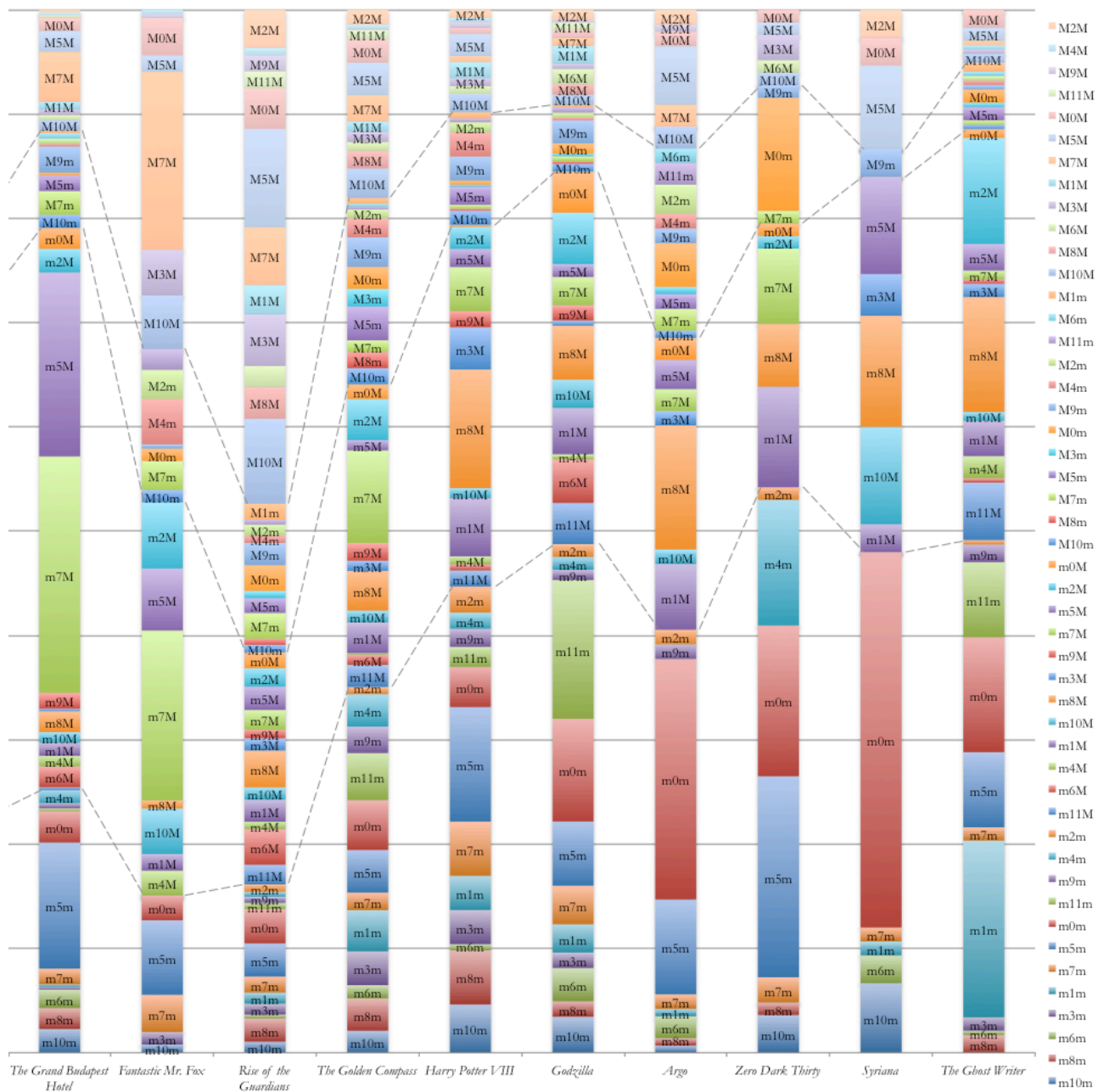
Figure 2.2 through Figure 2.7 present findings on one category of TTPC, where categories are based on the interval of root movement and whether it is a chromatic or diatonic progression. This offers a different range of insights than those offered by the grouping according to the twelve affect-based categories. Within each chart, the vertical

axis shows relative frequency, as a percentage of the total count of T*TPCs of any kind in the film.² The scale of the vertical axis differs from chart to chart, depending on the rarity of the category. The T*TPCs – shown in the depth axis – are arranged from most common (at the rear of the chart) to rarest (at the front). This arrangement highlights instances of unusually high frequency of a rarer T*TPC; such instances show up as one of the taller bars near the front of the chart. These charts reveal further insights about the use of T*TPCs in relation to film genre, for instance:

- Figure 2.4 reveals that the four adventure film scores are rich in chromatic mediant progressions, arguably because the extraordinary nature of the progressions is suited to the extraordinary and often other-worldly nature of the narrative content
- Figure 2.3 reveals that the two scores for Jacques Audiard films are richer in diatonic mediant progressions – especially M4m, M9m, and m8M – than they are in other T*TPC categories. One reason for this may be that these highly parsimonious and diatonic progressions are very ordinary, without an iota of otherness. This suits the gritty social realism of Audiard’s films. Additionally, these T*TPCs sound contemporary – suiting the settings of these films – because they can be style flags of contemporary popular styles.³
- Figure 2.3 reveals that m8M is common in all film genres except the Wes Anderson films and adventure films. Its lack of rare intervals or scale degrees means it is neither ideal for the eccentric comedy of Anderson’s films, nor for the exoticism and fantastical otherness that is rife in the Adventure films. It similarly lacks the child-like quality of fifth progressions that Desplat favours in Anderson films, as will be discussed in section 3.2.1.

² For example, if a film has 50 m8Ms, 30 m5ms, and 20 m3Ms, the relative frequency of m3M in that film is 20%.

³ See Capuzzo (2004) for a discussion of **L**, **R**, and **P** operations in popular music.



For instances in which a bar is significantly taller than those around it, the reason for this is usually that T*TPC in question is used in one or more of the score's leitmotifs. In Figure 2.4, for example, the high frequency of m4m in *Zero Dark Thirty* is because the main theme is based on m4m. The fact that m4m is rare in general but prevalent in *Zero Dark Thirty* is significant; it shows the extent to which Desplat was endowing the score with a harmonic “signature” or “fingerprint”. This helps to give the score its own harmonic identity, quite apart from any consideration of why this T*TPC was chosen for this score. Other such “harmonic signatures” can be seen in the prominent use of:

- m7M and m5M in *Grand Budapest Hotel* (Figure 2.2)
- M7M and m7M in *Fantastic Mr. Fox* (Figure 2.2)
- m4M in *The Imitation Game* (Figure 2.4)
- m8m in *Philomena* (Figure 2.4)
- M2M in *The Painted Veil* (Figure 2.6)
- M10M in *Rise of the Guardians* (Figure 2.6)
- m11m in *Godzilla* (Figure 2.7)
- m11M in *Girl with a Pearl Earring* (Figure 2.7)
- m1m in *The Ghost Writer* (Figure 2.7)

Readers may well find further insights in the graphs in this section. However, there is probably more benefit in looking at the T*TPCs in their specific narrative and musical contexts, which I will do in the remainder of this chapter. The usefulness of the quantitative approach is mostly that it establishes a grand perspective regarding Desplat's use of T*TPCs, therefore highlighting differences of approach between films and film genres. The survey also highlighted areas of significance, guiding my decisions about which T*TPCs to focus on in my analyses. In the majority of cases, these T*TPCs are articulated through pure major and minor triads, however, additional pitches such as sevenths and ninths are often added. In the next section I will explore some of the associations of the various chord types that Desplat employs in his scores.

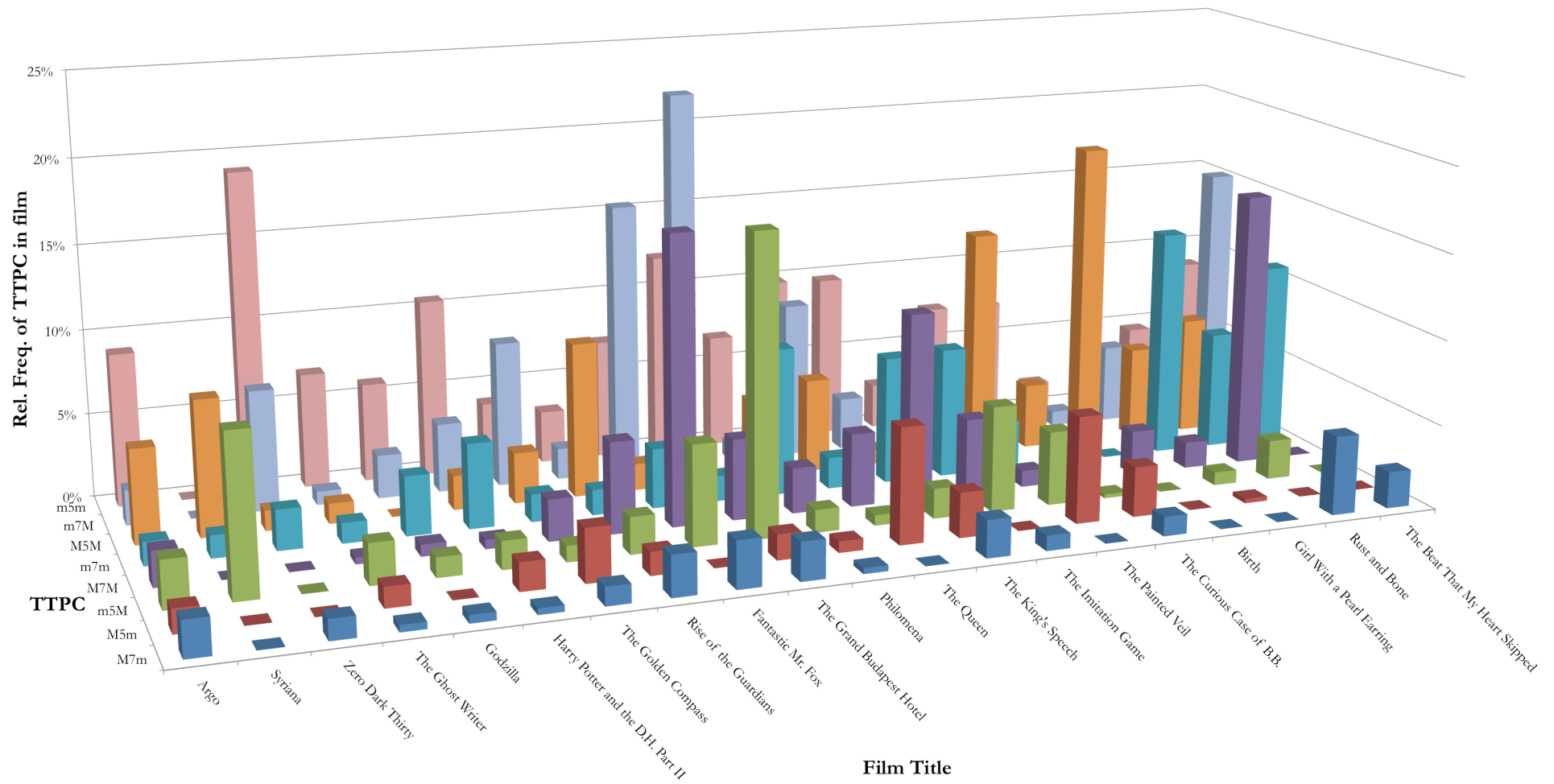


Figure 2.2: Relative frequency of fifth TTPCs in the corpus

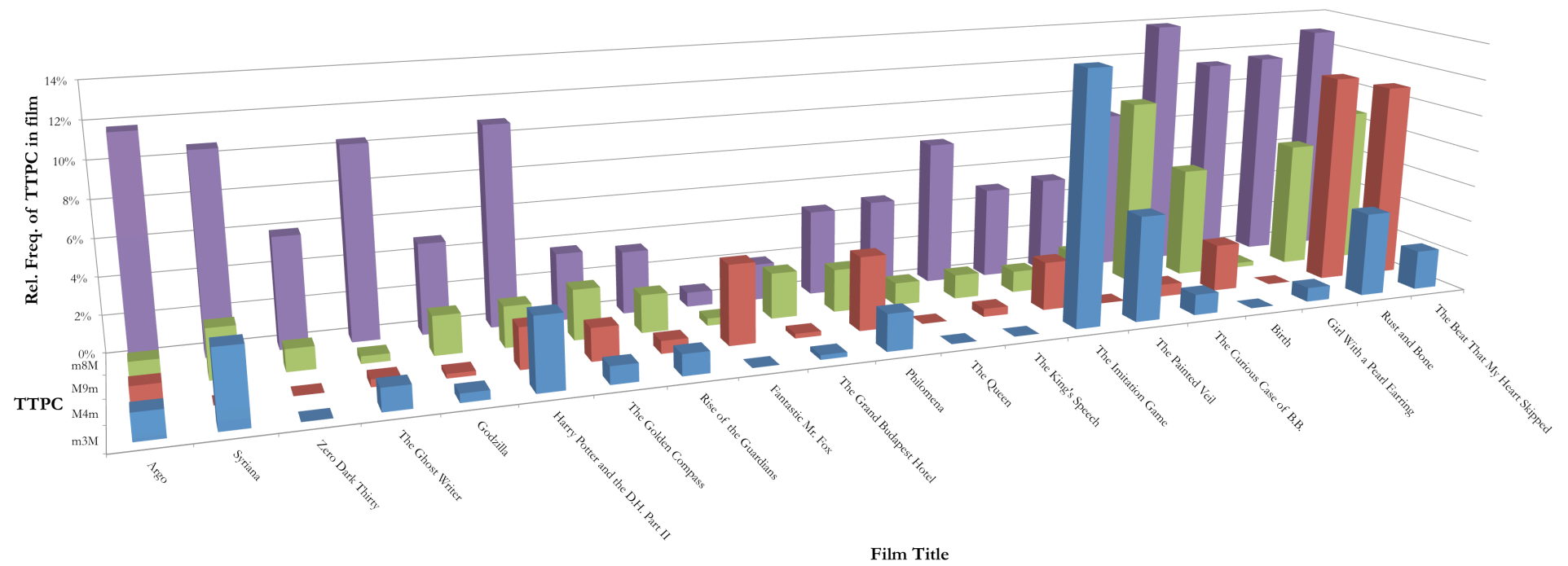


Figure 2.3: Relative frequency of diatonic mediant TTPCs in the corpus

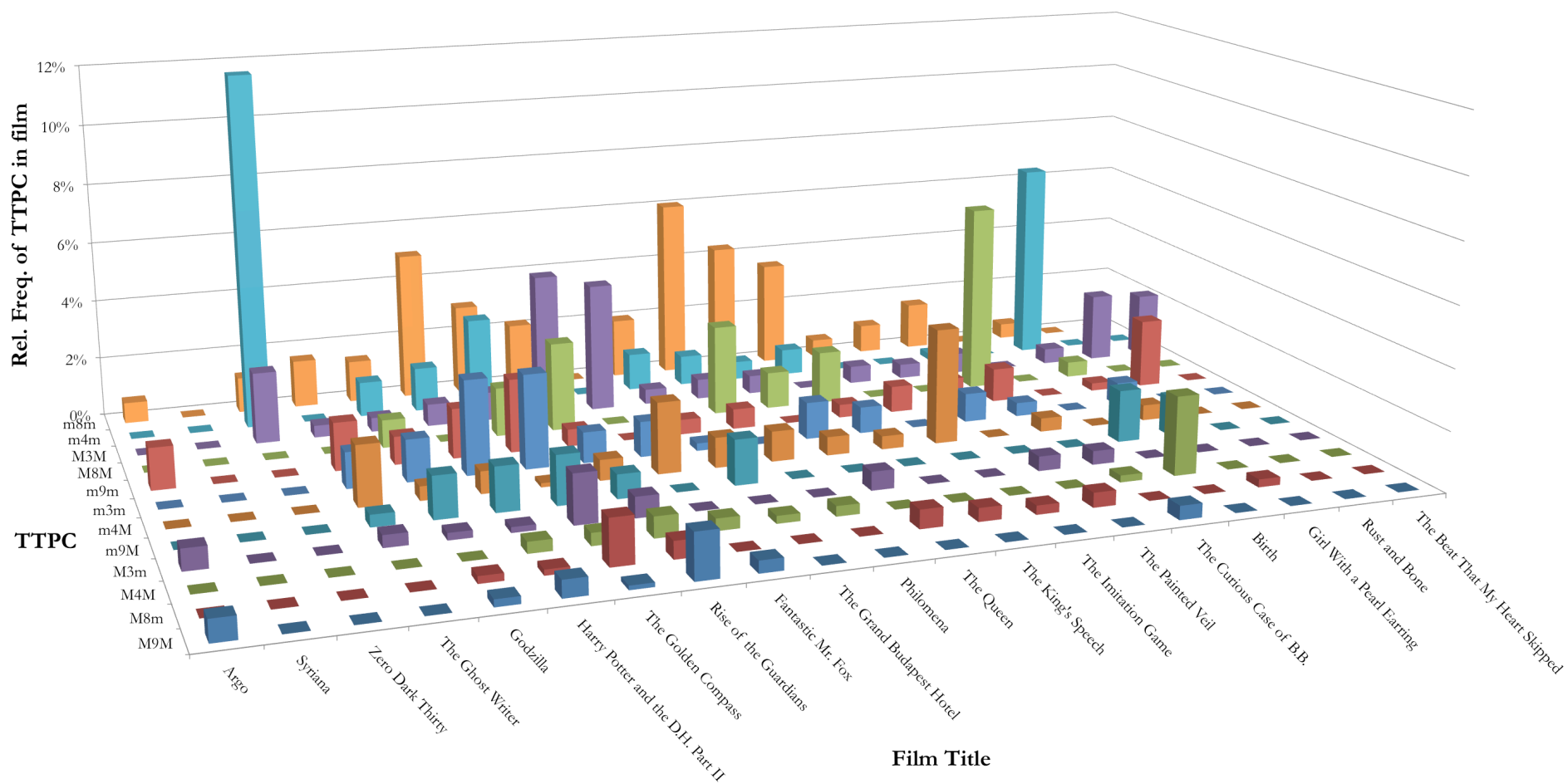


Figure 2.4: Relative frequency of chromatic median TTPCs in the corpus

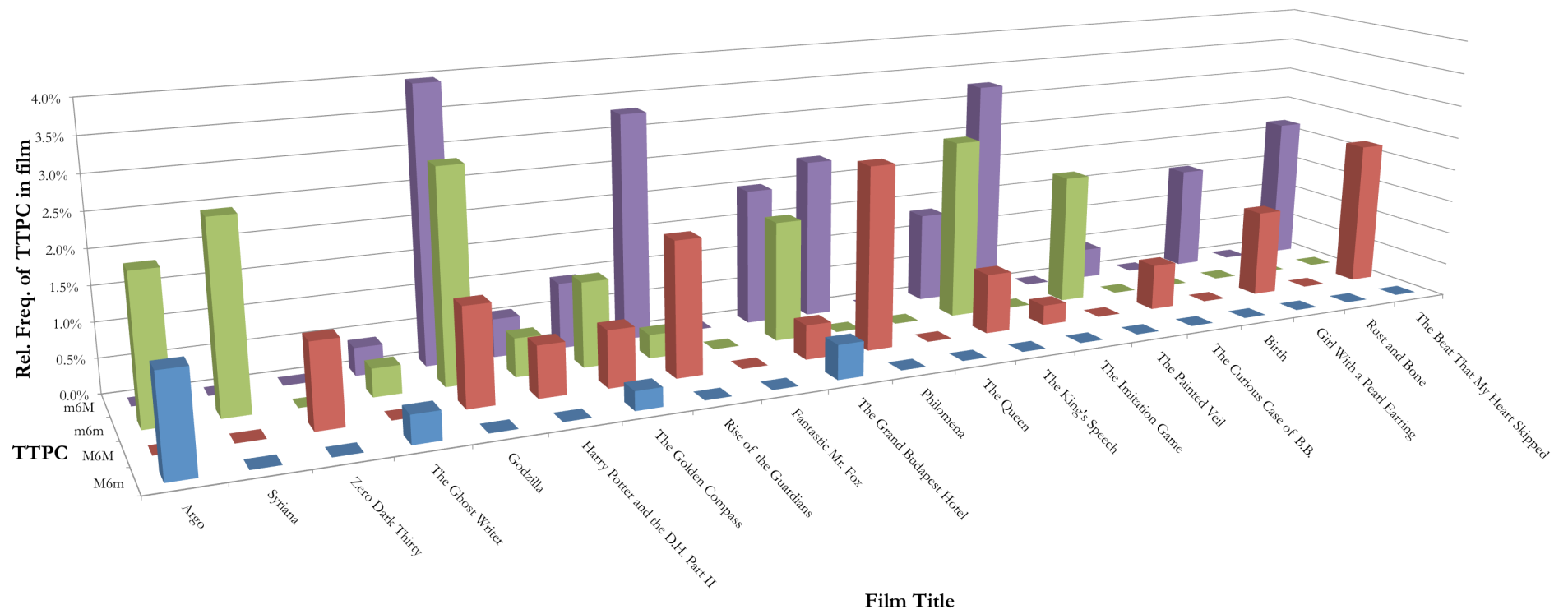


Figure 2.5: Relative frequency of tritonal TTPCs in the corpus

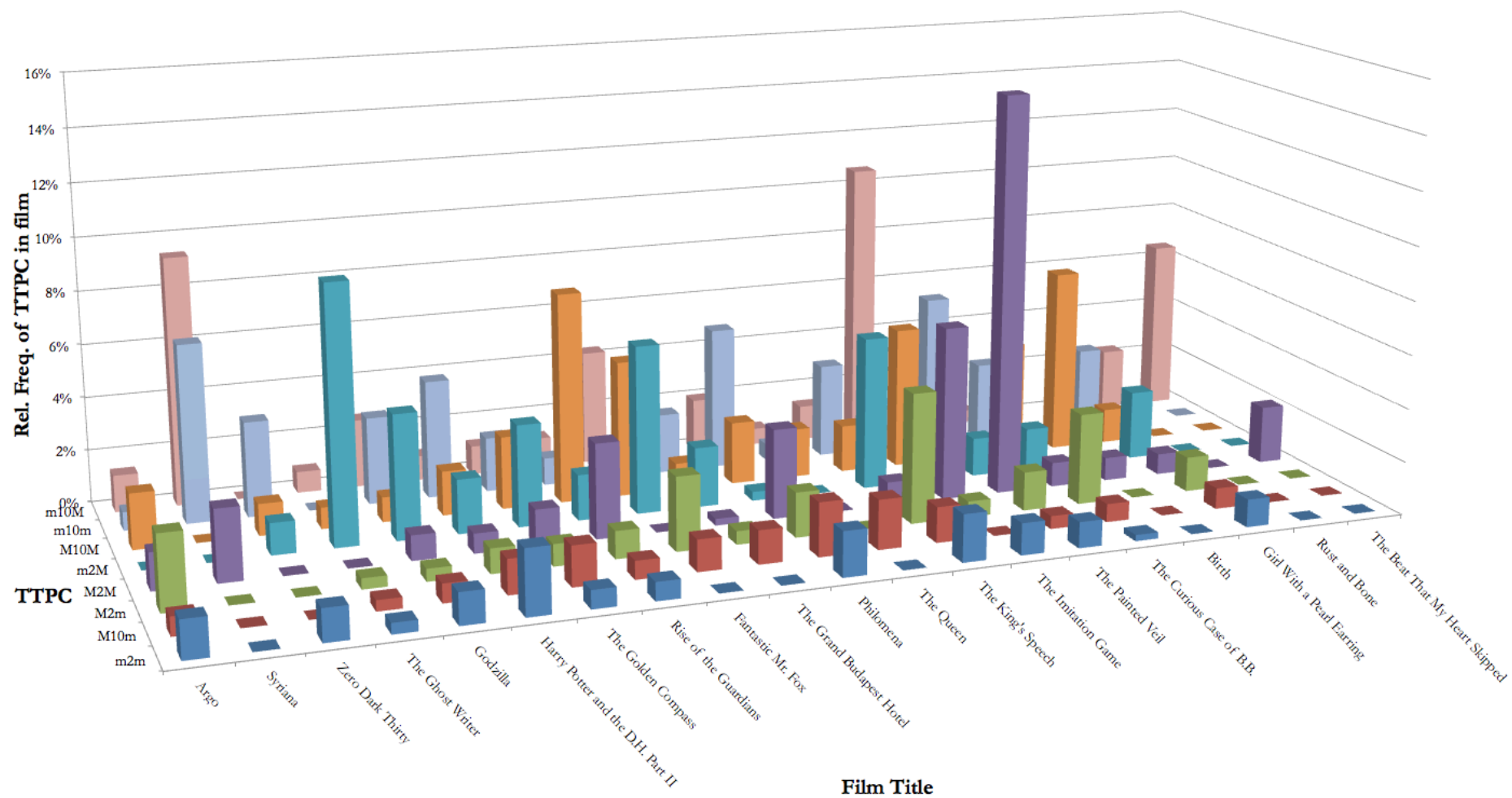


Figure 2.6: Relative frequency of whole-tone TTTPCs in the corpus

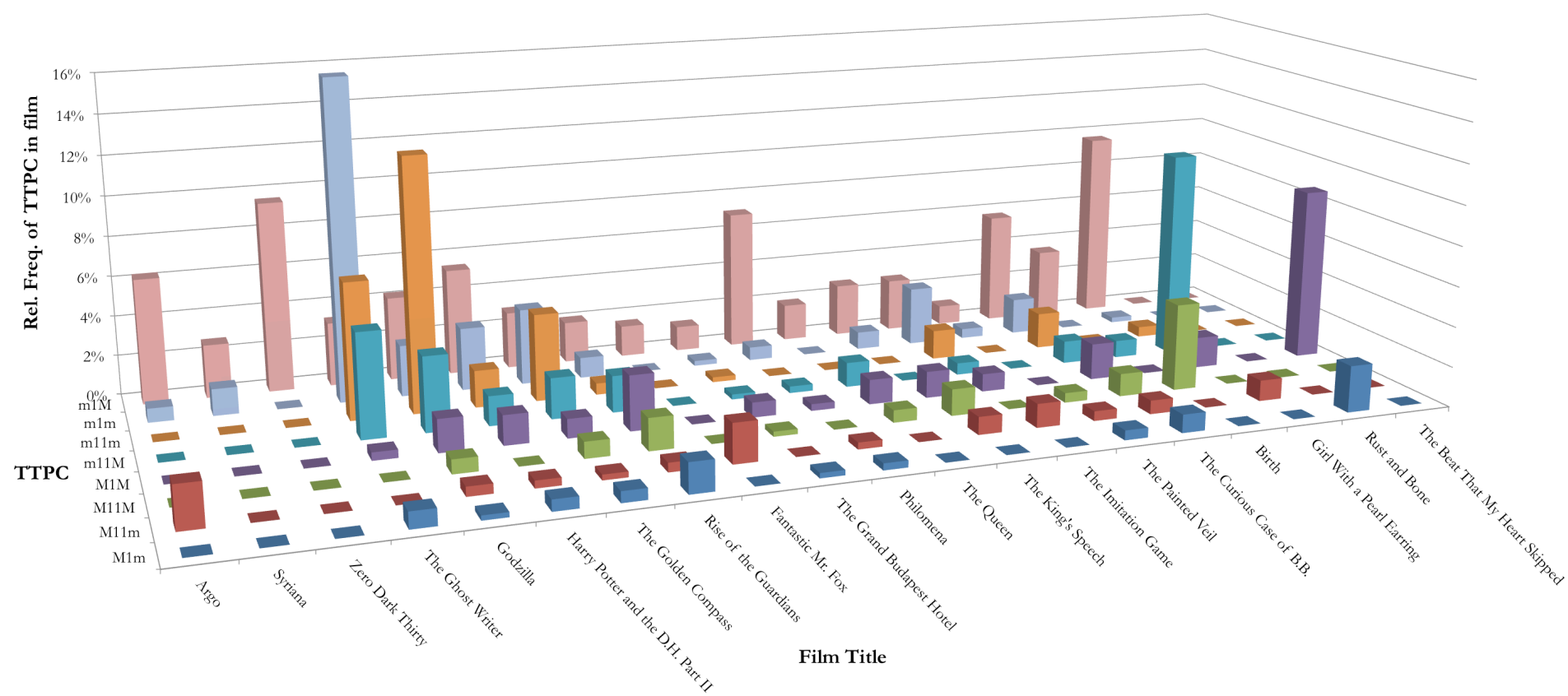


Figure 2.7: Relative frequency of semitone TTPCs in the corpus

2.2 Desplat's expressive use of chord types

The vast majority of chords used by Desplat are major and minor triads. As has been discussed, minor triads can function as topic flags for negative topics, especially when they outnumber major triads. Beyond this, rather than comparing the associations of these individual consonant triad types, it will be more fruitful to focus the analysis on the larger structural units of modes and TTPCs. A similar thing could be said of the minor seventh chords and major chords with added seconds. While these have a denser sound than pure triads, and sound less “final” because of their mild acoustic dissonance (M2/m7), I have not detected any consistent associations. This might be because they are no more distinctive than pure triads in terms of their interval rarity.

Major seventh chords, however, are more distinctive than major triads, because they contain the somewhat rare m2/M7 interval. They are also more inclined to function as style flags for specific styles that use them pervasively, such as jazz and French impressionism. The same could be said of major chords with an added sixth. (Section 3.1 provides a number of musical examples that include major seventh chords functioning as style flags for jazz in *The Curious Case of Benjamin Button*.) Dominant seventh chords or fully diminished seventh chords resolving to the tonic (major or minor) might function as a style flag for common practice period tonality, which may have some associative purpose to do with setting or characterisation, if this is corroborated by other factors. This may be why there is a relatively large number of dominant seventh chords in *The King's Speech*; the traditional harmony, with its upper-class, old-world associations, relates to the traditionalism of the royal characters. Fully diminished seventh chords are also agents of tension because of their rare d7/a2 interval.¹

Adding a ninth to a minor triad (and consequently adding a m2/M7 dissonance) is a relatively common strategy that Desplat employs to make a minor triad a little more dissonant. In thrillers such *The Ghost Writer*² and adventure films such as *Godzilla*,³ the

¹ For an example of a diminished seventh chord functioning to convey both traditionalism and tension in *The King's Speech*, see bar 8 of Figure 4.11.

² See “In the Woods”, at 1:24:06.

³ See, “Inside the Mines”, at 0:05:21.

minor triad with an added ninth is often used in tense scenes, to enhance a sense of danger, or similar. In a tender narrative context, perhaps with soft strings playing in high register, the dissonance can add poignancy. It tends to be used in this way in *Girl With A Pearl Earring* and other period dramas, as in the cue “The Master Is Painting” (Figure 2.8). This excerpt also illustrates a common practice in regard to added tones: they are often created by pedal tones that are consonant to only some of the triads played over them. Here, the E pedal in the violins (from bar 8) is an added ninth to D min (the tonic triad), but is consonant with A min and A maj. This is a common strategy throughout contemporary film scoring, and is perhaps popular, in part, because pedal tones create continuity, mitigating the discontinuity of cutting.

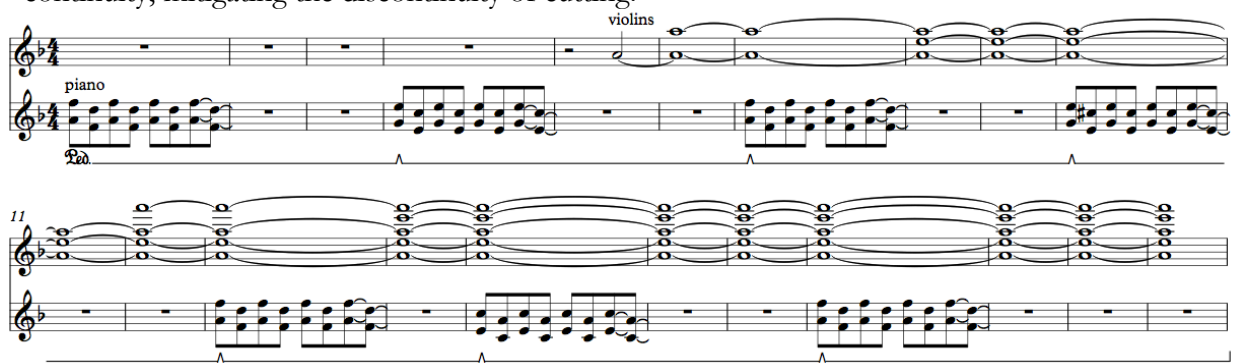


Figure 2.8: opening of "The Master Is Painting" from *Girl With A Pearl Earring* (0:14:25)

In section 1.4.4 I noted that very dissonant chord types often employ both acoustic dissonance and rare tonal interval classes. A prime tetrachord example of this is the minor-major-seventh chord, which takes its dissonance from both acoustic dissonance (ic1 on root and seventh) and a rare tonal interval class (d4/A5 between minor third and seventh). Cooper (2005, 39) writes that minor-major-seventh chords are “suggestive of a threatening or sinister atmosphere” in the film scores of Bernard Herrmann, as early as *The Ghost and Mrs Muir* (1947) and in his later collaborations with Alfred Hitchcock. Royal S. Brown (1994, 151), citing its use in *Psycho*, dubbed it the “Hitchcock chord”. This misleadingly implies uniqueness to the Hitchcock films, but the minor-major-seventh chord can nevertheless function as a topic flag for what I would call *Herrmann-influenced suspense*. One interesting application of the minor-major-seventh chord, as i^{M7} in melodic minor ascending (mmin1), will be discussed in section 2.3.4.

Open fifth sonorities are affectively neutral, due to their modal neutrality, and this is their appeal: sometimes a film composer may not wish to convey an obvious affect. If they function as topic flags, it will always heavily reliant on corroboration from other factors;

for instance, played loudly in brass in an action cue they seem to convey masculinity and unemotional brute force. The same could be said of a suspended second chord (e.g. C-as-root, D, G), which is like an open fifth in its modal neutrality, but is a somewhat fuller, less bare sound, containing a mild acoustic dissonance. A prominent example of this chord type is in the cue “Flight to the Compound” (0:53:19) in *Zero Dark Thirty*. American soldiers are being flown to Osama Bin Laden’s compound, where they will assassinate him. The chord only contains non-modal scale degrees $\{\hat{1}, \hat{2}, \hat{5}\}$, which have no connotations of affect, and this seems to relate to the soldier’s steely resolve. The M2 dissonance adds an element of aggression. The placement of the chord on relatively strong beats of the bar (1 and 3) gives it a deliberate, unwavering quality, while the use of trombones evokes the military associations of brass as well as the masculine associations of low pitch register. In sum, the chord characterizes the soldiers as macho, dogged and deadly.

The half-diminished seventh chord is another important feature of Desplat’s harmonic language, and he seems to favour this chord type to a greater extent than many other contemporary film composers do. They can function as style flags for styles including jazz, late romanticism, and French impressionism. Schneller (2014) writes,

In the nineteenth century, it acquired connotations of romance (e.g., Wagner's *Tristan*, Liszt's "Liebestraum") which established the sonority as a musical symbol of love, longing, and pathos. It has been invoked in this capacity by numerous film composers – including Williams' mentor Bernard Herrmann, whose score for *Vertigo* is stuffed to the gills with references to *Tristan*.

Longing and pathos are associations of half-diminished seventh chords that Desplat draws on almost every time he uses it, and love somewhat less consistently. Moreover, its ability to function as a style flag for styles of bygone eras probably explains why he reserves it mostly for period films, and/or moments of nostalgia. The name “half-diminished seventh chord” is something of a misnomer in terms of Desplat’s use of the chord, in that he usually uses it as a minor subdominant chord with an added sixth (iv^{add6}), which is often in second inversion, over a tonic pedal (iv_4^{6add6}). It is often treated interchangeably with iv or iv_4^6 as a variant of these. I discuss the use of iv^{add6} in Aeolian (dia6) contexts in section 2.3.1.

The use of iv^{add6} in major contexts is more distinctive, because the $b\hat{6}$ is *dynamically* unexpected in such contexts as well as schematically unexpected. According to Tagg and Clarida (2003, 195), half-diminished seventh chords in a major context “offset the general delight of their tonal surroundings and heighten the music's dramatic value,

adding emotional ‘depth’.” One of the most emphatic uses of this is in *Harry Potter VIII*, in the cue “A New Beginning”, after Harry decides to destroy the elder wand (which would have made him invincible) to prevent it from returning into the wrong hands. He holds the hands of his two close friends, in a gesture that suggests that love and friendship are his priorities. This is accompanied by a $I \Leftrightarrow iv_4^{6add6}$ oscillation (M5m), which in this narrative context is suggestive of love, nostalgia, and rest after the end of a prolonged conflict. Aside from the epilogue, this scene is the ending of an epic eight-film, seven-book saga which some young fans had been following for half of their lives when the film was released. It is therefore appropriate that Desplat closes the saga with the same emotion-laden cadence that Wagner used to close two of his own sagas.⁴ My reasoning for saying that the progression evokes “rest” involves the positive associations of the major triad, in combination with two metaphors: CLOSURE IN NARRATIVE IS CLOSURE IN MUSIC and REST IS MAGNETIC TONIC. (The strong melodic attractions $b\hat{6} \Rightarrow \hat{5}$ and $\hat{2} \Rightarrow b\hat{3}$ are what provide a strong attraction to the tonic, as well as the tonic pedal.)

Aside from using it as a subdominant chord with added sixth, Desplat also occasionally uses the half-diminished seventh in chromatic, jazz-influenced passages, often with additional chordal extensions. Two such passages in the corpus films – both played by *espressivo* strings – express morally dubious female longing.⁵ One is in *The Golden Compass*, in the cue “Mother” (Figure 2.9), in which Mrs Coulter embraces Lyra, after revealing that she is her mother. This is morally dubious in that Mrs Coulter is also in charge of an organisation that kidnaps children, and has been deceitful, controlling, and possessive towards Lyra throughout the film. Desplat accompanies this with a melody accompanied by chromatically planing⁶ diminished triads, which in combination with the melody results in half-diminished seventh chords and other extended chords found in jazz.

⁴ Lehman (2013a) points out that the endings of *Tristan* and *Götterdämmerung* both feature the $iv_4^{6add6} \Rightarrow I$ cadence.

⁵ Alex North employed a jazz-influenced idiom in his score for *A Streetcar Named Desire* (1947), to emphasise sensuality in certain moments, as discussed by Davison (2009, 97). Desplat has acknowledged North as one of his influences (Goldwasser 2006).

⁶ For a discussion of this technique, see section 2.4.7.

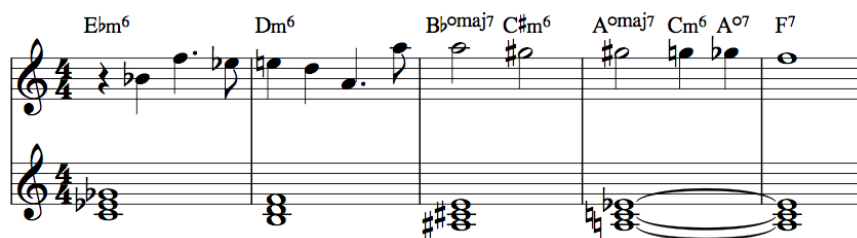


Figure 2.9: excerpt from "Mother", from *The Golden Compass* (1:27:40)

The other example is from *The Painted Veil*, in “The Lovers” (Figure 2.10), which plays when Kitty is cheating on her new husband. Desplat accompanies a high, tender violin solo with a progression including three half-diminished seventh chord types, two of which have additional pitches added. The descent in this passage – both in register and in terms of flat-wards descent in CoS space – adds a sense of pathos, which is apt in that Kitty’s longing for romance is not ultimately fulfilled through this affair.

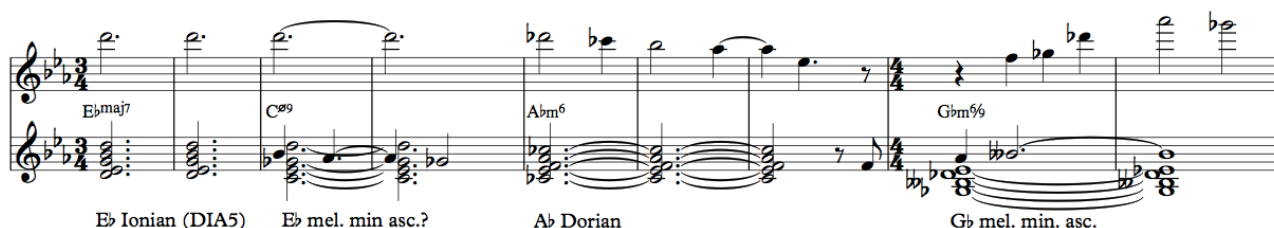


Figure 2.10: skeleton score of opening of "The Lovers", from *The Painted Veil* (0:20:25)

Finally, clusters are a category of chord type that Desplat uses at times, for tension. These dense chords, featuring multiple intervals of a second, could be divided into three categories: white-note clusters (subsets of the DIA scale type), atonal clusters (those including a [012] trichord tend towards atonality), and chromatic interval clusters (including at least one chromatic interval, but not a [012] trichord). Of these, the white-note clusters are the mildest in terms of dissonance, and the atonal clusters the most severe, all other things being equal. Often clusters accumulate pitches, gradually increasing the level of dissonance. For instance, in *Syriana*, many such accumulating clusters build a foreboding tension in “The Abduction” (0:57:50) and related cues. These are white-note clusters in the upper strings, on the first five scale degrees of B Aeolian. In *Rise of the Guardians*, an atonal accumulating cluster is exemplified in “Pitch at North Pole” (1:06:12). This chord starts as A maj, but becomes increasingly atonal as more pitches are added. The order of pitch additions is A, E, C#, Bb, Gb, Cb, G#, which is an octatonic subset until the G# is added, completing a [012] trichord on {G#, A, Bb}. This particular chord seems apt for its narrative moment, in which Pitch Black, the antagonist, seems to be about to triumph (with the last child ceasing to believe in the Guardians),

but does not. The positive affect of the A maj could be attributed to Pitch Black's delight at its anticipated triumph. It is given a sense of anticipation because the B \flat makes it sound like a dominant in D minor, and dominants anticipate resolution. Finally, the encroaching dissonance may be attributable to the emotions of Jack Frost, who is looking on in horror. This is but one example of how an atonal cluster can be interpreted for meaning.

Atonal clusters in general are most typically used in horror films. While there are no horror films in the corpus, the four adventure films all feature scenes that emulate the horror genre to some degree. *Harry Potter VIII* is a prime example of this. Films that remain closer to reality tend to use more modest levels of dissonance, such as the white-note clusters in *Syriana*.

To recap, Desplat mostly uses consonant triads and variants of these achieved through added tones, which sometimes result from pedal tones. Some chord types can function as style flags. Other expressively significant factors are the level of dissonance, and the modal implications of the chord. Chords and their expressive qualities are often best understood within their scalar contexts, and to that end, the next section is a substantial exploration of Desplat's use of modes.

2.3 Desplat's expressive use of modes

The purpose of this section is to share and discuss my findings about Desplat's expressive exploitation of the affective and associative qualities of various modes. Where relevant, I will also discuss CoTC transformations that occur within certain modes and serve to articulate the mode. This chapter is concerned with pure and strong examples of each mode, so excludes instances of bimodality and modal mixture, which are covered in sections 2.4.1 and 2.4.2, respectively. It is useful to establish the affective and associative qualities of each mode in its purest form, which then provides a basis from which more complex situations may be discussed.

A general finding – not a surprising one, but an important one – was that each mode is employed by Desplat for a *range* of expressive purposes, and there is a hierarchy of frequency within this range. For instance, Aeolian (dia6) was most frequently used in narrative contexts involving sadness, and was also used in contexts involving tension, war/conflict, mystery, romance, moral goodness, and urgency, approximately in that

order of frequency. These are not mutually exclusive; there is always more than one way in which music is being associative and communicative in each scene, and there is by no means a simple one-to-one relationship between a given mode-as-signifier and a given signified.

A second general finding was that modes with similar scale degree and tonal interval class content⁷ do indeed tend to have similar expressive functions. For instance, Ionian (DIA1) and Mixolydian (DIA5) have identical tonal interval class content and almost identical scale degree content, and both are associated with joy, humour, and fun. This suggests that the expressive qualities of a mode are partly produced by their component parts: scale degree and interval content. In other words, certain scale degrees and intervals, or combinations of these, can function as topic flags as well as whole modes. This in turn validates the “similarity space” functionality of CoS space. In particular, my findings about Desplat’s use of modes are consistent with the idea that flat scale degrees tend to flag negative topics, especially if in the tonic triad (as in $\flat\hat{3}$ or $\flat\hat{5}$). Additionally, certain scale degrees or combinations thereof emerged as being strongly associated with psychological tension, across a range of modes. These are generally tense by virtue of their creation of rare intervals, especially with members of the tonic triad, and with one another in the case of the combinations of scale degrees. Rare intervals are a form of dissonance even if they are not acoustic dissonances, and dissonance can function as a metaphor for psychological tension, as discussed in section 1.5.3. The four scale degrees that are semitonal neighbours to $\hat{1}$ and $\hat{5}$ – $\{\flat\hat{2}, \sharp\hat{4}, \flat\hat{6}, \natural\hat{7}\}$ – often create tension. If not through simultaneous acoustic dissonance with $\hat{1}$ and $\hat{5}$, the tension can arise through the ATTRACTION schema: their strong melodic attraction to $\hat{1}$ and $\hat{5}$ can be denied or delayed. It can also be understood in terms of rare intervals. Because they are relatively peripheral on the *line of fifths*, where $\hat{1}$ is central, they have a greater propensity to create rare intervals with other scale degrees. The propensity of $\sharp\hat{4}$ to express tension is significantly increased when it is combined with $\flat\hat{3}$, creating tension via the A2/d7 interval.

⁷ For an explanation of “tonal interval class”, see section 1.4.1, and for a discussion of its application to scales, see section 1.4.5.

Additionally, the two most common hyper-minor and hyper-major scale degrees – $\flat\hat{2}$ and $\sharp\hat{4}$ – readily function as topic flags for exoticist topics or a more general sense of otherness, because of their relatively rarity in Western music. Interestingly, ten of Desplat’s twenty-one most commonly used modes can potentially function as topic flags for Hungarian-Gypsy music, sometimes called *verbunkos*.⁸ Of course, they only *specifically* connote Hungary and Romani (or similar) when musically and/or narratively corroborated. This is mostly of relevance to *Grand Budapest Hotel* (set in a fictional country partly based on Hungary) and *The Golden Compass* (in which a fictional race, the *Gyptians* is loosely based on the Romani). However, Desplat arguably exploits these modes for their historical association with otherness, while usually steering away from the musical specifics that will signal any specific ethno-geographical associations.⁹

Table 2.1 shows seven scale degrees and scale degree combinations that are frequently associated with tension in the corpus. These all involve at least one scale degree with a strong melodic attraction¹⁰ to $\hat{1}$ and $\hat{5}$, by virtue of being semitonal neighbour to one of these. Such melodic attractions can create tension in their unresolved state, which may explain why the scale degrees and combinations thereof in Table 2.1 have become topic flags for a very broad “tension” topic. These often work together with those musical parameters metaphorically linked to psychological tension in section 1.5.3: loud dynamics, dissonance, high register, and distorted timbre. The number of these tension flags occurring in a mode appears to be correlated with the mode’s propensity to be used in tense narrative contexts. For instance, chromatic Lydian inverse (cli1) is almost always used in tense narrative situations and has six of the seven tension topic flags.

⁸ This is based on a study by Hungarian music theorist Lajos Bárdos (“Die Volksmusikalischen Tonleitern bei Liszt”), cited by musicologist Shay Loya (2011, 54–55). Bárdos listed thirteen modes that Franz Liszt borrowed from Hungarian-Gypsy music. He demonstrated that these were used in actual folk music, and that Béla Bartók and Zoltán Kodály also used them. The thirteen modes, in my nomenclature, are Lydian dominant (MMIN4), Mixolydian $\flat 6$ (MMIN5), Lydian $\flat 3$ (hmaj4), Harmonic major (HMAJ1), Romanian (hmin4), Phrygian dominant (HMIN5), Neapolitan minor (nmin1), Hungarian gypsy (nmin4), Hungarian minor (gyp4), chromatic Lydian inverse (cli1), Lydian $\sharp 2$ (HMIN6), Ionian $\sharp 2$ (NMIN6), and double harmonic major (GYP1). All but the last three are among Desplat’s twenty-one most commonly used modes, presented in Figure 1.3.

⁹ This relates to the Locke quotation on page 99.

¹⁰ See the discussion of tonal attraction in section 1.5.3.

Table 2.1: Scale degrees and combinations thereof which tend to function as topic flags for tension

Mode	$\flat\hat{6}$	$\{\flat\hat{7}, \hat{1}, \flat\hat{3}\}$	$\flat\hat{2}$	$\{\flat\hat{3}, \#4, \hat{5}\}$	$\{\#4, \hat{5}, \flat\hat{6}\}$	$\{\flat\hat{7}, \hat{1}, \flat\hat{2}\}$	$\#/\flat\hat{5}$
Chromatic Lydian inverse (cli1)	✓	✓	✓	✓	✓	✓	
Whole-half diminished (oct2)	✓	✓		✓			✓
Hungarian minor (gyp4)	✓	✓		✓	✓		
Neapolitan minor (nmin1)	✓	✓	✓			✓	
Locrian (dia7)	✓		✓				✓
Hungarian gypsy (nmin4)	✓			✓	✓		
Phrygian (dia3)	✓		✓				
Romanian (hmin4)				✓			
Phrygian natural 6 (mmin2)			✓				
Phrygian $\flat 4$ (hmaj3)	✓		✓				
Lydian $\flat 3$ (hmaj4)		✓		✓			
Half-whole diminished (oct1 or OCT1)			✓	✓			
Harmonic minor (hmin1)	✓	✓					
Melodic minor ascending (mmin1)		✓					
Aeolian (dia6)	✓						
Whole-tone scale (WT1)							✓

In the following sections, I will take a closer look at modes containing $\{\hat{1}, \hat{2}, \flat\hat{3}, \hat{5}\}$, then modes containing $\{\hat{1}, \flat\hat{2}, \flat\hat{3}, \hat{5}\}$, then those containing $\{\hat{1}, \hat{2}, \hat{3}, \hat{5}\}$, and finally at a mode containing $\flat\hat{5}$.

2.3.1 Uses of Aeolian mode (dia6)

Aeolian mode (dia6, { $\hat{1} \hat{2} \flat\hat{3} \hat{4} \hat{5} \flat\hat{6} \flat\hat{7}$ }) is the most common mode in the corpus, and the most expected mode if the tonic triad is minor, as discussed in section 1.4.4, so it has no strong signifiers of otherness. It also features three flat scale degrees, which can function as topic flags for negative topics, as discussed in section 1.5.4. Combining both of these traits, Aeolian is ideal for expressing moderately negative emotional states where there is no emphasis on otherness. In the corpus, I have found Aeolian to be used in narrative contexts involving sadness, moderate tension, solemn depictions of war (see Table 2.4 on page 150 for examples), and romance with melancholic undertones (see Table 2.5 on page 151). Table 2.2 provides several unambiguous examples of Desplat using Aeolian (dia6) to express sadness. The chords $\flat VI$ and iv are prominent in all of these examples, suggesting that $\flat\hat{6}$ is an important component of Desplat's musical expressions of sadness.

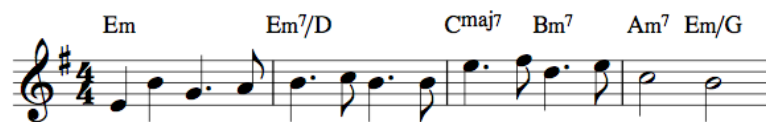


Figure 2.11: "Alan defeated" theme, as heard at 1:42:37 of *The Imitation Game*



Figure 2.12: Anthony/Michael's theme, as heard at 1:18:51 of *Philomena*



Figure 2.13: Mr Button's theme, from *The Curious Case of Benjamin Button*

Table 2.2: Examples of Aeolian (dia6) in sad narrative contexts

Film	Time(s)	Agent(s) to whom sadness is attributed	Narrative context	Means of mode prolongation ¹¹
<i>The Imitation Game</i>	1:02:29	Alan, CN ¹²	Adult Alan Turing remembers the day when his younger self went to give Christopher a love note, but Christopher was absent from school, having become fatally ill.	“Alan defeated theme” (Figure 2.11) on static i, with <i>ostinati</i> .
<i>The Imitation Game</i>	1:36:47	Young Alan, CN	Young Alan is informed that Christopher is dead.	Oscillation of: i ⁶ m8M bVI
<i>The Imitation Game</i>	1:42:37	Alan, CN	Alan is a lonely wreck, having been given chemical castration drugs to avoid imprisonment for his homosexuality. Joan comforts him by reminding him of the catastrophe-preventing extent of his achievement in breaking the Enigma code.	Descending bass line with some step progressions, as per Figure 2.11: i m0m i ² m8M bVIM ⁷ m1M v ⁷ m10m iv ⁷ m7m i ⁶
<i>The King’s Speech</i>	0:52:25	Bertie, CN	Bertie, telling Lionel of suppressed possible sources of anxiety, speaks of the premature death of his “sweet” brother, John.	Stepwise melody over higher tonic pedal that starts by descending from i ¹ to b3.
<i>The King’s Speech</i>	1:01:48	Lionel, Bertie, CN	Bertie insults and fires Lionel, his friend and speech therapist.	Oscillations of: i m0m i ^{sus4,2} iv ⁹ m2m v ⁷
<i>The King’s Speech</i>	1:12:23	Bertie, CN	After becoming King, Bertie weeps, lamenting his inadequacy, saying to his wife, “I’m not a King”.	Reprise of the passage above.
<i>Philomena</i>	1:18:51	Philomena, CN	Philomena learns that her son Anthony is buried at Roscrea Abbey in Ireland, and that his dying thoughts were with her. There is sadness, especially in the slow-moving strings, but the relatively fast <i>ostinato</i> also gives an undercurrent of urgency and excitement.	Anthony/Michael’s theme (Figure 2.12) provides <i>ostinato</i> during: i (long) m7m v ⁶ m1M bVI M2M bVIM ⁷ m10M i m7m v ⁷ m10m iv ⁷ m5m i m8M bVIM ⁷ M9m iv ⁷ m5m i (Descending bass line with some step progressions.)
<i>The Curious Case of Benjamin Button</i>		Benjamin, CN	Benjamin attends his father’s funeral.	m5m: see Figure 2.13, earlier this section.
<i>The Curious Case of Benjamin Button</i>	1:21:50	Benjamin, Captain Mike, CN	Captain Mike dies in Benjamin’s arms, after their tugboat rams a Nazi submarine.	Shimmering, pulsating texture on i ^{add4}
<i>The Curious Case of Benjamin Button</i>	“Loss theme” (Figure 3.8). See section 3.1.4 for details.			Oscillation of: i m5m iv ⁶

¹¹ The formatting used in this column, and also in the appendices, combines conventional Roman numeral notation with TTPC nomenclature. Figured roman numerals represent chords in chronological order, and each TTPC symbol represents the transformation between the chord function on either side of it.

¹² CN = the cinematic narrator

<i>The Curious Case of Benjamin Button</i>	1:41:12	CN	Benjamin drives his dying father to re-enact a nostalgic ritual: watching the sunrise over Lake Pontchartrain. His father dies as the sun rises.	G [#] Aeolian: i ⁷ m8M ^b VI M9m iv M9m ^b VI M9m iv m5m G [#] Dorian: i ⁷ m8M G [#] Aeolian: ^b VI ^{M7} M9m iv ⁷ M9m ^b VI M10M ^b VII ⁶ M10M ^b VI M9m iv ^{add6} m5m i ⁷ m8M ^b VI ^{add2} M9m iv M9m ^b VI M9m iv5 m5m i ⁷ m5m iv ⁶ m5m i (N.B. iv ⇔ ^b VI is prominent.)
<i>The Curious Case of Benjamin Button</i>	1:57:21	CN, Benjamin, Daisy	Benjamin visits Daisy in hospital after a car hits her. She knows her Ballet career is ruined.	B ^b Aeolian: i m8M ^b VI m3M iv m3M ^b VI m8M i m8M ^b VI M10M ^b VII m10M i ⁵
<i>The Curious Case of Benjamin Button</i>	1:57:21	Benjamin, then Elderly Daisy	Daisy asks Benjamin to stay out of her life. Elderly Daisy expresses regret about this.	B ^b Aeolian: i m8M ^b VI m3M iv m3M ^b VI m8M i m8M ^b VI M10M ^b VII m10M i ⁵
<i>Harry Potter VIII</i>	1:24:57	Hermione, Ron, Harry, CN	Harry farewells Ron and Hermione before leaving to surrender his life to Voldemort.	A Aeolian: i ⁶ m8M ^b VI M2M ^b VII ^{add2} m10M i
<i>Harry Potter VIII</i>	1:27:06	CN, Harry	Harry talks to ghosts of his parents and mentors, asking what it is like to die. A version of “Lily’s theme”.	C [#] Aeolian: i m7m ^v sus4 m0m v m10m iv m5m i m5m iv m5m i m8M ^b VI ⁵ m8M i m5m iv ⁶ m5m i m5m iv m5m i ⁹ m5m iv ⁶ m5m i ⁹ m5m iv ⁶ m5m i ⁹ m5m iv m5m i m8M ^b VI ^{M7} m3M iv ⁷ , add4 m5m i ⁹ m8M ^b VI ⁵ m8M i ⁹
<i>De rouille et d’os</i>	0:25:52	CN, Stéphanie	After having her legs amputated after an accident, Stéphanie lies in hospital, devastated.	Slow melody over tonic pedal
<i>Birth</i>	1:25:19	Anna, CN	Anna is photographed at her wedding, but struggles to smile, apparently lost in grief for her first husband. She wades into the ocean in her wedding dress, on the brink of suicide.	B Aeolian: i m5m iv ⁶ m5m i ⁶ m8M ^b VI m8M i ⁶ NB. the first tonic triad is sustained for over two minutes with a slow melody.
<i>Argo</i>	0:44:24	Tony, CN	Tony is regretful that he missed his son’s birthday.	Oscillation of: i m8M ^b VI ⁶

Aeolian can also be used in psychologically tense narrative contexts, by combining its negative associations with metaphors for tension and/or entrapment. The level of tension tends to be controlled by the linearity metaphors that Chattah correlates with psychological tension (see section 1.5.3). The sense of psychological entrapment is achieved through metaphors introduced in section 1.5.3: ENTRAPMENT IS MAGNETIC TONIC and/or ENTRAPMENT IS SMALL TONAL SPACE CONTAINER. Some Aeolian progressions that achieve these entrapment metaphors very effectively are $i \Leftrightarrow iv_4^6$ (m5m), $i \Leftrightarrow iv_4^{6add6}$ (m5m), and $i \Leftrightarrow bVI^6$ (m8M). In all three cases, the strong $b\hat{6} \Rightarrow \hat{5}$ melodic attraction is exploited along with a tonic pedal to magnetise the tonic triad, which is also negatively-affected due to its minor triadic mode. As with all musical metaphors, the metaphors become meaningful when corroborated by the narrative context, so we will look at some examples of this now in narrative contexts.

The King's Speech has an abundance of $i \Leftrightarrow iv_4^{6add6}$ progressions, which come to function as a *leitharmonie* for the intense anxiety that Bertie/King George VI feels in relation to public speaking, which exposes his paralysing stammer. The first substantial example is in the second part of the title cue, when Bertie waits anxiously to give his first radio broadcast in front of a crowded Wembley Stadium (0:02:50 and Figure 2.14). The music enters as the camera zooms to a close-up that emphasises the worried look on the prince's face. This implies that the passage expresses Bertie's interior processes as he listens to the radio broadcaster introducing his upcoming speech. The heavily magnetised tonic triad seems to represent the sense of Bertie being trapped: forced by duty into addressing the whole world, despite his terror of public speaking. A milder dissonance – the tonic with a suspended fourth and second – is also used in the passage and elsewhere in the film. This functions in the same way as the $i \Leftrightarrow iv_4^{6add6}$ and shares the $\hat{2} \Rightarrow b\hat{3}$ attraction towards the tonic, but it has a gentler character, due to its avoidance of both rare intervals and flat scale degrees. Most other instances of this leitharmonie in *The King's Speech* are of the hmin1-5-hmin4 variety (as opposed to dia6-5-dia2) and one of these instances will be discussed in relation to harmonic minor in section 2.3.3.

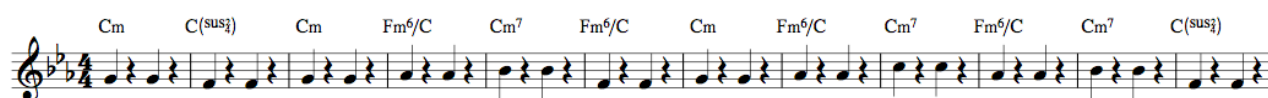


Figure 2.14: excerpt from "The King's Speech", from *The King's Speech* (0:02:50), played by strings with harp.

In *Harry Potter VIII*, $i \Leftrightarrow iv_4^{6add6}$ in what is predominantly Aeolian¹³ is used to express a corporate, wartime anxiety and literal entrapment: Hogwarts castle is beleaguered by Voldemort's forces. This progression first appears during preparations for battle in the cue "Panic Inside Hogwarts" (0:41:23). Later it receives a more prolonged treatment in "Battlefield" (0:55:44 and Figure 2.15). This music occurs during a scene on a large staircase in which the outnumbered Hogwarts forces are retreating back into the castle and Harry kisses Ginny, hoping it will not be their last. The sustained chords express a vulnerable kind of anxiety similar to that in *The King's Speech*, while the fast-moving ostinato emphasises the hurry of the fleeing crowds via the ACTIVITY LEVEL IS TEMPO metaphor. The size of the orchestral and choral forces is metaphorical for the large number of people whose emotional state is being expressed. Table 2.3 lists further examples of Desplat's employment of Aeolian (dia6) in moderately tense narrative contexts. In most of these scenes, the tension in the scene is a result of the anxious anticipation of some danger. Often the characters feeling tense are either discussing their situation in hushed tones, or repressing internal anxieties.

Figure 2.15: excerpt (minimal detail) of "Battlefield" from *Harry Potter VIII* (0:55:44)

¹³ C-as- $\flat\hat{7}$ is much more foregrounded than the C \sharp -as- $\flat\hat{7}$ in the last beat of the ostinato. Another bimodal combination of Aeolian (dia6) and harmonic minor (hmin1) involving this ostinato will be discussed in section 2.4.1.

Table 2.3: Examples of Aeolian (dia6) in moderately tense narrative contexts

Film	Time(s)	Agent(s) to whom tension is attributed ¹⁴	Narrative context	Means of mode prolongation
<i>De rouille et d'os</i>	1:00:41	Ali, CN	Ali talks with his new boss, Martial, about the ethically dubious work they are doing, installing surveillance cameras in stores and warehouses.	Sustained textures over i_4^6 , i_4^{6add2} , and i_2^5
<i>The Golden Compass</i>	1:06:03	Iorek, Scoreseby, CN	Iorek and Scoresby plan how to protect Lyra, who is endangered, about to visit evil King Ragnar.	Step progressions in C Aeolian: $bVII^7$ $m10M$ i $m10M$ $bVII$ $m10M$ i $m10M$ $bVII$ $M10M$ bVI $m1M$ v $m2m$ iv $m5m$ i
<i>The Golden Compass</i>	1:26:21	Lyra, CN	Mrs Coulter, a dangerous woman, starts to admit that she is Lyra's mother.	Ostinato over i_4^6
<i>Harry Potter VIII</i>	0:05:27	Harry, Hermione, Ron, CN	Harry, Hermione, and Ron, in conspiratorial tones, plan their dangerous mission to find a magical object (<i>horcrux</i>) in an underground vault.	$i \Leftrightarrow iv_4^6$
<i>The Ghost Writer</i>	1:56:40	CN	A note is passed to Ruth Lang as she delivers a speech at the book launch of the memoirs of her late husband. The note is from the ghost-writer, and shows that he knows her secret, which is a conspiracy of international significance.	Oscillation of i $m8M$ bVI_6^6
<i>Syriana</i>	0:15:01	CN, Barnes	Barnes drives at the CIA offices in Washington, where his superiors remove him as an operative in the Middle East in favour of a desk job. They are anxious about his recent memos about missile theft. He is anxious about his career's future and the direction the CIA is taking.	Ostinato over i
<i>Syriana</i>	0:57:00	Barnes, CN	Barnes shares a lift and later a restaurant with Prince Nasir, who he is about to assassinate on behalf of the CIA. The assassination is eventually thwarted, with Barnes himself being abducted.	Ostinato over i

¹⁴ "CN" = cinematic narrator.

Table 2.4: Examples of Aeolian (dia6) in solemn narrative contexts relating to war or similar

Film	Time(s)	Agent(s) to whom solemnity is attributed	Narrative context	Means of mode prolongation
<i>The King's Speech</i>	1:30:04	Logue family, CN	A radio broadcasts announces the onset of World War II, as Logue and his family listen, feeling the solemn gravitas of the moment.	Descending bass progression with major to minor third-substitution. G Aeolian: i m10M bVII M2M bVIM ⁷ M11m v ⁷ m7m i m7m v ⁶ M4m bIII ⁶ M2m iv ^{6add2} m10m v ⁶ m4m
<i>The Imitation Game</i>	1:31:26	Alan, CN	Cue: "End of War". Montage including real footage of World War II battles, and Alan's team of Enigma code-breakers in Britain. Alan reflects in VO on the Allied victories made possible (and allied casualties allowed) through the intelligence his team provided. Later (during the third Aeolian passage) there is footage of President Truman's victory broadcast: "This is a solemn but glorious hour".	Bb Aeolian passages are mostly m7m. i ⁶ m7m v m7m i ⁶ m7m v m7m i ⁶ m10M bVII ⁶ m10M i m7m v m7m i m7m v m7m i Second passage: i m7m v m7m i m7m v m7m i Third passage: i m7m v m7m i m10M bVII ⁶ m10M i m7m v m1M bVI M2M bVII M2M bVI ⁶ M10M bVII
<i>Harry Potter VIII</i>	0:48:49	Remus Lupin, CN	The Battle of Hogwarts is about to begin, with the magical protective shield over the castle being challenged by Voldemort's forces.	C# Aeolian: i m0m i ⁷ m5m iv ⁶ m5m i m7m v/1 m10m iv ⁶
<i>Harry Potter VIII</i>	1:41:42	CN	Neville Longbottom gives a speech in front of Voldemort's forces and survivors of the Battle of Hogwarts. He says that Harry and others fallen in battle "didn't die in vain", but Voldemort will.	G Aeolian: : i ⁵ m8M bVI ⁵ m8M : X4 i m8M bVI m8M i m8M bVI m8M i m5m iv ⁶ m5m i m8M bVIM ⁷ m8M : i m3M bIII M4m v m1M bVI m8M : X5 i

Table 2.5: Examples of Aeolian (dia6) in narrative contexts that are romantic and melancholic

Film	Time(s)	Agent(s) to whom romantic/melancholy feelings are attributed	Narrative context	Means of mode prolongation
<i>Girl with A Pearl Earring</i>	0:38:14	Griet, CN	Griet realises (at Vermeer's prompting) that there are colours in the clouds and is lost in reverie looking at them. It is a moment of meaningful connection between her and Vermeer.	Oscillation of i m7m v ⁶
<i>Girl with A Pearl Earring</i>	1:03:40	Griet, Vermeer, CN	Vermeer is painting Griet and asks her to remove her cap. She does so after initially refusing, as she considers her hair private. Vermeer sees her long wavy hair and there is a strong sense of attraction between the two.	Mostly oscillation of i m7m v ⁶
<i>Girl with A Pearl Earring</i>	1:24:43	Griet	After Vermeer's wife fires Griet out of jealousy, Griet walks through the house, hurt, and contemplating the loss. She goes to the door of Vermeer's studio, but cannot bring herself to open the door and say goodbye.	Mostly oscillation of i m7m v ⁶
<i>The Curious Case of Benjamin Button</i>	2:03:23	Benjamin and Daisy, CN	Benjamin and Daisy make love in on a yacht and on a beach in the Florida Keys, by moonlight. The sense of melancholy is attributable to the slant of the cinematic narrator. The romance is doomed to be short-lived because of Benjamin's condition.	G Aeolian: i m5m iv ⁶ m5m i m5m iv m5m i (Figure 3.8)
<i>De battre mon coeur s'est arrêté</i>	0:49:06	Tom and Aline, CN	Aline admits to Tom, her husband's colleague, that they share a mutual attraction. They make love. The tone is one of yearning; both characters are unhappy. Aline is herself the victim of infidelity, while Tom is in the grips of a Freudian Oedipal complex. ¹⁵	F# Aeolian: bVI ⁶ m8M i m8M bVI ⁶ m8M i m5m iv ⁶ i
<i>The Painted Veil</i>	1:28:41	Walter and Kitty, CN	Walter and Kitty passionately consummate their newfound love. It follows a slow thaw in their mutual animosity since Kitty's affair early in the marriage.	bVI, followed by melodic lines over a sustained tremolo texture approximating to i

¹⁵ See Julia Dobson's (2007) article for an exploration of the Oedipal complex in this film.

The cinematic narrator can be interpreted as expressing sadness that the suicide bombers have reached this point.

I have so far been talking about Dorian primarily in terms of affect. It can also function as a style flag if this is corroborated by other style flags and by the narrative. Dorian was largely neglected in concert music during the common-practice period, but remained in use in various folk traditions. Consequently, one of its expressive roles is to function as a style flag for folk styles or pre-Baroque styles. As Lehman (2013b, 30) points out, Dorian, as used in Hollywood film music, can be “suggestive of folk or pastoral settings”.²⁰

An example of Dorian’s use as a flag for a quasi-medieval style in *Harry Potter VIII* is in “Procession” (1:38:00). This plays when Hagrid gravely and ceremoniously carries an apparently dead Harry into the ruined courtyard at Hogwarts. Dorian mode, slow tempo, low-register choir in octaves doubling cor anglais, and a tonic pedal combine to give a sense of a mysterious, ancient funeral ritual.

Desplat also finds opportunities to use Dorian as a style flag for Irish or British folk music. *Philomena* is named after its protagonist, an Irish woman whose son, Anthony, was adopted by Americans fifty years ago, against her will. Martin, a journalist, aids her in searching for him in America. During the cue “Quiet Time” (1:09:19) Martin studies the Celtic harp logo on his glass of Guinness, comparing it carefully to a picture of Philomena’s adult son. We later learn that he had noticed Anthony’s Celtic harp badge: signalling that Anthony’s Irish beginnings were still important to him as an adult; this is an encouraging development in their search. By subtly employing a number of Irish style flags – Dorian mode, bodhrán drum, grace notes, and of course harp – the music subtly underlines that Martin’s interior processes were focussed on an Irish icon.

²⁰ The reason for such associations are, in part, an idealized ‘folkishness’, as represented in artistic evocations of pastoral contexts or working-class environments.

When Desplat uses Dorian elsewhere in *Philomena* – such as in “Birth” (0:05:25) and “Discovering Michael” (0:48:55) – there is only limited corroboration for its function as a style flag for Irish folk, such as the Irish setting and the use of harp. While it was probably chosen for these scenes primarily because of its bittersweet affective qualities, its hints of function as an Irish style flag are setting-appropriate.²¹



Figure 2.17: main theme from *The Imitation Game*, or "Alan successful" theme

Another British biopic, *The Imitation Game*, has a main theme (Figure 2.17) in Dorian. The film tells the story of Alan Turing, an English cryptographer who invented the first computer in order to decipher Nazi radio signals during World War II. While his achievements significantly helped the allies in their victory, Turing’s notional success was eclipsed by personal tragedy culminating in his suicide in 1954. Desplat has said that he places great importance on perfecting the music for a film’s opening sequence, ensuring it draws in the audience and communicates the essence of the film.²² He has said that the main theme to *The Imitation Game* is “a mix of joy and melancholia”,²³ which one can infer relates to this central dynamic combining Turing’s notional and national success with personal tragedy. In this context, Dorian mode is apt in terms of both setting and emotion. The Dorian harmony and the prominent use of symphonic strings arguably function as style flags for folk-inspired²⁴ symphonic music by mid-twentieth-century English nationalists such as Ralph Vaughan Williams.

Harmonically, each phrase opens with $i \Rightarrow \flat III$ and continues with either $\flat VII$ or IV . Thus, the boldness of the melodic ascent is underlined by a thrust from negative to positive topic flags by way of triadic mode. As Richards (2015b) puts it, “this motion suggests a struggle from a negative (minor) state to a more positive (major) one”. I would add that chord IV , when it is used, sounds positive for two independent reasons, being both a

²¹ Desplat revealed in an interview with David Poland (2013) that the emphasis of the Irish setting was a low priority for the score.

²² See the video by Cowie (2010), at 0:27:17.

²³ See (Hirway 2015), 3:56

²⁴ Philip Tagg and Bob Clarida (2003, 322) counted twenty Dorian songs among the seventy songs in the *Penguin Book of English Folk Songs*, compared to only eleven Aeolian. Only Ionian outnumbered Dorian, with twenty-four songs.

major triad and containing a degree ($\hat{4}\hat{6}$) that is raised relative to schematic expectations.²⁵ This uplifting progression to IV is paired with the two highest phrases in the melody. Melody and harmony are collaborating to make these particularly uplifting moments – bringing the “joy” Desplat describes – while the minor tonic triad is ever-present, closing every phrase with melancholy. In this way, the theme can be used in the more uplifting moments of the film, in which Turing’s success is the emphasis,²⁶ while remaining sensitive to his personal tragedies. The final and longest statement of the theme is at the end of the film (1:44:01), when the music emphasises the mixture of joy and melancholia that are captured by both the intertitles and in the visual images.



Figure 2.18: Main theme from *The Painted Veil*

Like *The Imitation Game*, *The Painted Veil* has a main theme with arching melodic phrases in which slow, legato strings play the $i \Rightarrow \flat III \Rightarrow IV \Rightarrow i$ progression over an energetic post-minimalist rhythmic figuration, based on piano. While the films and their scores have many differences, I would argue that there are sufficient parallels that it is not coincidental that they share a similar main theme. Both are serious dramas with English characters, set in the first half of the twentieth century in a context that includes historical conflict.²⁷ In both, the male lead is a hopeless romantic with a good heart who experiences the pain of a broken relationship with a fiancé or wife, but is reconciled before dying tragically. Both men solve a complicated scientific problem that saves many lives, but do not live long enough themselves to get the thanks they deserve. (In *The Painted Veil*, Walter is a bacteriologist who builds a waterwheel to improve a village’s water supply and allay a terrible cholera outbreak.)

²⁵ See section 1.5.5.

²⁶ This includes a montage in which he runs and invents (discussed in section 1.5.3), and a scene in which he explains his vision of the computer to Joan (0:41:56). Richards (2015b) justifiably calls this the “Alan successful” theme.

²⁷ *The Painted Veil* is set in China in 1925, and the conflict is the Chinese nationalist movement.

Obviously, there are more differences than similarities, but the similarity is largely one of tone. Desplat's desire to write a theme that captures "a mix of joy and melancholia" applies to both films. The essence of accomplishment in adversity, framed with tragedy – which is so well captured by the $i \Rightarrow bIII \Rightarrow IV \Rightarrow i$ progression – is common to both. The resonance between Dorian mode and English characters, and symphonic forces with bygone eras is common to both. And the use of fast minimalist interlocking ostinati as a metaphor for a fast, brilliant scientific mind is common to both. This exploits the *motoric* minimalist topic that Leydon identified as evoking "indifferent mechanised process". Desplat has explained (Hirway 2015) that his reasoning for the fast, quantised piano ostinati in *The Imitation Game* was to convey Turing's fast mind and love of calculation. Something similar clearly occurs in *The Painted Veil*, and the metaphor is made explicit when the piano ostinati enter on the shot of Walter in which he has the idea to build a waterwheel that solves the cholera problem in the village (1:04:03). When the waterwheel is finally functioning, accompanied by a cue called "The Water Wheel" (1:10:23), the motoric minimalist topic takes on further prominence, relating to the physical motion of the wheel. The point of this comparison between the main themes of *The Painted Veil* and *The Imitation Game* is not that Desplat is being formulaic or re-heating older material; the point is that the metaphors, associations, and stylistic strategies I have described have broader applicability in Desplat's musical language than any one film.

One final expressive application of Dorian I have observed is that it can convey a sense of physical uplift. In *Harry Potter VIII*, the cue "Severus and Lily" accompanies a flashback scene in which Lily (Harry's mother) and Severus Snape are seen to be friends as children. They meet up in a rural setting under riverside willows. The most striking Dorian moment is a $iv \Rightarrow i \text{ dia}2-5-\text{dia}2$ progression, as Severus magically turns willow leaves into flying insects to impress Lily. The higher-than-expected $\sharp\hat{6}$ (especially following iv , which contains $b\hat{6}$) gives a sense of uplift and lightness as the willow-insects fly upward. The uplift is also more conventionally captured by ascending lines *within* the mode. This exploits the metaphor VERTICAL SPACE IS PITCH FREQUENCY. Desplat's choice to make this a Dorian moment is also over-determined in the sense that there the setting is rural and the emotional tone is bitter-sweet, mingling the joy of childhood romance with the heartbreak it caused Severus when unrequited.

Earlier in *Harry Potter*, there is another scene in which a Dorian ostinato metaphorically emphasises a sense of vertical uplift. It is at 0:21:51, when Harry and his companions have escaped the underworld below Gringotts Wizarding Bank on the back of a dragon. The Dorian passage accompanies the moment that the dragon begins to fly over the rooftops of London. Dorian is also suitable here in its balance of negative affect (jeopardy) and positive affect (exhilaration).

Of course, these uses of Dorian (mixed or neutral affective states, folksiness, and uplift) are by no means mutually exclusive. Also, Dorian does not work alone, but rather relies on various musical and cinematic elements to convey the total impression. Nevertheless, I believe the above categories give a fair impression of how Desplat uses Dorian.

2.3.3 Uses of harmonic minor (hmin1)

The feature distinguishing harmonic minor (hmin1, $\{\hat{1} \hat{2} \flat\hat{3} \hat{4} \hat{5} \flat\hat{6} \natural\hat{7}\}$) from Aeolian (dia6) is of course the $\natural\hat{7}$. This difference has two main effects on the ways in which Desplat deploys the mode for expressive ends. First, the raised seventh in minor mode can function as a style flag for Baroque, Classical and Romantic styles (i.e. styles of the common-practice period), because it is more common in these styles than in many other styles in the present-day.²⁸ These styles are apt to conjure associations of their period (circa 1600 to 1900), geographical region (Western Europe), and/or the relatively high socio-economic status of their most avid present-day consumers. The second implication of the raised seventh in harmonic minor (hmin1), is that it allows the [014] trichord on $\{\natural\hat{7}, \hat{1}, \flat\hat{3}\}$ and the [034] trichord on $\{\flat\hat{6}, \natural\hat{7}, \hat{1}\}$, both of which I have previously identified as tension topic flags (Table 2.1). The increased potential for this dissonance (based on rare intervals) in harmonic minor is often, but not *always* exploited.

Desplat sometimes uses harmonic minor in ways that exploit both elements of its expressive potential. An excellent example from *Girl with A Pearl Earring* is the music associated with the wealthy, lecherous Van Ruijven (Figure 2.19).²⁹ Desplat draws on features of the antagonism topic identified by Scheurer (2007, 120), including minor

²⁸ Pop, rock, jazz, British folk, country music, and much film music since about 1980, all tend to favour $\flat\hat{7}$ in minor contexts.

²⁹ Van Ruijven attempts to rape the protagonist, Griet, accompanied by a version of this music, at 1:11:32.

mode, primitive, aggressive rhythms, and melodic dissonance such as the drawn out $\flat\hat{7}\Rightarrow\hat{1}$ appoggiaturas in the upper voice, bars 3, 5, 7. Here the music also has many style flags for Baroque music, evoking seventeenth-century Holland. However, Desplat is disinterested³⁰ in using Baroque music for the remainder of the score, so another factor is clearly at work. Desplat is arguably exploiting the present-day associations of Common Practice Period art music with class, capital, and high art, which is apt for this wealthy art patron.



Figure 2.19: Van Ruijven's theme, from *Girl with A Pearl Earring*, as heard in "Van Ruijven" (0:56:58)

Desplat also uses harmonic minor in some of the tenser moments in his other period films, such as those set in the early twentieth century, like *The King's Speech*, *The Painted Veil*, and *Grand Budapest Hotel*. The modernism of the 1920s and 1930s is not given strong emphasis in these films, so I would argue that harmonic minor (hmin1) contributes to the evocation of an historical era that is *closer* to the nineteenth century than to the present. In *The Grand Budapest Hotel*, Gustave's theme, which is detailed in section 3.2.3, is sometimes used for moments of tension (albeit comic tension), such as at 0:29:28 when Gustave steals the painting *Boy With Apple*. In *The Painted Veil*, a tense moment of nationalist uprising against the British colonials in China is accompanied by a cue ("Colony Club" 0:28:28), that begins in harmonic minor (hmin1). This is similar to the "Van Ruijven" example in its use of $\flat\hat{7}\Rightarrow\hat{1}$ as a dissonant appoggiatura over i and iv.

I have already discussed the use of $i\Leftarrow iv_4^{6add6}$ in *The King's Speech*, as a leitharmonic for Bertie's intense anxiety in relation to public speaking, exploiting metaphors of psychological entrapment. In the many harmonic minor examples, the $\flat\hat{7}$ adds additional

³⁰ Desplat himself has said that "to add another layer of ancient texture was not appropriate". See the video by Cowie (2010), at 0:42:36.

tension through the rare intervals it creates against the tonic and subdominant triads (A2/d7 and d4/A5, respectively). A good example of this is when Bertie gives his first speech as King George VI, to a room full of dignitaries, and his paralysing stammer is at its worst (1:10:04 and Figure 2.20). The camera reveals paintings of previous monarchs on the various walls of the room, suggesting that he feels the weight of history bearing down on him, and the expectation that he must rise to a stature of these predecessors. This weight of history is given emphasis by the music's stylistic evocation of past centuries, through the use of harmonic minor and its characteristic dissonances, such as $\flat\hat{7} \Rightarrow \hat{1}$ appoggiaturas (bars 2-3 and 8-9) and a diminished seventh chord on the leading-tone over a tonic pedal (bar 8).³¹ Additionally, the music emphasises Bertie's psychological entrapment through the metaphors ENTRAPMENT IS MAGNETIC TONIC and ENTRAPMENT IS SMALL TONAL SPACE CONTAINER.

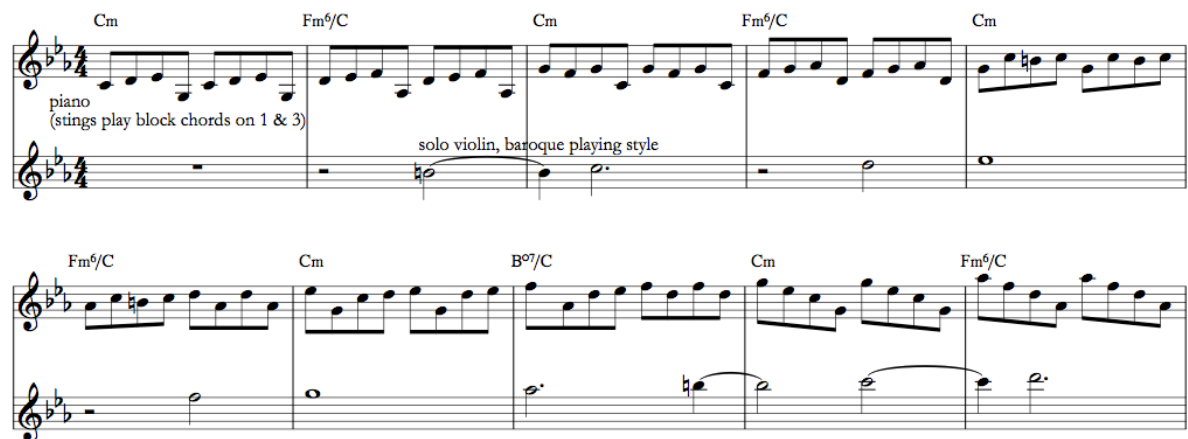


Figure 2.20: excerpt from cue in *The King's Speech* (1:10:01)

Desplat also uses harmonic minor prominently in some films with relatively contemporary settings. One such example is *The Queen*. His prominent use of minor modes with $\flat\hat{7}$ throughout this film is arguably related to his general wish to poke fun at the British monarchy as something obsolete, as something of a bygone era. This strategy, he has stated,³² is behind his prominent use of harpsichord, mandolin, and timpani in the score, which together bring “eighteenth-century” associations. As with *The King's Speech*, the relevance of the mode's “social status” connotation is also significant.

³¹ The figurations played by the piano are also suggestive of Baroque or Classical keyboard writing, while the solo violin is played in a Baroque style with minimal vibrato.

³² See the video by Cowie (2010), at 0:24:09.



Figure 2.21: theme for Princess Diana's death, from *The Queen*, as heard in "People's Princess" (0:11:20)

However, one theme (Figure 2.21) also clearly utilises the dissonances contained within harmonic minor for tension. While the melody only uses the $\natural 7$ in the final six bars of the melody, it is also used in the dominant chords in the accompaniment of some statements of the theme. This theme comes to symbolise the death of Princess Diana and its aftermath. It is first played at 0:11:20, in a fast-paced montage cutting between her final fatal car ride, paparazzi in pursuit, and other images of the press hounding her throughout her public life. Notable tension inducing features include the melodic $\{\flat 6, \hat{2}\}$ tritone played on the strong beats of bars 13-16 and the tenser still $\{\flat 6, \natural 7\}$ diminished seventh in the equivalent passage in bars 21-23. The increase in rarity between these two rare intervals works in tandem with the rising pitch height of the ascending sequence (bars 13-23) to enable a general build in tension that is especially apt in the build towards the car accident. The theme can be presented in a guise of grief as well as one of tension, through the use of slow tempo and *espressivo* strings, as at 0:24:13.

The main theme from *The Ghost Writer* (Figure 2.22) arguably exploits harmonic minor (hmin1) for its negative affect and tension, primarily. It is unlikely that it was chosen to evoke the setting, which neither European nor historical. And because the theme is not strongly associated with any specific characters it is doubtful that it was chosen for reasons of characterisation. The mode's most tense feature, its rarest interval the augmented second (A^{\flat} and B^{\natural} in Figure 2.22) is used as a melodic interval in bars 7-8, and while only brief, this is arguably the most distinctive feature of the melody.³³ The theme arguably symbolises the essence of the film: an investigation into corruption. The use of flute with flutter tongue for the melody is a timbral element reflecting jazz

³³ In the theme's climactic 1:56:18 appearance after Ruth's secret is revealed, it is presented in Hungarian minor (gyp4), which ratchets up the tension by adding an additional augmented second: $\{\flat 3, \sharp 4\}$.

influences, as is the frequent use of muted trumpets in cues containing the theme. As Scheurer (2007, 86) notes, jazz has been associated in hardboiled detective³⁴ films of the 1930s-1970s with gangsters and corruption in general.



Figure 2.22: Main theme from *The Ghost Writer*, as heard in “The Ghost Writer” (0:00:10)

2.3.4 Uses of melodic minor ascending (mmin1)

Melodic minor ascending (mmin1, $\{\hat{1} \hat{2} \flat\hat{3} \hat{4} \hat{5} \flat\hat{6} \flat\hat{7}\}$) is like harmonic minor (hmin1) in that it has a raised seventh and can therefore function as a style flag for Baroque, Classical, or Romantic music, bringing the associations of those styles in terms of period, place, and socio-economic status. This probably explains the mode’s prominence in films set in a real or imaginary past, including *Grand Budapest Hotel*, *The Golden Compass*, *Girl with A Pearl Earring*, and *The King’s Speech*. One reason melodic minor (mmin1) might be occasionally favoured over harmonic minor (hmin1) is pragmatic: it provides an even passing tone between $\hat{5}$ and $\flat\hat{7}$ in the form of $\flat\hat{6}$. However, there are also expressive implications to this difference. Because of the raised sixth, mmin1 lacks the tensest feature of harmonic minor, the A2/D7 on $\{\flat\hat{6}, \flat\hat{7}\}$, and also has one fewer flat degree. This means its use in overtly negative contexts such as tension is rarer than is the case with hmin1, and its use in light, whimsical contexts is more common.

A favourite signature device of Desplat’s using melodic minor (mmin1) is an upward arpeggiation of a tonic minor-major-seventh chord (i^{M7}), with $\flat\hat{6}$ as passing tone between $\hat{5}$ and $\flat\hat{7}$: $\hat{1} \Rightarrow \flat\hat{3} \Rightarrow \hat{5} \Rightarrow \flat\hat{6} \Rightarrow \flat\hat{7}$. Sometimes $\hat{2}$ and $\hat{4}$ are also added as passing tones to make a full ascent of the mode, but the tones of i^{M7} are always on the beat, strengthening the implication of i^{M7} . As stated in 2.2, major-minor-seventh chords can function as topic flags for *Herrmann-influenced suspense*.

³⁴ There are similarities between this film and a hardboiled detective film, even though the ghost-writer’s investigation is that of a writer rather than a detective.



Figure 2.23: Curiosity motif, from *The Ghost Writer*

One of Desplat's Herrmann-influenced scores is the *The Ghost Writer*.³⁵ In Polanski's suspenseful thriller, the melodic minor ascent provides what I call the "curiosity" motif (Figure 2.23). This is stated at least three times,³⁶ at moments when the plot thickens and titular ghost-writer seems to be thinking that something is curious or suspicious. The upward motion has iconicity to the upward intonation of a question, while the conclusion of the ascent on the least stable scale degree ($\natural\hat{7}$) also signals uncertainty, via the metaphor CLOSURE IN NARRATIVE IS CLOSURE IN MUSIC. The contrary motion adds another signifier of disorientation, and another topic flag of *Herrmann-influenced suspense*, reminiscent of the use of dissonant contrary motion to evoke vertigo in Herrmann's score for *Vertigo*. Desplat also uses a melodic minor ascent to $\natural\hat{7}$ in the context of mystery, uncertainty and suspense in *Rise of the Guardians* (Figure 2.24), when Jack is anxiously pondering why the Man on the Moon gave him his magical powers.



Figure 2.24: bars immediately preceding the title card of *Rise of the Guardians* (0:03:22)

³⁵ Desplat acknowledges this in the video by Cowie (2010), at 0:06:06.

³⁶ Occurrences include 0:25:51, 0:49:27, and 1:09:55. There is a more extended ostinato passage in melodic minor ascending (mmin1) using similar instrumentation and contrary motion at 0:21:35.



Figure 2.25: Ostinati in *The Queen* when the Royal family views flowers at Balmoral (partial reduction) (1:10:52)

But dark suspense is not the only application of this device. In *The Queen*, a melodic minor ascent (omitting $\hat{2}$ and $\hat{4}$) occurs as part of an agitated tremolo-driven ostinato (Figure 2.25). The passage rounds off a cue in which the Queen, a nervy Prince Charles and other royals view the condolence flowers for Diana outside Balmoral, watched with interest by crowds and paparazzi. The Royals have bowed to intense pressure to publicly display their grief (and acknowledge the public's grief), while the media watch ravenously and the public look on with expressions ranging from disapproval to sorrow. The Hitchcockian associations of minor-major-seventh chord and its manic arpeggiation contribute a touch of unease and dark absurdity to the scene. And yet, the way in which the outer voices on the third beat of each bar suggest simple tonic/dominant oscillation disguises the major-minor-seventh somewhat, along with its dark associations. The music accompanying this grief-themed circus allows for a range of interpretations of the slant of the cinematic narrator. Lesley Brill writes of Director Stephen Frears:

Frears always directs, to a greater or lesser degree, as an ironist ... Possible meanings are limited, in clear relation to each other, and usually left without anything guiding the viewer to a strong preference.

The melodic minor ascent device may have been chosen in part because of its ability (in this guise) to capture an ambiguity between a serious reading of the scene, and a reading acknowledging its comical absurdity, exploiting the comedic potential of rare intervals. Desplat uses an almost identical ostinato (Figure 2.26), in the opening of *Cheri* (2009), his next collaboration with Frears after *The Queen*.

The only common narrative feature between this and the previous example is the wry, tongue-in-cheek slant of the cinematic narrator, distinctive of Frears' directorial style. For this reason, perhaps one could go as far as attributing the tone of the music here to the implied filmmaker as well as the cinematic narrator.

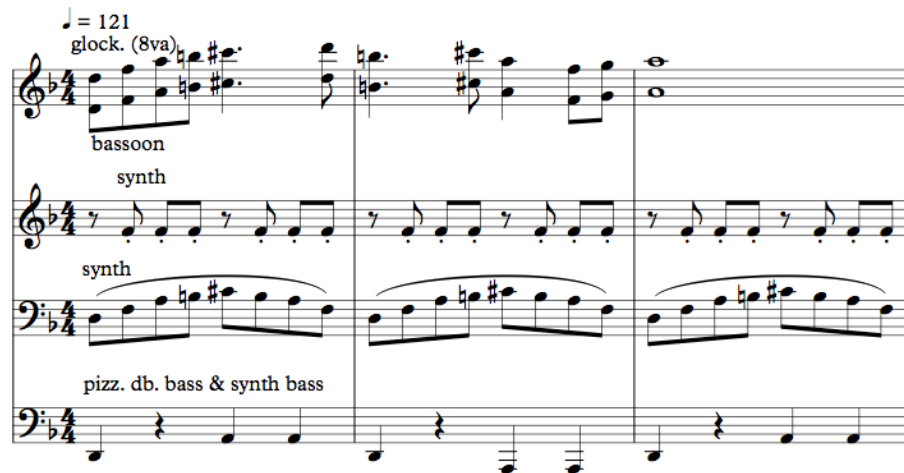


Figure 2.26: opening bars of Cheri (partial transcription)

The fact that Desplat is willing to use the same device in such different narrative contexts may indicate that he simply likes it for aesthetic reasons. He may also understand the device to have an interesting blend of potential for suspense and comedy, either or both of which can be brought to the fore to suit a given context. The above examples all feature mmin1 articulated melodically over chord i. It can also be articulated by progressions including chords i, IV and V, as in the “Adventure theme” in *Grand Budapest Hotel*, which is discussed in section 3.2.3.

2.3.5 Uses of Lydian flat 3 (hmaj4)

Lydian $\flat 3$ (hmaj4, $\{\hat{1} \hat{2} \flat \hat{3} \# \hat{4} \hat{5} \flat \hat{6} \flat \hat{7}\}$) is the most common of a family of modes that Desplat uses, that include $\{\hat{1} \flat \hat{3} \# \hat{4} \hat{5}\}$. A distinguishing feature for all these modes is the $\# \hat{4}$ – and especially its pairing with $\flat \hat{3}$ to create an A2/d7. This contributes an element of otherness and tension. Lydian $\flat 3$, as its name suggests, is like Lydian (DIA4) with a flat third, but I propose that it is more helpful to think of it as being like melodic minor ascending (mmin1) with a raised fourth. It is much closer in its expressive potential to mmin1 than to Lydian (DIA4), because of the minor mode of the tonic triad, and because of tonal interval class content, as shown in Figure 1.3.

In the corpus, especially in the adventure films, Lydian $\flat 3$ is most consistently associated with antagonism. Desplat uses it to evoke the malice of Pitch Black in *Rise of the Guardians*, the monstrosity of Godzilla and the MUTOs in *Godzilla*, the sheer evil of Voldemort and his death eaters in *Harry Potter VIII*, and a sinister, quasi-religious order (“The Magisterium”) in *The Golden Compass*.

In *Harry Potter*, an example of Lydian $\flat 3$ ³⁷ evoking Voldemort’s antagonism is when, following his conquest of Hogwarts, he proclaims his authority over Harry’s friends. He says, “Harry Potter is dead! From this day forth, you put your faith in me.” An altered quotation of Hedwig’s theme – a leitmotif symbolic of Hogwarts and the wizarding world – underscores this. The B \sharp in bar 4 of the melody is a semitone higher than usual ($\sharp 4$ rather than $\hat{4}$). Bribitzer-Stull (2015) calls this kind of dissonant development of a leitmotif “harmonic corruption”. This harmonic corruption is may be read as a metaphor for Voldemort’s corruption of Hogwarts, with which the leitmotif is associated. A sustained $i^{add\sharp 4}$ chord underpins the quotation, with the dissonant clusters perhaps being metaphorical for a quiet, protracted sense of dread.



Figure 2.27: Hedwig’s theme quoted in “Procession”, *Harry Potter VIII* (percussion omitted)

Desplat’s use of Lydian $\flat 3$ in connection with Voldemort is not isolated to this passage. The “Horcrux” theme provides a further example. This is a leitmotif borrowed from *Harry Potter and the Deathly Hallows: Part 1*, in which it is frequently stated in association with the seven *horcruxes* that Harry must find and destroy so that he can destroy Voldemort. It is only stated once in *Harry Potter VIII*, in the cue “Underworld” (0:15:35). In this scene, Harry and his friends have broken into the underground, treasure-filled vault of one of Voldemort’s allies, to find and destroy a horcrux. Only the light of the

³⁷ The $\hat{6}$ (D \sharp) is remembered from four bars prior to this excerpt, and is also more likely based on the availability heuristic and interval rarity.

trio's wands lights the dark vault, and the atmosphere is eerie. The leitmotif relies on its whole arrangement to create the intended expressive result, so I have presented an excerpt in reduction.

The basis of hmaj4-11-hmaj3 is decorated by an instance of linear chromaticism in the sixth bar of the violin melody. This $\flat\hat{7}-\flat\hat{6}-\hat{5}$ run introduces two scale degrees ($\flat\hat{7}$ and $\flat\hat{6}$) that are flatter than expected in the established context of hmaj4-11-hmaj3. The harp part creates bimodality by employing scale degrees that are *sharper* than expected relative to hmaj3-11-hmaj3: $\hat{3}$ (F#), $\#1=\hat{2}/vii$ (D#) and $\hat{5}\#=\hat{6}/vii$ (A#). This is interesting because it combines the dissonance of false relations (with its negative connotations) with chromatic raising of scale degrees (with its positive connotations). The resulting impression is of a facade of ethereal innocence and beauty concealing evil. The sense of the ethereal beauty is reinforced by violin harmonics (a very pure sound), with delicate vibraphone and harp arpeggiation in mid-register. The impression of a beautiful façade concealing evil is extremely apt for this leitmotif in that more than half of the horcruxes conceal their dark magic within precious pieces of jewellery: a ring, a locket, a golden cup, and a diadem.

Figure 2.28: “Horcrux theme” from *Harry Potter VII & VIII*

In *Rise of the Guardians*, Desplat represents “Pitch Black” (the boogie man), another malicious, magical, and power-hungry antagonist, with harmonic corruption of a leitmotif into a version in Lydian $\flat 3$. This is at 0:30:05, when Pitch has invaded the Tooth Fairy’s palace. Given that Pitch Black is the “nightmare king” and has adapted “magical dreamsand” to his evil purposes, it is apt that he is represented here by a corrupted rendition of the “Dream theme” (Figure 2.55), which is Ionian in its natural state. The melody here is accompanied by an oscillating $\text{h} \text{maj} 4 - 11 - \text{h} \text{maj} 3$, which is used elsewhere in connection with Pitch, for example, the passage in Figure 2.29 plays at 1:11:03, when he appears in the sky with unprecedented power and boldness. His imposing presence is emphasised with low camera angles and a violent thunderstorm that he conjures behind him. Desplat’s threatening music affirms that Pitch Black’s arrival is one of blatant malice and aggression.



Figure 2.29: Passage announcing the presence of Pitch Black, 1:11:03 in *Rise of the Guardians*

An interesting feature of this passage, and a relatively common strategy of Desplat's is that he uses registral ascent to disguise the stasis of the harmonic oscillation. This gives the passage a gestural shape suggesting an ever-increasing might while the oscillation maintains a sense that Pitch Black is unrelenting and difficult to escape.

Another powerful and feared character who Desplat musically represents through an hmaj4-11-hmaj3 oscillation is Godzilla, a 350-foot amphibious reptilian monster. His motif, notated in Figure 2.30, has some similarities to John Williams' famous leitmotif for another ocean-dwelling monster, the shark in *Jaws*.



Figure 2.30: Godzilla's motif

The motifs for both Godzilla and Jaws are based on a relatively close oscillating interval: a minor third and a minor second, respectively. The oscillation in both cases suggests something primitive, as Schneller (2014) observes in reference to the *Jaws* theme. Additionally, both motifs use low register to emphasise the size of the creature, employing Chattah's metaphor SIZE IS PITCH FREQUENCY. Finally, both motifs highlight semitonal motion as a direct melodic interval in *Jaws* and as an interval of transposition in *Godzilla*. This suggests the metaphor SERPENTINE MOTION IS INCREMENTAL FLUCTUATION IN PITCH FREQUENCY, which is my

paraphrasing of an observation by Schneller (2014) about Jaws. He traces this metaphor back to Wagner’s representation of the dragon Fafner in *Der Ring des Nibelungen*.³⁸

In “Last Shot” (1:43:16) Godzilla’s motif is developed to create an appropriately aggressive accompaniment for a 300-foot insect-like MUTO (Massive Unidentified Terrestrial Organism) wreaking havoc, immune to the showers of bullets fired at it (Figure 2.32). Like the example in Figure 2.29 from *Rise of the Guardians*, an m11m oscillation is combined with registral ascent and prominent trombones.³⁹ Finally, in *The Golden Compass*, an hmaj4-11-hmaj3⁴⁰ motion is included in the theme for the Magisterium (Figure 2.31). The Magisterium is a powerful, corrupt quasi-religious order, which explains the almost hymn-like rhythms and texture. These examples show that Lydian $\flat\hat{3}$, and particularly hmaj4-11-hmaj3, are quite consistently associated with antagonism in Desplat’s adventure film scores. This is significant, because it is an example of Desplat finding an alternative to some of the more over-used harmonic signifiers of eerie antagonism, such as the “Tarnhelm” (m8m), which I discuss in section 2.4.3.2. It is also noteworthy that a mode with only one flat scale degree ($\flat\hat{3}$) can have such consistently negative connotations. This is proof of the potency of the $\{\flat\hat{3}, \sharp\hat{4}\}$ combination to express a significant amount of otherness and tension.



Figure 2.31: The Magisterium theme, from *The Golden Compass*, as heard in “Mrs Coulter” (0:18:38)

³⁸ Also see a moment in *Harry Potter VIII*, in the cue “The Grey Lady” (0:49:49). A glissando from $\flat\hat{3}$ to $\flat\hat{2}$ is suggestive of serpentine motion, suggesting the semitone that is needed to resolve $\flat\hat{2}$ but does not resolve. This plays when Ron and Hermione are at the snake-decorated door to the *Chamber of Secrets*, where they are going in search of a basilisk (giant snake) fang.

³⁹ Because of the Eb-as- $\flat\hat{6}$, this is a slight variant on hmaj4-11-hmaj3: gyp4-11-gyp3. The rarer intervals and presence of another flat degree adds aggression.

⁴⁰ A relative of hmaj4-11-hmaj3 with slightly rarer intervals is gyp4-11-gyp3, which differs in having a $\flat\hat{6}$. It is used, with some alterations and additions, to accompany a frenzied battle scene elsewhere in *The Golden Compass*, in “Samoyed Attack” (1:04:40).

♩ = 100

Gm F#m Gm F#m Gm F#m Gm F#m

strings (top line only shown)

ff

trombones

ff

5 Gm F#m Gm F#m Gm F#m Gm F#m

horns

ff

9 Dm C#m Dm C#m Dm C#m Dm C#m

ff Two E♭ clarinets?

(strings continue in same vein)

Figure 2.32: Partial reduction of the opening of "Last Shot", from *Godzilla* (1:43:16)

2.3.6 Uses of Phrygian mode (dia3)

The salient feature of Phrygian (dia3, { $\hat{1} \flat \hat{2} \flat \hat{3} \hat{4} \hat{5} \flat \hat{6} \flat \hat{7}$ }) is its flat second ($\flat \hat{2}$). Like all flat scale degrees, $\flat \hat{2}$ can function as a flag for negative topics. But, being hyper-minor, it defies both Ionian-centric and Aeolian-centric expectations, making it more expressively potent than the flat degrees found in Aeolian. There seems to be two main motivations for Desplat choosing Phrygian over Aeolian, which often co-exist. The first is to express slightly more negative affect than is possible with Aeolian. Musicologist Sarha Moore (2013, 465) notes that, “the flat second after [the fifteenth century] connoted ‘pathos’ and ‘anguish’ in Western music.” She understands the $\flat \hat{2} \Rightarrow \hat{1}$ gesture in particular to be an example of the grief-associated *pianto* topic flag I mentioned in section 1.5.2.3. The second motivation for Desplat to use Phrygian seems to be the evocation of a sense of otherness (especially exoticism), which in the case of *Argo* and *Zero Dark Thirty* relates to Middle-Eastern settings, but can also relate to a fantastical Other, as we will see. Phrygian mode evokes *pianto* and exoticist topics most blatantly when the mode is both tonicised

and *vertically explicit*,⁴¹ with the $\flat\hat{2}$ sounded over a tonic chord or pedal. As Moore (2013, 465) observes, “musical motifs containing the flat second signify the Other, the note itself being Other to the “normal” choice of musical notes in Western genres.” She is implying the presence of a broad metaphor I have proposed: UNFAMILIARITY IS MUSICAL UNFAMILIARITY. Moore later writes, under the heading *Dysphoric Arabs*:

The most potent meeting of the $\flat\hat{2} - \hat{1}$ *pianto* topic with the $\flat\hat{2} - \hat{1}$ Oriental trope is, perhaps, in the depiction of the Arab in war films. The depiction of the Arab within film has frequently been overlaid with the “sinister” and “evil”.

I will hereafter refer to the musical overlaying of sinister and Eastern connotations as the *Dysphoric East* topic, to adapt Moore’s phrase. While it would be wrong and unfair to say that Desplat employs this topic crassly – and the responsibility for the creative choices ultimately lies with the director of each film – he is on dangerous ground under the direction of Ben Affleck in *Argo* and under Kathryn Bigelow in *Zero Dark Thirty*.



Figure 2.33: Excerpt from opening cue of *Argo* (0:01:00)

The opening cue of Ben Affleck’s thriller *Argo* (Figure 2.33) is a good example of Desplat using vertically explicit Phrygian as part of a *Dysphoric East* topic, whose corroborating topic flags in this case include classical kemençe as the melody instrument,⁴² the wordless singing of Sussan Deyhim, slow tempo and a texture of melody with tonic pedal. The cue accompanies a prologue that establishes the historical background of the film’s setting. This is Iran in 1979, following the revolution that overthrew the Shah (Emperor) installed by the United States, Mohammad Reza Pahlavi. A voice-over narrator describes how the Shah was widely hated by his subjects for reasons including opulence and excess while “the people starved”. The music, understood in the context of this narration, arguably voices the sorrow of the Iranian people while portraying the Shah as their oppressor and the “other” to be loathed by the audience.

⁴¹ This concept is introduced on page 42.

⁴² This is a bowed lute originating in the Eastern Mediterranean region and used in Ottoman classical music.

Later in the film, the same melody is used to portray a different “other”: the regime of the revolutionary leader who overthrew the Shah in 1979: Ayatollah Ruhollah Khomeini. The slant of the cinematic narrator portrays this regime as equally oppressive as the Shah’s, in its own way. Desplat supports this slant when he uses the same Phrygian melody as the opening (Figure 2.33) at 0:51:19, over images of central Tehran including Khomeini’s machine-gun-wielding soldiers and corpses hanging from cranes. Whereas in the opening the agency of the Iranian people was musically expressed, here the camera angles provide the point-of-view of protagonist Tony Mendez, the American CIA agent who has just arrived in Tehran to rescue American hostages. The cinematic narrator, including Desplat’s music, is therefore presenting the scene *through the eyes of a Western visitor* as a hostile environment of otherness. The immediately previous cue “The Scent of Death” (0:49:14), does much the same, also using Phrygian mode, but in a rhythmically energised fashion that is suggestive of Tehran’s energetic urban bustle.

This musical and cinematic depiction of Tehran serves the filmmakers’ dramatic aims: it increases the impetus for the American hostages to be rescued from this environment. It does, however, open the filmmakers to charges of “neo-orientalism”, like that of Narges Sadat Mousavi (2013, 81) writing in the *Iranian Review of Foreign Affairs*:

Most traumatic of all, the streets of Tehran [in *Argo*] are filled with cranes hanging corpses of collaborators of the Pahlavi regime. One could argue that Affleck has depicted a stereotyped and caricatured view of the Iranian society and has made a mockery out of Iranian culture.

Mousavi is much more approving of the opening of the film, saying that it “even humanizes the Iranian people as victims of [the Shah’s] cruelties”, while “the rest of the movie in fact undoes what this opening accomplishes.” The two uses of the Phrygian melody in Figure 2.33, one more potentially offensive than the other, arguably demonstrate the importance of implied narrative agency on how a music cue might be interpreted. The example also highlights the political minefield that a film composer must negotiate when using a resource such as Phrygian, which is capable of conflating connotations of an ethnic group with connotations of negative affect.



Figure 2.34: Excerpt from “Drive to Embassy”, from *Zero Dark Thirty* (0:09:44)

In *Zero Dark Thirty*’s “Drive to Embassy”, Desplat scores a remarkably similar scene to Mendez’s arrival in Tehran: a protagonist who is an American CIA agent (Maya) drives into a city with a predominantly Muslim population (Islamabad, 2003) and there is a montage of scene-setting shots. While there are no soldiers or hanging corpses, this scene does emphasise elements that are exotic to Western audiences, such as bazaar scenes with camels and ornately decorated busses with passengers travelling on the roof. In keeping with this more moderate tone, the music is a more moderate⁴³ token of the *Dysphoric East* topic. It includes among its style flags vertically explicit Phrygian (on E \flat), slow tempo, an exotic melodic instrument (the duduk), and a pedal tone.

In *Fantastic Mr. Fox*, Phrygian – in the form of a dia3-10-dia2 oscillation with an emphasis on the dia3 – is used playfully, but still to connote otherness and dysphoria. “Bean’s Secret Cider Cellar” (0:24:46) is an arrangement of the “Boggis, Bunce and Bean” theme (Figure 3.13), into the *Spaghetti Western* topic, which pays homage to Ennio Morricone’s scores for Sergio Leone’s “Dollars Trilogy”. The topic flags are mostly timbral: a whistled melody, snare drum, jaw harp, strummed acoustic guitar, and flutter-tongued flute.⁴⁴ Phrygian is not as typical of the Spaghetti Westerns, although other minor modes with $\flat\hat{7}$ certainly are, as Philip Tagg and Bob Clarida observe in their exploration of the topic (2003, 371). However, the use of Phrygian in this topic seems congruent in that, strummed on the guitar, it can function as style flag for flamenco, connoting Spain, where the Dollars Trilogy was filmed. Through Spanish influence,

⁴³ The moderate tone is partly because it is possible to hear parts of the passage in A \flat Aeolian, with a dominant pedal.

⁴⁴ All of these elements but the flutter-tongued flute are present in the opening titles of *For a Few Dollars More* (1965) and most are used in all three films. Flutter-tongued flute-like instruments – bass ocarina and soprano recorder – are used in *The Good, the Bad, and the Ugly*, reveals Charles Leinberger (2004, 71).

Phrygian also entered Mexican styles such as mariachi, which infuses the Spaghetti Western topic, connoting the setting of the Dollars Trilogy: the South-Western frontier, with its Mexican gangsters. In *Fantastic Mr. Fox*, the communicative function of this topic is to characterise Rat (who is guarding the cellar when Mr Fox robs it) as a gangster and a pariah – both “the bad” and “the ugly”. The sequence is enjoyable and amusing in part because it offers spectators the pleasure of recognising the good-humoured homage.

The remaining two examples of vertically explicit Phrygian are both from period dramas set in the UK during or just prior to World War II, so the Nazi threat is the source of otherness in these cases. In *The Imitation Game*, it is used to give a sense of jeopardy to a scene in which Alan Turing rides his bicycle, with Nazi messages tucked into his sock relating to the top-secret mission to crack the Enigma Code. What he is doing is dangerous and illegal. But the danger is counterbalanced by an almost comedic sense of sneakiness via the use of pizzicato strings.⁴⁵ “King George VI” in *The King’s Speech* provides a more serious example. The cue, which starts in Phrygian, accompanies the scene in which Winston Churchill asks Bertie what he would like to call himself when he becomes King. When Bertie can’t get the words out due to his stutter, Churchill suggests “George VI”. The darkness of the scene is in the subtext: war with Germany is imminent, and a King is required whom the people can rally behind, but Bertie feels inadequate for the task. Very slow tempo and bowed strings support Phrygian in expressing Bertie’s troubled state of mind.

I will now turn to examples of Phrygian mode that are not vertically explicit. Here, $\flat\hat{2}$ can be contextualised as the root of $\flat\text{II}$ (often in a $\text{dia}3\text{-}1\text{-DIA}4$ oscillation) or as the third of $\flat\text{vii}$ (often in a $\text{dia}3\text{-}10\text{-dia}2$ oscillation). In both cases, because the $\flat\hat{2}$ is consonant to its current triad, its dissonance to the tonic is considerably less palpable. Of these two TSPCs, the $\text{dia}3\text{-}10\text{-dia}2$ is more negative, being in the category mXm rather than mXM . One of the most noteworthy examples of $\text{dia}3\text{-}1\text{-DIA}4$ is in the “Bombings” cue in *Zero Dark Thirty* (0:33:09), accompanying the tense anticipation and aftermath of the London Bombings on July 7, 2005. The camera follows a bus as it drives into Tavistock Square. There is an explosion, and, remarkably, the cue continues in the same vein after the

⁴⁵ According to Cooke (2010, 11) pizzicato strings have been associated with sneaking since the silent film era, when Delibes’ *Pizzicato Polka* was routinely used for sneaking sequences.

explosion, in a clear example of “extra-diegetic music” discussed in section 1.3.2. This is a more dissonant breed of dia3-1-DIA4 in which a tonic pedal is held throughout, creating a dissonance with the \flat II chord and invoking the ENTRAPMENT IS MAGNETIC TONIC metaphor.⁴⁶

In *The Ghost Writer*, in the cue “Pr. Paul Emmet”, there are two instances dia3-1-DIA4 oscillation. The cue is essentially brooding, mysterious travel music, possibly inspired by the famous driving scenes in Hitchcock’s *Psycho* accompanied by Herrmann’s churning score.⁴⁷ The driver is following a sat-nav towards an unknown location that he knows may get him killed. What is somewhat unusual about this use of dia3-1-DIA4 is that the \flat II is a suspended second chord, with the suspended second being held over from the third of the tonic triad. The absence of a major triad also makes the progression darker than it would otherwise be. Additionally, the smaller voice-leading and retention of part of the tonic triad makes the triad more apt to evoke the metaphors ENTRAPMENT IS SMALL TONAL SPACE CONTAINER and ENTRAPMENT IS MAGNETIC TONIC.

If a major triad is used in dia3-1-DIA4, and there is no tonic pedal, it can take on an interesting bitter-sweet quality, due to the strong affective contrast between the two local modes. The “Loss theme” from *The Curious Case of Benjamin Button*, and “Murmansk B” are good examples of this, and are discussed in section 3.1. Conversely, if two minor triads clearly articulate Phrygian, as in dia3-10-dia2, an extremely negative affect such as utter despair can be conveyed. *Harry Potter VIII* provides two good examples of this, both of which relate to the sorrow of Hogwarts students in some of the school’s darkest days.⁴⁸ To summarize, Desplat’s uses of Phrygian are always connected to negative affect and often to exoticist topics, although the degree of these and the weighting between the two varies based on other factors. Factors increasing the emphasis of otherness include the use of exotic instruments and pedal tones, while factors increasing negative affect

⁴⁶ Another dia3-1-DIA4 over a tonic pedal also involves a scene in which many lives are lost. This is in *The Curious Case of Benjamin Button*, after many of Benjamin’s companions are killed in a submarine battle (1:21:51).

⁴⁷ As has been mentioned, Desplat acknowledges *Psycho*’s composer, Bernard Herrmann as a point of reference when scoring *The Ghost Writer*. See the video by Cowie (2010), at 0:06:06.

⁴⁸ See the start of “A New Headmaster” (0:34:35), which accompanies images of students marching silently in the near-dark under the oppressive rule of Headmaster Snape. Also see the music accompanying the scene in which students mourn the many who have recently fallen in battle (1:14:18).

include slow tempo and the avoidance of major triads, as in dia3-10-dia2. Use of Phrygian in a vertically explicit manner tends to increase both its sense of exoticism and of negative affect. These other factors therefore allow the mode a considerable expressive range, although negativity and otherness are the essence of the association.

2.3.7 Uses of chromatic Lydian inverse (cli1)

Chromatic Lydian inverse (cli1, $\{\hat{1} \flat\hat{2} \flat\hat{3} \sharp\hat{4} \hat{5} \flat\hat{6} \flat\hat{7}\}$) is characterised by a [012] trichord in two locations – $\{\sharp\hat{4} \hat{5} \flat\hat{6}\}$ and $\{\flat\hat{7} \hat{1} \flat\hat{2}\}$ – and the very rare A3/d6 interval on $\{\flat\hat{2} \sharp\hat{4}\}$. It therefore has almost all of the features that could function as tonic flags for tension (Table 2.1), making it especially apt for the expression of danger or similarly tense states such as panic, terror, the chaos of battle, and especially antagonism. In *Rise of the Guardians*, when the antagonist Pitch Black prepares his forces for battle and declares his evil agenda, *fortissimo* trombones and horns aggressively descend down the mode three times (Figure 2.35), only leaving one gap emphasising the distinctive augmented third from $\sharp\hat{4}$ to $\flat\hat{2}$. By starting and ending on $\hat{1}$ on strong beats, Desplat gives the music a sense of certainty, which in this narrative context implies that a fierce battle is inevitable. This is also an instance of ENTRAPMENT IS SMALL TONAL SPACE CONTAINER and ENTRAPMENT IS MAGNETIC TONIC, with the tonic being magnetised by the strong $\flat\hat{2} \Rightarrow \hat{1}$ melodic attraction that closes each descent.



Figure 2.35: motif concluding "Dreamsand", from *Rise of the Guardians* (0:17:09)⁴⁹

In *The Golden Compass*, Desplat had also used chromatic Lydian inverse (cli) as a violent battle cry in fortissimo trombones (Figure 2.36), near the beginning of the cue accompanying the climactic clash with the Magisterium's forces: "Battle With the Tartars". The brass play a variant of the "Magisterium theme", altering the final pitch to ascend to an octave-displaced $\sharp\hat{4}$, creating a dissonant compound tritone with the tonic pedal (Figure 2.31). The accompanying ostinato in the violins magnetises A-as- $\hat{1}$ by

⁴⁹ In the ostinato accompanying this, an E \flat -as- $\flat\hat{2}$ is also included, making the bimodal result cli1 plus gyp4: $\{\hat{1}, \flat\hat{2}, \flat\hat{3}, \sharp\hat{4}, \hat{5}, \flat\hat{6}, \flat\hat{7}\}$, but the E \flat -as- $\flat\hat{2}$ is much more prominent.

rapidly flying around this pitch and the two degrees most strongly attracted to it (G \sharp -as- $\hat{1}$ and B \flat -as- $\hat{2}$). There is also a leitmotivic connection in that first three notes of this violin ostinato followed by a return to A is the leitmotif for the *Gobblers*, who are one of the enemy forces in this battle. The motif is an allusion to James Horner’s “danger theme” which is used in many of his scores and is now arguably an important topic flag for danger in film music.⁵⁰

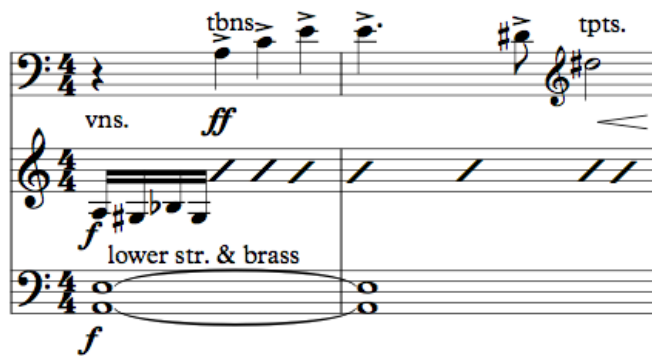


Figure 2.36: development of the Magisterium theme (Figure 2.31), in “Battle with the Tartars”, from *The Golden Compass* (1:30:57)

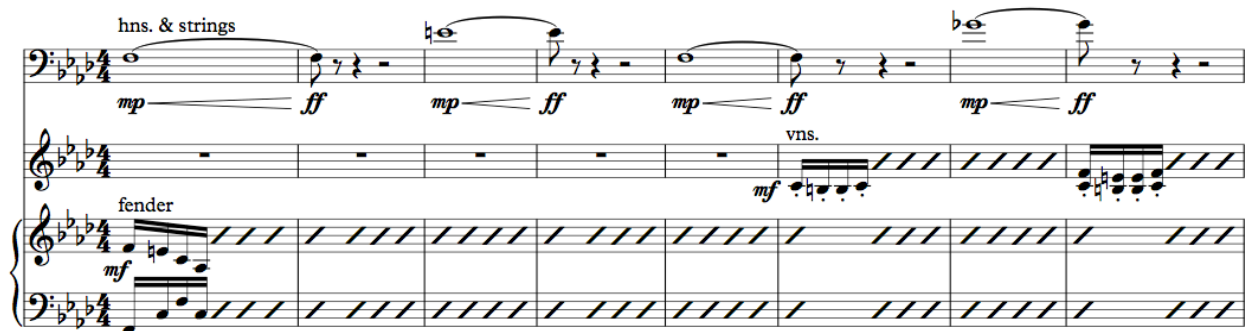


Figure 2.37: excerpt from “Chase on the Ferry”, from *The Ghost Writer* (1:27:25)

Not restricted to the caricatured villains of children’s films, chromatic Lydian inverse (cli1) also finds application in the portrayal of antagonism and panic in *The Ghost Writer*’s “Chase on the Ferry” (Figure 2.37). Here the Fender piano rapidly arpeggiates an F minor-major-seventh chord, functioning as a topic flag for the Herrmann-influenced suspense, which Desplat has acknowledged as an influence on this score.⁵¹ The horns provide the chromatic cluster around $\hat{1}$, but the strong melodic attractions of E-as- $\hat{7}$ and G \flat -as- $\hat{2}$ to resolve to $\hat{1}$ by semitone are denied by way of octave displacement of the $\hat{1}$, creating a strong sense of unresolved tension. This is played as the ghost-writer is

⁵⁰ See Carl-Henrik Buschmann (2015).

⁵¹ See the video by Cowie (2010), at 0:06:06.

pursued on a ferry by two men who apparently want to kill him because he has learned too much about their boss's corruption. The entrapment metaphors are also pertinent here, with the protagonist literally being trapped on a ferry. These examples should suffice to illustrate that this particular mode, with its two [012] trichords and maximal semitonal dissonance to $\hat{1}$ and $\hat{5}$, is a particularly useful resource for Desplat in extremely tense narrative situations. One further example will be discussed in relation to the close study of *The Grand Budapest Hotel*, in section 3.2.3.4.

2.3.8 Uses of Phrygian flat 4 (h_{ma}j3)

Phrygian $\flat 4$ (h_{ma}j3, $\{\hat{1} \flat \hat{2} \flat \hat{3} \flat \hat{4} \hat{5} \flat \hat{6} \flat \hat{7}\}$), is a variant of Phrygian in which every scale degree but $\hat{1}$ and $\hat{5}$ is flat. It one of the most overtly negative modes in Desplat's arsenal, and is almost always articulated by way of an h_{ma}j3-1-h_{ma}j4 oscillation.



Figure 2.38: Ruth's theme, from *The Ghost Writer*

The best examples are agents of mystery and foreboding in *The Ghost Writer*. One example is the theme in Figure 2.38. This theme, if it can be called that, is a series of similar melodic phrases, played with a luxurious degree of *espressivo*, by alternating violins and cellos to decorate the triadic oscillation $\flat ii \leftrightarrow i$. The theme becomes loosely symbolic of the antagonist, Ruth Lang.⁵² Ruth is a typical *femme fatale*; she seduces the ghost-writer, in part to keep him an ally, lies to cover her wrongdoings, and eventually is complicit in

⁵² Instances include: when Ruth confides in the ghost-writer while walking on the beach (0:18:26), when Ruth starts to seduce the ghost-writer (0:56:01), and when Ruth's connection to the CIA becomes clear (1:53:59)

his murder. The extent of Ruth's villainy is only revealed in a twist at the film's climax. Thus, to avoid giving the twist away, Desplat ensures that theme is not too overtly antagonistic; it could be interpreted as the cinematic narrator articulating a general sense of mystery, feminine elegance, and unhappiness around her character.

A salient feature of the theme is the two suspension⁵³ types played in minims over the tonic triad, which are both relatively rare: $\flat\hat{4} \Rightarrow \flat\hat{3}$ and $\flat\hat{9} \Rightarrow \hat{8}$. The $\flat\hat{4} \Rightarrow \flat\hat{3}$ one is particularly interesting in that at this slow tempo, the $\flat\hat{4}$ is prone to being heard as $\hat{3}$ until it resolves to $\flat\hat{3}$, meaning listeners may hear $\flat ii \Rightarrow I \Rightarrow i$, the first two chords of which are a SLIDE which will be linked to paradox in section 2.4.3.1. But whereas $\flat ii \Rightarrow I$ is a resolution, it is only fleeting, being followed swiftly by the negative affect of I giving way to i .

Other examples of an oscillating $hmaj3-1-hmaj4$ include the following. A mournful $\flat ii \Rightarrow i$ cadence is used in *The Imitation Game*, when Turing realises he needs to break his engagement with Joan in order to protect her (1:28:22). This is made more mournful by the 9-8 suspension on the $\flat ii$ in the top voice. A cadence in the opposite direction ($i \Rightarrow \flat ii$), with an upward 2-3 suspension over $\flat ii$, is played in *The King's Speech*, when Edward VIII abdicates, which is portrayed as a deeply bitter moment for both himself and his successor. It also provides tension in a percussion-driven action cue in *Syriana* (1:39:33).

2.3.9 Uses of Ionian mode (DIA1)

Ionian (DIA1, $\{\hat{1} \hat{2} \hat{3} \hat{4} \hat{5} \hat{6} \hat{7}\}$) is most notable for being the most schematically expected mode, and the most associated with positive affect. This of course does not mean that it cannot be surprising; it might surprise dynamic expectations in a context in which non-Ionian modes dominate. Neither does it mean the mode is necessarily always used in the expression of positive affect, because mode is but one musical parameter. The strongest association I found was between Ionian and morally "good" characters, who tend to be the protagonist or his/her close companion, and are often children. The mode was also associated with positive emotional states that frequently co-exist with

⁵³ The one in the second bar is unprepared, so technically an appoggiatura.

such characters, including comedy, happiness, love (romantic and otherwise), and fun, roughly in that order of frequency.

For instance, the child protagonist of *The Golden Compass*, Lyra, has an Ionian theme (Figure 2.39). Lyra and her young friends Billy and Roger share another Ionian theme that is often presented in a spirited tempo (Figure 2.40).⁵⁴ Both themes include flags for the topic *children's song*, to reflect the characters' innocence. The topic flags include Ionian, mostly stepwise motion, two-bar or four-bar phrases, emphasis on primary triads, and unsyncopated rhythm. Lyra's theme exemplifies how sentimentality can be evoked through the use of minor triads in an Ionian (or predominantly Ionian) context. The Ionian mode of the "Lyra, Roger & Billy" theme, on the other hand, is more directly expressive of the happiness of the children in their home environment. This is helped by its avoidance of minor triads. The mode of this theme is changed to minor elsewhere in the film, after the boys have been kidnapped,⁵⁵ using a common Wagnerian leitmotif development technique.⁵⁶



Figure 2.39: Lyra's theme from *The Golden Compass*, as it appears in "Epilogue" (1:38:00)

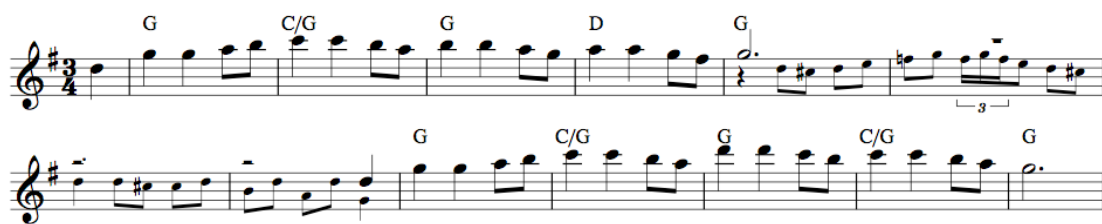


Figure 2.40: "Lyra, Roger & Billy" theme from *The Golden Compass*, as heard at (0:02:11)

⁵⁴ The small note-heads are an arrangement-specific detail in Lydian dominant (MMIN4), which I will discuss in section 2.3.12.

⁵⁵ See 1:03:46, for example, after Billy has been found by Lyra in a dire state.

⁵⁶ See Matthew Bribitzer-Stull (2015, 170).

The opening cue of *Fantastic Mr. Fox*, “Mr. Fox in the Fields” (Figure 2.41) provides a good example of how Ionian tends to be employed in this film. It is not so much a melodic theme as an assembly of delicately orchestrated ostinati and motifs in a style that mingles topic flags for bluegrass – including simple Ionian harmony, mandolin and banjo timbres – with topic flags for post-minimalism, including repetitive form and harmonic stasis on the tonic triad. The bluegrass topic emphasises the rural setting of the film, while the post-minimalist style is related to Wes Anderson’s minimalist visual aesthetic, as will be discussed in section 3.2.1.

The figure shows a musical score for the A-section of "Mr. Fox in the Fields". It is written in 4/4 time with a tempo of 133. The score consists of three staves: mandolin, banjo, and pizz. str. (pizzicato strings). The mandolin and banjo play a repeating eighth-note pattern, while the pizz. str. play a repeating eighth-note pattern. The score is divided into four measures, with the first and third measures containing the main melodic theme and the second and fourth measures containing a variation of the theme.

Figure 2.41: Skeleton score of the A-section of “Mr. Fox in the Fields”, from *The Fantastic Mr. Fox*. (0:01:55)

“Mr. Fox in the Fields” is important mainly in that it is stated at the start and end of the film, providing musical bookends that articulate the film’s overall light-hearted and charmingly idiosyncratic tone. The cheerful mood is achieved via a combination of Ionian with lively tempo. The idiosyncrasy partly lies in the use of instruments – such as banjo – rarely heard in conventional film music, but also in the way the motifs come to rest on $\hat{6}$ (B) over I. The music also emphasises some of Mr. Fox’s traits. The tonal

stability of the long, root position tonic is perhaps expressive of his straight-forward, unflappable optimism and self-confidence. And as Desplat has stated,⁵⁷ the use of physically small and often high-pitched instruments – such as mandolin, tambourine, and glockenspiel – was motivated by the small size of the character puppets. The metaphor in operation here is SIZE IS PITCH FREQUENCY.⁵⁸



Figure 2.42: Main theme from *The King's Speech*, first heard in “The King’s Speech” (0:00:47)

The King’s Speech is another film whose title theme is Ionian, at least in its A-section (Figure 2.42). The first instance of this theme has a scene-setting function. The film opens with still shots of a BBC radio studio in 1925. The *mise-en-scène*, including the images of microphones, depict an orderly, flawless, and sophisticated recording environment. The impeccably-spoken, tuxedo-clad BBC news reader that introduces Prince Albert’s inaugural radio broadcast is the embodiment of this neatness, which from a present-day perspective also appears excessively formal and old-fashioned. This set-up serves to highlight the shockingly awkward imperfection of the prince’s stammering speech that follows. The A-section of the theme is an important accessory to this set-up, emphasising the pristine BBC studio in the following ways. There are several topic flags for a piece of light, lyrical piano music from the Classical era, including Alberti bass,⁵⁹ simple tonic/dominant harmony in Ionian and discreet, compact phrases. This style, which prizes elegant simplicity and restraint above all else, and has present-day associations with formality, sophistication and class, is well-equipped to emphasises the condition of the BBC studio.

⁵⁷ See (Seitz 2013, 135).

⁵⁸ This metaphor is mentioned by Chattah (2006, 34).

⁵⁹ Alberti bass for Albert/Bertie – is this a coincidence or a deliberate musical pun on Desplat’s part?

The theme's other two statements relate to the characters of Prince Albert/King George VI and his supportive wife, Elizabeth. (The theme appears as "The Royal Household" in the soundtrack album). The second instance (0:53:56) is when Bertie is rehearsing tongue-twisters in a car with Elizabeth. The third instance (1:17:47) is when Myrtle Logue, a lower middle-class woman, is surprised to meet the new King and Queen (Bertie and Elizabeth) in her house, and sweetly invites them to dinner. The associations of elegance, class, and a bygone era remain relevant, especially in the third instance. Additionally, in these two scenes, the music also seems to be expressive of the characters' relatively light, jovial mood, in contrast to the many scenes in which they are troubled. Importantly, the music does not portray the characters as too stuffy and aloof, rather it contributes to a slant of the cinematic narrator that humanises them, as does the script's emphasis of Albert's nickname, Bertie. This is partly achieved through an accompaniment of pizzicato strings, which adds a layer of lightness, and partly through playful syncopations at the phrase endings.

I also discovered that Ionian could be used in the expression of affectively neutral, mixed or even negative emotional states when other musical parameters neutralise or overrule its positive affect. For instance, Kitty's theme from *The Painted Veil* (Figure 2.43) can be profoundly melancholy when performed slowly in low register, and when other elements of the narrative signal melancholy.⁶⁰



Figure 2.43: Kitty's theme, from *The Painted Veil*, as heard at (1:31:17)

⁶⁰ The most extreme case is the scene in which Kitty weeps at Walter's bedside as he dies (1:49:27).

In *De rouille et d'os*, a cue (“1er combat”) consists of long oscillations of DIA1-7-DIA5 with the occasional DIA1-4-dia3. This is played slowly in low mid-to-low register by accordion and electric guitars. The slow tempo, low register, and distorted timbres offset the positive affect of the major mode, resulting in a subtly melancholy, almost emotionally neutral tone. It accompanies a violent and illegal “mixed martial arts” street fight, which Ali wins, while his girlfriend Stéphanie watches, concerned. The music has a consistent tone throughout and is anempathetic to the violence and to Ali’s victory. It is more empathetic with Stéphanie’s anxiety, its primary purpose seems to be to make a comment about Ali’s character. By including loss-associated⁶¹ M4m, Desplat may be suggesting that Ali is essentially a vulnerable, sad person, which ironically manifests itself in his aggressive, macho exterior. Certainly, the music gives emotional depth and richness to the scene, while being somewhat elliptical about *which* emotion to feel. This somewhat emotionally ambiguous approach is relatively common in *De rouille et d'os* and the other Jacques Audiard film in the corpus, *De battre mon cœur s’est arrêté*.

To summarise, Ionian tends to be associated with morally good characters, the innocence of children and happiness, but can be more neutral or melancholy if other musical parameters, such as inclusion of minor triads, low register or slow tempo suggest negative affect.

2.3.10 Uses of Lydian mode (DIA4)

The salient feature of Lydian (DIA4, { $\hat{1} \hat{2} \hat{3} \hat{4} \hat{5} \hat{6} \hat{7}$ }) is $\hat{4}$, its only divergence from Ionian (DIA1). As was discussed in section 1.5.4, sharp scale degrees such as $\hat{4}$ can be agents of either positive or negative affect, but either way there tends to be an element of unfamiliarity. Lehman (2013b, 32) was quoted in the latter section as saying that Lydian in film music has “a wide range of applications, from a mixture of sentiment with wonder or amazement, to the intimation of sardonic, even devilish intentions behind a sweet façade.”

Lydian is very common in Desplat’s music, but it very rarely sounds fully tonicised. Most often, vertically explicit instances of Lydian occur on $\flat VI$ of Aeolian (dia6) or IV of

⁶¹ Murphy (2014b) argues that M4m is associated with sentimentality and loss.

Ionian (DIA1). The examples I will now discuss are the relatively rare examples that are unambiguously centred on I of Lydian. In Desplat's scores, Lydian is often used in connection with children, the benevolent supernatural, romance, and/or uplift.

Lydian can function as a flag for a topic I will describe as *childhood wonder*. Film music historian Mervyn Cook (2008, 95–96) traces this topic back to Korngold's score for *The Prince and The Pauper* (which features boy protagonists) but it was revived in the 1980s by John Williams, especially in his films with wide-eyed child protagonists, including *E.T. The Extra-terrestrial*.⁶² Lydian's aptness to express the benevolent supernatural may be partly topical, but it also arises metaphorically from its similarity to the positively valenced Ionian but slight alterity via the unfamiliar $\sharp\hat{4}$. This exploits the metaphor UNFAMILIARITY IS MUSICAL UNFAMILIARITY, as well as the positive topics that Ionian and its close relatives can conjure. *Rise of the Guardians* contains a number of examples of the *childhood wonder* topic that employ Lydian, for example when the Sandman returns from apparent death (1:15:48), flying around and creating dreams and miracles to the delight of the children observing. As is often the case, here Lydian is articulated by DIA4-2-DIA5, which, as Schneller (2014) writes, often functions in Williams' film scores as a signifier not only of *childhood wonder*, but of flight. The theme for the Tooth Fairy – who is almost always flying – also opens with an upward DIA4-2-DIA5 (Figure 2.44).

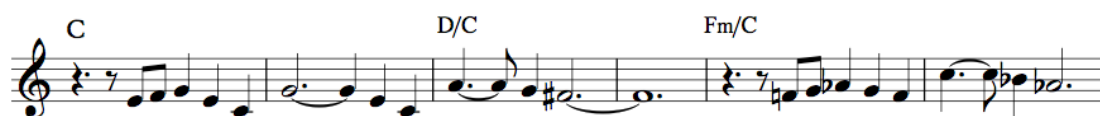


Figure 2.44: Tooth's theme, from *Rise of the Guardians*

Lydian's aptness to express physical uplift (or other freedom from gravity) relies on the metaphor VERTICAL SPACE IS PITCH FREQUENCY, and arises because $\sharp\hat{4}$ is higher than expected relative to Ionian-centric expectations, and has a strong melodic attraction upwards to resolve to $\hat{5}$. This manifestation of the metaphor has already been described in section 2.3.2, in relation to the $\flat\hat{6}$ of Dorian.⁶³ A Lydian example of the metaphor involves the Sandman character in *Rise of the Guardians*, who is so light that he

⁶² See Lehman (2013b, 14–21) for an extensive account of what he calls Williams' "soaring wonderment" style.

⁶³ The effect is stronger in Lydian because $\sharp\hat{4} \Rightarrow \hat{5}$ is a stronger melodic attraction than $\flat\hat{6} \Rightarrow \flat\hat{7}$.

appears to be walking on the moon. At 1:19:13 Lydian is used in simultaneously with this “moon-walking”. The choice of Lydian for this moment is overdetermined, in that it also involves Sandy’s benevolent supernatural powers, and children. In another example from the same film, at 0:31:05 Lydian is used when Pitch Black complains to the Guardians: “But then the Man in the Moon chose you to replace my fear with your wonder and light, lifting their hearts”. Lydian accompanies the second part of this quote, focussing on the benevolent supernatural and emotional uplift.



Figure 2.45: Lydian ostinato, from *Birth*, used in cues including “The Rendezvous” (0:32:21)

In *Birth*, two of the most frequently reoccurring musical ideas employ Lydian. Several cues include an ostinato based on a turn figure around $\hat{1}$ and $\hat{5}$ (Figure 2.45).⁶⁴ This is played by celeste, with harp at double speed in a mensuration canon, and is always underpinned by an oscillation of $\hat{1}$ and $\hat{5}$ in the sub-bass synth. The theme is leitmotivically associated with young Sean. This ten-year-old boy claims to be the reincarnation of Sean, Anna’s husband who died ten years ago. I have mentioned that Lydian can function as a topic flag for the supernatural. In this ostinato, the association is reinforced not only by the narrative link to Sean’s reincarnation claim, but by the use of two timbres associated with the supernatural: celeste and harp.⁶⁵ Celesta is doubly apt to symbolise a young Sean, because it has iconicity with sounds associated with childhood, such as music boxes and toy glockenspiels. Lydian is also doubly apt in that it can be a topic flag for childhood wonder as well as the supernatural.

⁶⁴ These include “The Rendezvous” (0:32:21), “Under a Spell” (0:41:20), and “Day Out” (0:50:56).

⁶⁵ Angels have frequently been depicted playing harps, and harp glissandi are associated with dream (Lehman 2013b, 24). Céleste is French for ‘heavenly’. Its association with the other-worldly probably date back to Tchaikovsky’s “Dance of the Sugar Plum Fairy” from *The Nutcracker*, an association that John Williams has reinforced in his *Harry Potter* scores.

The ostinato is looped for long durations (thirteen bars in “The Rendezvous”) and this minimalist repetition is also a significant topic flag. In section 1.5.3 I mentioned some of the expressive functions minimalist repetition can exhibit, according to Leydon. These include “aphasic ... notions of cognitive impairment, madness or logical absurdity” and “mantric ... a state of mystical transcendence”. Musicologist Tristian Evans (2016, 79–81) adds that there is a well-established association between minimalism and “the urbane environment of New York City”, especially through Steve Reich works, including *New York Counterpoint* and *City Life*.⁶⁶

Perhaps all of these associations are relevant in the case of the minimalist repetition in *Birth*. Psychologists John Izod and Joanna Dovalis (2011, 26) propose that Anna’s “fixation on Sean can be classified as neurotic and infantile”, suggesting the relevance of the “aphasic” minimalist topic. They also write that “throughout the film spectators are drawn to oscillate between sceptical and mystical positions”. I concur, and would add that the sceptical and mystical interpretations are often held in tension *simultaneously*. A striking example is the scene (0:32:29) in which young Sean is being interrogated by Anna’s friends and family, in an attempt to disprove his reincarnation claim. The interrogation questions encourage scepticism in the audience. Meanwhile, the Lydian ostinato in the cue “Under a Spell” – though not necessarily all elements of the cue⁶⁷ – seems to be pulling the audience in the other direction, implying that something supernatural *is* taking place. This implication is possible because of the supernatural topic flags mentioned earlier (Lydian mode, harp, and celeste) *and* because the minimalist repetition, according to Leydon’s mantric topic, can evoke a state of “mystical transcendence”. One could equally argue that the Lydian ostinato in *Birth* relates to Anna’s mental entrapment. The state of being “under a spell”, to quote the cue title, may imply either mental entrapment or genuine supernatural activity, or both, and this ambiguity is the essence of film’s mystery.

⁶⁶ Desplat has acknowledged that American minimalist composers John Adams and Steve Reich are influences on his style (Caschetto 2009)

⁶⁷ The bimodal elements of the cue “Under a Spell” add a further layer of complexity, and are addressed in section 2.4.1.



Figure 2.46: Love theme, from *Birth*, as heard in “The Rendezvous” (0:31:48)

The other musical idea employing Lydian from *Birth* is what I call the “love theme” (Figure 2.46). It first appears in the opening “Prologue”, perhaps to signal that the film will be a romance. Its leitmotivic association with romance is first established in the cue “The Engagement”, which (as mentioned in section 1.3.2) is a partly-diegetic piano waltz during Anna and Joseph’s engagement party. It is not Joseph that Anna is deeply in love with, however; she still yearns for her late husband, Sean, even entertaining the idea that a child might be his reincarnation. The theme is clearly a token of the topic *romantic yearning*, though its use of topic flags including *espressivo* high violins, slow tempo and appoggiaturas such as $\#4 \Rightarrow \hat{5}$ (bars 3-4).⁶⁸ As well as tapping into associations, Lydian appoggiaturas are arguably functioning as *metaphors* for yearning. Dissonance seeking resolution to consonance is arguably a metaphor for desire for emotional resolution. Moreover, in the case of Lydian appoggiaturas, this sense is mingled with positive affect in the form of the major tonic triad and near-Ionian mode.⁶⁹ Whether evoking *childhood wonder*, the benevolent supernatural, uplift, romantic yearning, or a combination of the above, Lydian is a versatile and potent expressive resource.

2.3.11 Uses of Mixolydian mode (DIA5)

Like Lydian (DIA4), Mixolydian (DIA5, $\{\hat{1} \hat{2} \hat{3} \hat{4} \hat{5} \hat{6} \flat\hat{7}\}$) is only slightly different to Ionian (DIA1), sharing the same scale type and all but one scale degree. As such, it inherits the largely positive and familiar associations of DIA1. While an emphasis on flat degrees can be a flag for negative affect, the $\flat\hat{7}$ alone, not being part of the tonic triad, is insufficient to preclude Mixolydian from being used by Desplat in joyful and familiar narrative contexts. So, what does the $\flat\hat{7}$ contribute that differentiates Mixolydian expressively from Ionian?

⁶⁸ Wagner’s famous “Prelude” to *Tristan und Isolde* features all of these topic flags, helping to establish the topic that was later continued in Hollywood.

⁶⁹ The theme also invokes the grief-laden *pianto* topic to signal Anna’s grief, through the $\flat\hat{6} \Rightarrow \hat{5}$ appoggiatura in the last two bars, which transforms the mode into used Lydian $\flat\hat{6}$ (NMAJ4), by inverting the earlier $\#4$ appoggiatura.

Sometimes a prolongation of a Mixolydian tonic provides a sense of anticipation, because Ionian-centric expectations can tend to reinterpret this as a sustained dominant in Ionian, and dominants cause listeners to anticipate resolution. This exploits the metaphor CLOSURE IN NARRATIVE IS CLOSURE IN MUSIC, in combination with Ionian-centric expectations. The cue “A New Prime Minister” in *The Queen*, which was already discussed as an example of CoS transformations, provides a good example of Mixolydian expressing anticipation. In this scene, a newly elected Tony Blair is on his way to meet the Queen at Buckingham Palace, with a sense of excited, optimistic anticipation. The excerpt notated in Figure 2.47 is in C Mixolydian till the F# in bar 7. I would argue that Desplat uses this Mixolydian passage in order to emphasise Blair’s feelings of keen anticipation about meeting the Queen.



Figure 2.47: Excerpt from “A New Prime Minister”, from *The Queen* (0:03:37 and 0:05:13)

Another aspect of Mixolydian is that it, and particularly its subtonic triad $\flat VII$, can be a style flag for several American styles. Film music researcher Tom Schneller puts it this way:

The lowered seventh degree in major has long been associated with American roots music (Appalachian folk, blues, jazz, and rock). It is also an integral part of Aaron Copland's nationalist style: $\flat VII$ features prominently, for example, in the iconic Fanfare for the Common Man... This cluster of associations helps to explain why Williams (along with Goldsmith, Horner, and other film composers) resorts to $\flat VII$ again and again as a musical shorthand for ‘America.’⁷⁰

⁷⁰ Schneller (2014)

Desplat is arguably exploiting this topic flag at the climax of *Argo*, in the cue “The Mission”, as the American hostages successfully escape Iran by plane. This cue includes a subtonic triad near its climax, as an American-flavoured chord between the tonic and subdominant triads. The whole cue has a noble, triumphant tone and is redolent of patriotic American sentiment attributable to the cinematic narrator.

In *Birth*, set in New York City, one of the prominent leitmotifs (Figure 2.48) combines two *Americana* topic flags: Mixolydian mode and quintal counterpoint. The counterpoint, to my ears, registers as an allusion to some of the two-part counterpoint in Aaron Copland’s *Fanfare for the Common Man* (Figure 2.49), which, as Schneller points out (2014, 53), “looms large” as a template for *Americana* in film music, especially in the scores of John Williams. The similarity is especially apparent in the cadence from IV⁵ down a perfect fourth to I⁵, preceded by a dyad with $\hat{6}$ in the bass (bar 3 of Figure 2.49 and bar 3 and 7-8 of Figure 2.48). The contour – steep ascent followed by steep descent – is also similar.



Figure 2.48: Mixolydian theme from *Birth*, as heard in “Prologue” (0:00:55)



Figure 2.49: Aaron Copland’s *Fanfare for the Common Man*, bars 15-17

Desplat disguises this allusion by orchestrating the material in low woodwinds and/or strings (compared to the heroic horns and trumpets in the Copland), which in the lowest dyads gives it an almost sinister character. Perhaps Desplat is deliberately taking a musical idea associated with an idealised American “common man”, and subverting it by making it into something darker. This makes it an appropriate leitmotif for Anna’s memory of her late husband Sean. She remembers him in idealised terms, but his memory haunts her and she does not know something the audience learns by the end, which is that he was unfaithful.

In *The Curious Case of Benjamin Button*, two Mixolydian cues are associated with the character Ngunda Oti, a pygmy born in an unknown African location. This is in the lively cue “Little Man Oti” (0:28:11), and its subdued reprise (0:38:58) when Mr Oti farewells

Benjamin. Mixolydian seems congruent in this context, perhaps in part because the first cue accompanies a trip into town in New Orleans during the jazz era, and Mixolydian can certainly function as a style topic of jazz. An additional reference to jazz is provided by a motif (Figure 2.50) that *may* be an allusion to the bass riff of the Miles Davis song *So What*. But the use of congas and marimba suggests that Desplat is infusing these two cues subtly with African style flags, as a nod to Mr Oti’s ethnicity. Mixolydian also feels somewhat at home with these African style flags, perhaps because many African modes share Mixolydian’s $\flat\hat{7}$ and other degrees, due to derivation from the harmonic series, equiheptatonic, and/or equipentatonic temperaments.⁷¹



Figure 2.50: Mr Oti’s motif (in E Mixolydian), used in “Little Man Oti” (0:28:11) from *The Curious Case of Benjamin Button*

Mixolydian also serves the light, fun tone of the first Mr Oti scene. A number of the instances of Mixolydian in the corpus have such a tone. For example, there is a theme in *The Golden Compass* (Figure 2.51) which is associated with the delightful time that Lyra has when she is first befriended by Mrs Coulter, before the relationship sours. Featuring a DIA5-10-DIA4 oscillation, it first enters as a B-section in the cue “Sky Ferry”. I venture that three associative factors make Mixolydian appropriate for tone of fun and delight. First is its positive affect, due to similarity to Ionian. Second is its slight deviation from Ionian, remembering Huron’s point that surprises can be inferred as humour, which in a milder form might simply be perceived as *fun*. Third is its ability to flag styles associated with relatively informal performance contexts (folk, blues, jazz, and rock), which arguably enables the mode to evoke light-heartedness by extension. Of course, these factors require corroboration in the narrative and music, often by fast tempo.

⁷¹ According to Gerhard Kubik’s article in Oxford Music Online (n.d.), there are three broad families of tonal systems used in Africa. Some are derived from the harmonic series. Modes in such systems are likely to approximate to Lydian Dominant (MMIN4), a close relative of Mixolydian. Other tonal systems are based on equidistant temperaments, especially equiheptatonic and equipentatonic. Equipentatonic approximates to a subset of Mixolydian scale degrees – $\{\hat{1}, \hat{2}, \hat{4}, \hat{5}, \flat\hat{7}\}$ – when rounded to the nearest equal tempered scale degree. Equiheptatonic approximates in the same way to Dorian, another close relative of Mixolydian. Some African modes are almost identical to Mixolydian, such as such as the mode *nyamaropa*, used by the Shona people to tune *mbira* thumb pianos (Scott Robinson n.d.).



Figure 2.51: B-section of “Sky Ferry”, from *The Golden Compass* (0:22:00)

2.3.12 Uses of Lydian dominant (MMIN4)

Lydian dominant (MMIN4, $\{\hat{1} \hat{2} \hat{3} \# \hat{4} \hat{5} \hat{6} \flat \hat{7}\}$, or the ‘acoustic scale’) is like Lydian in that $\# \hat{4}$ brings a sense of alterity and the child-like, but $\flat \hat{7}$ adds some of Mixolydian’s qualities, including anticipation and/or a jocular, light tone. These two non-Ionian degrees form the rare interval of a d4/A5. The major tonic triad endows the mode with positive affect, while the d4/A5 and $\# \hat{4}$ (both somewhat rare and therefore surprising) together lend it a quality that can either be humorously peculiar or benevolently supernatural, depending on which is better corroborated by the musical and narrative context. In Danny Elfman’s opening title to *The Simpsons*, the mode’s humorously peculiar qualities are exploited, and this theme’s prominence in popular culture has probably strengthened the association of the mode with a humorously peculiar tone.

Rise of the Guardians, which, like *The Simpsons*, is an animation that is sometimes off-beat in its humour, provides the best examples in the corpus of Lydian dominant. The best example that I would characterise as humorously peculiar is in the cue “Busy Workshop”. This accompanies a lively, whimsical scene in which North (Father Christmas) walks Jack Frost (and the audience) through his workshop at the North Pole, where yetis are painstakingly crafting toys and little elves provide slapstick comedy with their ham-fisted antics. The first subject of the cue (Figure 2.52) outlines the essential features of Lydian dominant: tonic triad and rarest interval. It alternates between doing this on the tonic and on the subtonic, articulating MMIN4-10-MMIN4. This is a way of preserving Lydian dominant as the local mode, without being restricted to the tonic chord.

The MMIN4-10-MMIN4 stripped of its extra-triadic tones articulates Mixolydian. The associative relevance of this is that Mixolydian can function as a style flag for rock, and the cue does veer further towards rock at one point when a yeti tests one of the toys – an electric guitar –, with this diegetic guitar solo integrating with its non-diegetic accompaniment. The hints of rock in “Busy Workshop” are also associatively congruent with the characterisation of the tattooed North and his yetis as streetwise and tough. At

the same time, the $\sharp 4$ of Lydian dominant balances this with its hints of child-like innocence and alterity, which is also appropriate for a depiction of Father Christmas's workshop. The passage is further decorated by flourishes of linear chromaticism. As explained in section 2.4.7, this trait can contribute to a sense of comedy and frenetic chaos.

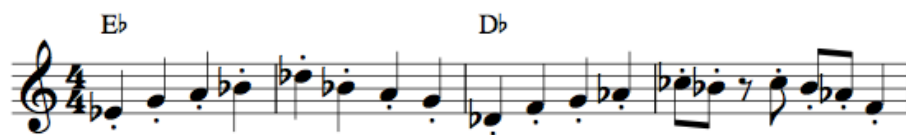


Figure 2.52: First subject of "Busy Workshop" in *Rise of the Guardians* (0:23:04)

Rise of the Guardians also provides some examples of Lydian dominant being used in a narrative context involving benevolently supernatural activity, such as when Jack Frost throws a magical snowball in Cupcake's face to cure her of her aversion to snow fighting (0:12:48). Further examples of Lydian dominant being used in supernatural contexts are found in *Birth*, with its theme of reincarnation (in "Prologue" at 0:02:31) and *The Golden Compass*, when Lyra is almost separated from her dæmon (in "Rescuing the Children" at 1:23:55). The latter example is interesting in that it is a moment of supernatural *malevolence*, although the perpetrators masquerade as benevolent.

Lydian dominant is used in a radically different way elsewhere in *The Golden Compass*: as an exoticist topic flag for Hungarian-Gypsy music.⁷² Throughout the film there is an association between the Gyptians (friendly Romani-like nomads living in a canal boats and ships) and the Hungarian-Gypsy music topic.⁷³ A variety of modes are used for this topic in the film, but a good Lydian dominant example is in the first statement of the "Lyra, Roger & Billy theme" (Figure 2.40) in which Billy is the Gyptian character. There is a swirling, Lydian dominant line between phrases of the Ionian theme (bars 5-8). This phrase focuses on the section of the scale containing the rarest intervals and scale degrees: $\{\sharp 4, \hat{5}, \hat{6}, \flat 7\}$, which is why it sounds more exotic than some other uses of Lydian dominant. Other Hungarian-Gypsy topic flags in this cue include the tonic pedal, the decorative triplet figure, high clarinets, and ethnic flutes.

⁷² See the footnote on page 142.

⁷³ Also see the cue "Lord Faa, King of the Gyptians" (0:42:42), for example.

2.3.13 Uses of Mixolydian flat 6 (MMIN5)

Mixolydian $\flat 6$ (MMIN5, $\{\hat{1} \hat{2} \hat{3} \hat{4} \hat{5} \flat \hat{6} \flat \hat{7}\}$), is similar to Lydian dominant (MMIN4) insofar as it shares the same scale type (MMIN) and a major tonic triad, but it lacks the $\sharp \hat{4}$ and therefore lacks comedic and/or child-like associations. Its rarest interval comes in the guise of a scale degree combination not found in common Western modes (DIA1, dia6, hmin1, and mmin1), namely $\{\flat \hat{3}, \flat \hat{6}\}$. As Table 1.6 and Table 1.7 reveal, the major tonic triad, while positively valenced, paradoxically enhances the ability of the $\flat \hat{6}$ to sound unexpected (lower than the expected $\flat \hat{6}$), and therefore negatively valenced. This musical paradox can potentially be exploited as a metaphor for a non-musical paradox. Moreover, the mixed affective messages of the mode can convey an affective complexity, or affective ambivalence in which spectators are not too obviously spoon-fed by the music. The narrative context may colour how the music is perceived as much as vice versa. As a consequence of the above traits, Mixolydian $\flat 6$ tends to be used by Desplat as a topic flag in mysterious otherness and/or exoticist topics.

In *Syriana*, the first subject of the cue “Tortured” (Figure 2.53) is in G Mixolydian $\flat 6$, and provides a good example of it being used in an exotic and dark narrative context. In the scene, Bob Barnes (George Clooney’s character) is lying on a hospital bed, after being tortured in Lebanon. During the cue, his CIA colleagues revoke his passports and begin interview him with an accusatory tone, which is the beginning of his estrangement from the agency. The cue features a haunting melody played by duduk (doubled by flute) over a tonic pedal tone. Four topic flags combine here to articulate the *Dysphoric East* topic mentioned in section 2.3.6: Mixolydian $\flat 6$, duduk, the melody/pedal texture, and slow tempo. The topic’s expressive function here is to convey the troubled physical and mental state of the protagonist, while being redolent of the geographic region in which he was tortured. The melody/pedal texture also highlights Barnes’ loneliness as his company turns against him.



Figure 2.53: Melody of "Tortured", from *Syriana* (1:08:39)

In *The Golden Compass*, Mixolydian $\flat 6$ is used in the first phrase of the leitmotif for Iorek, the armoured polar bear that Lyra befriends (Figure 2.54). Here the mode is less to do with the moral ambiguity of the character and more expressive of the mystery and exoticism that surrounds Iorek's race, which so fascinates Lyra. One trait of this race is that they make armour from "sky-iron" (from meteorites), and a bear's armour is considered to be its soul. This relates to a more specific association that the mode has accrued in film music, as a topic flag relating to the mystery of outer space.⁷⁴



Figure 2.54: Iorek's theme from *The Golden Compass*, as heard in "Iorek Byrnison" (0:51:20)

In *Girl with a Pearl Earring*, the cue "Vermeer's Studio" contains another example of Mixolydian $\flat 6$ being exploited to express mystery and an ambiguity of affect. The passage in question (at 0:08:35) consists of an extended oscillation between the tonic triad (D maj) and $B\flat$ aug in first inversion, with A-as- $\hat{5}$ and $B\flat$ -as- $\flat\hat{6}$ in the upper voice of these chords, respectively. This, played in luminous strings, accompanies the reveal of the great artist's studio to both the audience and Griet, the maid who has been instructed to clean it. The music, lighting, and acting performances collaborate to express an aura of awe-inspiring genius – a form of otherness – that reverences the room to an almost supernatural degree. This is expressive of both Griet's emotions and the slant of the cinematic narrator. Adding to the sense of enigma in this example is an enharmonic paradox.⁷⁵ While the $A \Leftrightarrow B\flat$ oscillation in the upper voice suggests that these are neighbouring scale degrees (consistent with my inference of Mixolydian $\flat 6$), a hearing where the " $B\flat$ " is in fact $A\sharp$ is somewhat encouraged in that a D-F \sharp -A \sharp configuration of the augmented chord preserves diatonic intervals between vertically adjacent pitches.

⁷⁴ A non-Desplat example of this association in action includes James Newton Howard's cue "First Crop Circles", in *Signs*.

⁷⁵ By this I mean that a pitch could be perceived as being spelled in two different ways, with almost equal likelihood, presenting a cognitive challenge for the listener.

2.3.14 Uses of harmonic major (HMAJ1)

Harmonic major (HMAJ1, $\{\hat{1} \hat{2} \hat{3} \hat{4} \hat{5} \flat\hat{6} \natural\hat{7}\}$) differs from Mixolydian $\flat 6$ (MMIN5) only in its raised seventh. This endows it with a rarer interval than MMIN5 offers: the A2/d7 on $\{\flat\hat{6}, \natural\hat{7}\}$. While the interval itself is rare, its occurrence on $\{\flat\hat{6}, \natural\hat{7}\}$ is familiar due to its use in harmonic minor (hmin1). Moreover, $\natural\hat{7}$ is a more common scale degree than $\flat\hat{7}$ in a major context, according to Table 1.6. This relative familiarity may explain why Desplat is less inclined to use harmonic major (HMAJ1) in exotic and mysterious narrative contexts than he is with Mixolydian $\flat 6$ (MMIN5). Harmonic major *occasionally* becomes a flag for exoticist topics, especially when the interval $\{\flat\hat{6}, \natural\hat{7}\}$ is given melodic emphasis, as it is in the accompaniment to “Postcards” from *The Curious Case of Benjamin Button*.⁷⁶ More consistently, however, the expressive emphasis in the scenes containing harmonic major seems to be a sense of heartstring-tugging tenderness, which also applies to the “Postcards” example. The tenderness is often between a romantic couple, or some other close relationship, often involving a child.

I have found that the sense of tenderness is most strongly associated with one of the mode’s CoTC transformations: HMAJ1-5-hmaj4. Desplat’s association between this transformation and tenderness may in part result from its status as a *flat-degree MXm*, which is positive when at rest on its tonicised triad, but has a non-tonicised triad that is negative for two reasons (its minor triadic mode and its use of a flatter-than-expected scale degree).⁷⁷ This is readily metaphorical with tender narrative contexts such as poignant love in difficult circumstances, or consolation overcoming sorrow. Moreover, unlike most other *flat-degree MXm* progressions, HMAJ1-5-hmaj4 is a CoTC, making it more simple and traditional – and therefore possibly more direct, nostalgic and sentimental – than a CoS or CoTCaS. One final explanation of the progression’s association with tenderness is its ability to function as a style flag for Romantic music of the nineteenth century, which contributes associations of earnest, emotive self-expression. However, HMAJ1-5-hmaj4 has also become something of a signature of Desplat’s own style. Through the present study, my assessment he has a greater penchant for it than other contemporary film composers.

⁷⁶ See section 3.1.1.

⁷⁷ See section 1.5.5.

Following are three examples from the corpus of HMAJ1-5-hmaj4 expressing tenderness between a heterosexual couple. Scott Murphy (2014a, 487) has noted the association in film music between M5m and heterosexual romance, showing that Desplat’s practice relates to wider practice in this instance. The first example is the strongest romantic moment in *Harry Potter VIII*, namely the dramatic kiss shared by Ron and Hermione, after they confront danger to destroy a horcrux with a basilisk fang. This is in the cue “In the Chamber of Secrets” (0:52:18).

The other two romantic examples are from *The Curious Case of Benjamin Button*, and involve tender moments in the love story of Benjamin and Daisy. When they first start to make love, following Daisy’s debilitating accident and their fallout (2:02:03), there is an oscillation of $I \Leftrightarrow iv^6$. Later, in “Talk by the Lake” at 2:11:01, there is a HMAJ1-5-hmaj4 plagal cadence as part of the progression $I^{M7} \Rightarrow vi \Rightarrow iv^6 \Rightarrow I^4$. This follows a scene in which Daisy promises Benjamin to never indulge in self-pity again.

Some of the following examples involve a child or child-like character, tenderness and a HMAJ1-5-hmaj4 transformation. In *Rise of the Guardians*, Bunnymund (the Easter Bunny) lovingly delivers a sleeping girl (Sophie) back to her bedroom following her escapade to his enchanted Easter-themed warren. We hear a leitmotif associated with dream in the film – which is Ionian in its natural state – in a version with its first phrase (Figure 2.55) re-harmonised using an auxiliary HMAJ1-5-hmaj4 progression. In “Jack’s Centre”, at 1:10:47, the same harmonisation of the “dream theme” is reprised in a different key, in a heart-string-pulling moment of reconciliation between the friendly adversaries Bunnymund and Jack Frost.

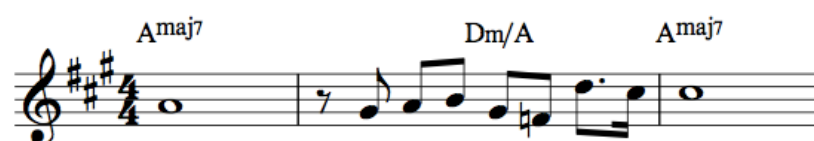


Figure 2.55: Dream theme from *Rise of the Guardians*, as heard in “Easter” (0:51:40)

In *The Golden Compass*, similarly tender moments between Lyra and Billy are scored using HMAJ1-5-hmaj4.⁷⁸ The common feature of all of these examples is that there is tender love between characters, almost always made poignant by some recent adversity that has now been resolved. This sense is emphasised by the use of a HMAJ1-5-hmaj4 transformation, which juxtaposes a heart-string-pulling minor subdominant with a resolution to a major tonic triad.

2.3.15 Uses of whole-half diminished (oct2)

The octatonic scale is a mode of limited transposition and consequently has a propensity for enharmonic paradoxes and tonal disorientation,⁷⁹ which lends itself to the metaphor DISORIENTATION IS TONAL DISORIENTATION.⁸⁰ It also has a propensity for acoustic dissonance – via its four ic1 intervals – and this can arguably lend the disorientation an antagonistic edge, exploiting Chattah’s metaphor PSYCHOLOGICAL/PHYSICAL STATE IS HARMONIC CONSTRUCT.

The scale degree content of the whole-half diminished scale (oct2) is $\{\hat{1}, \hat{2}, \flat\hat{3}, \hat{4}, \flat\hat{5}, \flat\hat{6}, \sharp\hat{6}, \sharp\hat{7}\}$, if one favours the most likely spellings of each scale degree, based on scale degree rarity in a minor context (Table 1.7). This is notable for its six degrees in common with harmonic minor (hmin1) and six in common with melodic minor ascending (mmin1). However, a more enharmonically agnostic list, based on my analyses of Desplat’s uses of this mode, is $\{\hat{1}, \hat{2}, \flat\hat{3}, \hat{4}, \sharp\hat{4}/\flat\hat{5}, \sharp\hat{5}/\flat\hat{6}, \sharp\hat{6}/\flat\hat{7}, \sharp\hat{7}\}$. The enharmonic ambiguities native to the octatonic scale give it a propensity to express disorientation.

⁷⁸ See bars 8 and 13-14 of Figure 2.39’s reduction of Lyra’s theme, and a similar moment in “Rescuing the Children” at 1:20:10.

⁷⁹ In scales with twelve transpositions, every scale degree has a unique intervallic relationship to every other scale degree, which helps orientation. This is not the case in the octatonic scale. Each scale degree is intervallically indistinguishable from three others (the ones 3 or 6 semitones above or below).

⁸⁰ The whole-tone scale (WT1) also lends itself to this metaphor, especially if it involves entry into a dream state (2013b, 24). Desplat does use WT1 this way in *Rise of the Guardians* when the Tooth Fairy is knocked out by a ball of magical dreamsand (0:40:14), and when a North Pole elf is rendered cataleptic by electrocution (In “Busy Workshop” at 0:23:31).



Figure 2.56: Rycart's theme, from *The Ghost Writer*, as heard in "The Old Man" (0:45:11). Reprised at 1:30:31 and 1:41:56.

Consider, for example, the passage in Figure 2.56, which is played in three scenes of *The Ghost Writer* relating to the mysterious character, Richard Rycart, and the line of investigation into corruption that leads the protagonist to turn to him. The passage gradually introduces the pitches of G# oct2 via a monophonic line over a tonic pedal. The D of bars 1-8 is not only an acoustic dissonance (ic6) with the G# tonic, suggesting a tense or disturbed psychological state, attributable to the protagonist. The D is also an enharmonically ambiguous pitch – and consequently contributes a sense of the character's mental disorientation, or need to solve a conundrum. The music variously encourages a D-as- $\flat\hat{5}$ hearing and a C \times -as- $\sharp\hat{4}$ hearing of the pitch. When it is first heard, listeners are likely to hear it as $\sharp\hat{4}$, because $\flat\hat{5}$ is rarer and therefore less plausible overall, as revealed in Table 1.6 and Table 1.7. Then when it resolves to B-as- $\flat\hat{3}$ in bar 2, the D-as- $\flat\hat{5}$ hearing probably becomes the favourite, because this avoids a rare augmented second from C \times to B, and a diminished tonic triad is outlined. In bar 5, the C \times -as- $\sharp\hat{4}$ hearing regains plausibility because of the resolution to A \sharp -as- $\hat{2}$, which is more plausibly a falling major third than a falling diminished fourth. Then in bar 10, an E-as- $\flat\hat{6}$ enters, which arguably causes the D-as- $\flat\hat{5}$ hearing to regain plausibility, retrospectively.

Desplat is continually subverting audience expectations, denying comfortable orientation within the scale, and also making it difficult for listeners to situate the pitch into an associative framework. Is it $\sharp\hat{4}$ – which can imply positive surprise as well as tension – or $\flat\hat{5}$ – which can be a style topic for blues and is very negatively valenced by virtue of being hyper-minor?² Depending on the listener, perhaps it is both or neither, but either way, the result is disorientation and uncertainty.

This sense is further emphasised by the fact that the D is played by the violins softly and with a slow onset. This is arguably an indexical sign for hesitance, because musicians tend to play this way when they are hesitant, just as people entering a room do so softly and slowly if they are unsure of themselves. Moreover, while the lingering dissonant pitch always resolves to something more consonant, the resolution pitch is never entirely satisfying – it is short and always outlines a harmony other than a consonant tonic triad. The overall impression is of the protagonist seeking, but not quite finding, satisfying answers to a mystery.



Figure 2.57: Music representing Bunnymund's angst, from *Rise of the Guardians* (0:18:14)

The music in Figure 2.57 presents a contrasting, much more playful use of whole-half diminished (oct2).⁸¹ The music is used twice to represent the resentful attitude of Bunnymund (The Easter Bunny) towards Jack Frost for causing a blizzard at Easter, decades ago. The rivalry is one between allies, rather than enemies, although Bunnymund is certainly cast as the Other in this rivalry, relative to Jack, the protagonist. This otherness is one factor that makes such this unusual scale an apt choice. The passage is

⁸¹ The $F\sharp-as-\flat\hat{7}$ of the penultimate bar is foreign to the mode, however may be interpreted as a chromatic passing tone, to complete a chromatic line from $G\sharp-as-\hat{1}$ down to $E-as-\flat\hat{6}$.

first heard at 0:18:14 when Bunnymund has Jack stuffed in a sack by Yetis so he can be sent to the North Pole via magical portal. The slant of the cinematic narrator at this point is to portray the situation as a mixture of zany humour, danger, and uncertainty, all of which whole-half diminished (oct2) are apt to express. Staccato bassoon functions here as an additional topic flag for comedy; in an association that dates back to Carl Stalling's scores for 1930s Disney cartoons,⁸² if not earlier.

These examples of Desplat's use of whole-half diminished (oct2) show that it can have a wide range of expressive applications, from the serious to the comedic, however the common factors between these two usages is a sense of otherness, uncertainty, and negative affect.

2.3.16 Summary of Desplat's expressive use of modes

Desplat uses a wide range of modes, and each mode serves a range of expressive functions. Here is a brief summary of some of the key findings about each of the fifteen modes discussed in section 2.3:

Aeolian (dia6) is used in narrative contexts involving negative affect and little or no otherness. This included scenes that are sad, romantic and melancholy, moderately tense, or solemn while reflecting on war. Dorian (dia2) has more mitigated negative affect, making it suitable for situations with mixed emotions, or more understated melancholy. It can also function as a style flag for pre-Baroque styles, or folk music, including British folk music. Its raised $\hat{6}$ can function as a metaphor for physical uplift. Harmonic minor (hmin1) can be somewhat more tense than Aeolian and Dorian if its $\{\flat\hat{6}, \natural\hat{7}\}$ interval is emphasised, and it can also function as a style flag for common practice period tonality, which is associated with Europe, past centuries, and high socio-economic status. Melodic minor ascending (mmin1) shares these associations, but is somewhat less prone to tension and negative affect than harmonic minor (hmin1), and can have a more whimsical, light quality. However, when combined with an arpeggiation of a minor-major-seventh chord, it can function as a style flag for Herrmann-influenced suspense.

⁸² Stalling admitted in an interview to favouring the bassoon "for comic effects" (Goldmark and Taylor 2002, 51)

Lydian $\flat 3$ (hmaj4) is the most common of a group of modes distinguished by the interval $\{\flat \hat{3}, \# \hat{4}\}$. It is often articulated by the TSPC hmaj4-11-

2.4 Desplat's expressive use of chromaticism

While the aim of Chapter 4 was to explore how Desplat supports filmic narratives through passages that adhere to a single mode, the aim of the present chapter is to use these insights to explore passages that do not; passages that are chromatic in some way or other. The chapter is divided according to the various ways in which chromaticism emerges. In some cases, two modes of the same tonic coincide within the space of one chord duration, creating *bimodality* (section 2.4.1). In other cases, a passage is dominated by one mode, but certain chords are borrowed from a parallel mode, in *modal mixture* (section 2.4.2). In some passages, one particular *chromatic TTPC* is the focus of a passage (section 2.4.3). This is a substantial section with subsections dedicated to particular TTPCs. In other passages, a non-chromatic TTPC is made chromatic by some inflection in its extra-triadic tones, creating a *CoTCaS* progression that is used for expressive and non-modulatory purposes (section 2.4.4). Some passages are characterised by the way in which they modulate, tracing a path through tonal space; these will be analysed using the *LRP map* and its scalar equivalents (section 2.4.6). Finally, some passages will be discussed in terms of their expressive use of linear chromaticism (section 2.4.7).

2.4.1 Uses of bimodality

Much of Desplat's music is based purely on heptatonic scales and transformations between them, but he sometimes creates bimodality by simultaneously overlaying two modes that differ in scale degree content (usually only slightly) but share a tonic. For instance, he might combine C Ionian with C harmonic major, or D Mixolydian with D Lydian. In this section, I will consider instances in which this occurs over a tonic triad. Instances that occur across two or more chords will be addressed in the next section, under modal mixture.

Sometimes, bimodality arises from the combination of two layers, such as a melody and an ostinato, that are in slightly different modes. Whereas Desplat could conform one layer to the mode of the other, he sometimes prefers to allow the two layers to be juxtaposed bimodally, which has the combined advantage of maintaining fidelity to these musical ideas while creating an interesting juxtaposition. The resulting *false relations* (A1/d8) are rare intervals, which cause surprise by the challenge they pose to heptatonic scalar expectations, especially when they occur as simultaneous intervals. Depending on the degree to which the false relations are emphasised and on the narrative and musical

context, they might provide increased tension or simply increased idiosyncrasy and colour. While some false relations can function as style flags (for instance, $\hat{3}/\flat\hat{3}$ might function as a style flag for blues), on the whole it seems that they are not so redolent of exoticist topics as are other chromatic intervals – such as augmented seconds. This could be advantageous if such associations are not desirable in the narrative context, but tension by way of rare intervals *is* desirable.

Bimodality can also provide a means to evoke the associations of two modes simultaneously, or the combination of the two might itself be exploited as a metaphor for an uneasy juxtaposition. If one of the two modes is prevailing in the passage, the pitch class(es) foreign to that mode will be the salient expressive feature, being heard as an intrusion that deviates from the dynamic expectations established by the prevailing mode. For instance, if C Ionian is the prevailing mode and it is combined with C harmonic major, $A\flat$ -as- $\flat\hat{6}$ would be the salient expressive feature because it deviates from C Ionian.

The first example is from “The Tunnel” from *Harry Potter VIII* (Figure 2.58). This cue accompanies a scene in which Harry and his friends travel at breakneck speed into the underworld beneath Gringotts bank, in a mine cart resembling a roller coaster. The cue employs a rapidly descending ostinato to emphasise the speed and direction of the train ride by metaphor, while using the slower, sweeping violin melody to cast the scene as part of an epic, grand adventure. The ostinato relates to onscreen motion, and the melody to the slant of the cinematic narrator. Thus, the music is both wed to the visuals and offers something the visuals do not offer.



Figure 2.58: theme and ostinato in "The Tunnel", from *Harry Potter VIII* (0:14:33)

As for the bimodality, it combines harmonic minor (in the melody and the second bar of the ostinato) with Aeolian (in the first bar of the ostinato). This can be represented as $hmin1/dia6$, with $hmin1$ coming first because it is the more prevailing of the two. By alternating between $F\sharp$ -as- $\natural\hat{7}$ and $F\flat$ -as- $\flat\hat{7}$ in the ostinato, each makes the other a little

less expected,⁸³ injecting a dash of volatility suitable for the dangerous ride. Of course, audiences are accustomed to the seventh and sixth degrees being a movable feast in minor keys, so hmin1/dia6 is note-worthy for its frequency within the corpus, not for its unconventionality.

Figure 2.59: excerpt from “The Queen Drives”, from *The Queen*.

In *The Queen*, the A-section of “The Queen Drives” (Figure 2.59) exemplifies another type of minor key bimodality, in which the sixth degree is variable: mmin1/hmin1. The prevailing F melodic minor ascending in the accompaniment is combined with F harmonic minor in the melody. Desplat probably wanted the light, whimsical associations of mmin1 for this fun scene of the Queen driving a Range Rover through rough terrain at Balmoral. But he was evidently unprepared to alter the melody (well known to audiences by this stage in the film) to fit with the accompaniment’s $\natural 6$, so he retains its usual $\flat 6$. Perhaps Desplat also favoured this $\flat 6/\natural 6$ incongruity as a metaphor

⁸³ Desplat also accentuates potential of the F^\sharp -as- $\natural 7$ to create surprise and interest by juxtaposing it with $B\flat$ -as- $\flat 3$ (melody, bars 2-3), creating a rare diminished fourth.

for the incongruity in the scene, between what the Queen is doing and what the public is more accustomed to her doing in her public role.

Perhaps the most striking example of bimodality in the corpus is the Lydian/Mixolydian bimodality (DIA4/DIA5) that characterises several cues in *Birth*. This includes “The Rendezvous”, when Anna enters Central Park to rendezvous with Young Sean (0:32:29), “Under a Spell”, when Young Sean reveals he knows things that supposedly only Sean could know (0:41:29), and “Day Out” when Anna and Young Sean have a day out together, with Anna’s unhealthy obsession with the boy taking hold (0:50:52). Two musical ideas are juxtaposed in these cues: the Mixolydian leitmotif discussed in section 2.3.11, and the Lydian ostinato discussed in section 2.3.10. Because the two modes are articulated in different registers and timbres, as shown in Figure 2.60 below, they are audibly distinct from one another rather than blurred together, and can arguably retain their modal identities as Lydian and Mixolydian elements. I would therefore argue that the resulting expression has three aspects: meaning specific to the Mixolydian leitmotif, meaning specific to the Lydian ostinato, and the unease and sense of duality caused by the pairing of the two.



Figure 2.60: excerpt of "The Rendezvous", from *Birth* (0:32:29)

The Mixolydian leitmotif symbolises the death of Sean, and relates to the question of whether or not he was an idealized American man, by alluding to Copland’s *Fanfare for the Common Man*, but in low register strings and/or woodwind. And the Lydian ostinato relates to the idea that ten-year-old Sean is the supernaturally reincarnated Sean, which could either be supernatural or a neurotic, obsessive delusion on Anna’s part. The bimodal combination of the two is arguably metaphorical for a number of dualities at work in the narrative: Sean versus Young Sean, death versus birth (and the idea that the

former triggered the latter), the scepticism versus mysticism, and Anna’s distaste versus enchantment in response to Young Sean and his reincarnation claim.⁸⁴

In the cues from *Birth* featuring DIA4/DIA5 bimodality, the Mixolydian $\flat\hat{7}$ is sometimes supplied not by the Mixolydian leitmotif shown in Figure 2.60, but by a sustained horn note on $\flat\hat{7}$, interspersed with short upper and lower neighbour tones. A similar effect is achieved in one sequence in *The Curious Case of Benjamin Button*, in which a montage is shown of Benjamin’s early life at the nursing home, as an apparent little old man who is in reality a young child (0:18:35). Here the prevailing mode is D Ionian, articulated by ostinati including harp and sub-bass synth (similarly to *Birth*). Over this, horn doubled by trombone sustain a $B\flat$ -as- $\flat\hat{6}$ that provides tension, creating a false relation with the $B\flat$ -as- $\natural\hat{6}$ in the ostinato, as well as other rare intervals including the $d5/A5$ on $\{\hat{3}, \flat\hat{6}\}$. The moments of $\flat\hat{6}$, creating DIA1/HMAJ1 bimodality, are paired with moments in which Benjamin is scolded by Queenie, his adoptive mother. But more is achieved than mere tension: the $\flat\hat{6}/\hat{6}$ duality is arguably functioning as a metaphor for the dualities highlighted in the scene, namely Benjamin’s “old” body versus his young soul, and realism versus magic. It is almost certainly deliberate that the most “normal” mode (DIA1) is being juxtaposed with one that can carry strong connotations of fantasy and otherness (HMAJ1).

2.4.2 Uses of modal mixture

I will now discuss instances of modal mixture, which is like bimodality in that it involves two parallel modes, but is expressed across multiple chords, where some chords belong to the prevailing mode, while others are “borrowed” from a parallel mode. Because the false relation is not sounded simultaneously, it is not a dissonance, yet the proximity of two pitches of the same diatonic class (e.g. $\flat\hat{6}$ and $\natural\hat{6}$) still generates surprise (and therefore expressive salience), because in purely heptatonic scalar music they are treated as mutually exclusive. A passage containing modal mixture will contain multiple transformations, some of which are simple CoTC transformations (i.e. chord changes

⁸⁴ For an example of DIA1/DIA5 bimodality from *Birth*, see “The Kiss”. This is an example of how bimodal dissonance can make a passage quite tense, but not in a conventional way, as the two modes being combined are generally associated with positive affect.

morally good and *eventually* triumphant underdog heroes, which is the essence of the film. Other well-known tokens of the topic include the main theme of *Star Wars* and the Fellowship and Gondor themes from Peter Jackson's *Lord of the Rings* trilogy.⁸⁶ As is often the case with this topic, the melody of the *Guardians* main theme is generally carried by strident brass, especially French horns, and accompanied by a rhythmically energised orchestral *tutti*. Like the *Star Wars* and *Gondor* themes, the opening melodic interval is a perfect fifth, but, less conventionally, the fifths descend, except for the closing one. As Scheurer (2007, 82) notes, this interval is strongly associated with heroism. By eschewing the more conventionally heroic major tonic triad, the theme helps to express the cinematic narrator's slant that the heroes have a tough and intimidating (read "bad-ass") side to them. This emphasis helps to distinguish the characters from their more conventional (and less macho) depictions. However, the theme counterbalances the gruffness by giving the final word to the surprising major triads discussed earlier.

A contrasting example of dia6/dia2 mixture is provided by a passage from "The Birth Feast" in *Girl with A Pearl Earring* (notated in Figure 2.62 and charted in Figure 2.63). Here the prevailing mode is B *Dorian*, but one chord – G maj as $\flat VI$ – is borrowed from B Aeolian. The passage occurs when Pieter, the local butcher's son, flirts charmingly with Griet as he delivers the meat, trying to get her to smile. It is a sweet, lyrical and relatively simple episode in a cue that otherwise casts the preparations for the birth feast as regal, energetic, festive, and extravagant. The sweetness is partly from the *expressivo* performances from strings and clarinet, and partly because the previous passage emphasised minor and hyper-minor scale degrees, meaning that the $\sharp \hat{6}$ in this Dorian passage sounds particularly bright by comparison. Thus, this passage is using Dorian for its relatively positive affect, with just a hint of melancholy. The chord borrowed from Aeolian (G maj-as- $\flat VI$) is interesting in that it deviates from dynamic expectations – by being borrowed from another mode and by being approached by a tritonal root motion – but it meets schematic, Aeolian-centric expectations. To my ears, this makes it doubly pleasurable because it has an element of surprise and at the same time a sense of being "correct" and therefore comfortable. (The same could be said of the $\flat VI$ that closes the

⁸⁶ In the *Star Wars* case this is Ionian/Mixolydian mixture (DIA1/DIA5), in the *Fellowship* case it is Mixolydian/Aeolian mixture (DIA5/dia6), and in the *Gondor* case it is Ionian/Aeolian mixture (DIA1/dia6).

Rise of the Guardians example). Desplat emphasises this special chord by making it the peak of the melodic ascent and placing it on the strong mid-point of the eight-bar hypermeter. This emphasis of the borrowed chord makes the passage slightly more emotionally heightened than if only one of the two modes were used, giving the scene a heightened emotional quality which in this narrative context is a kind of romantic aura of young love.

Figure 2.62: excerpt from "The Birth Feast", from *Girl with a Pearl Earring* (0:19:57)

c# dia3	f# dia6	b dia2	E DIA5	A DIA1	D DIA4	g# dia7
c# dia7	f# dia3	b dia6	e dia2	A DIA5	D DIA1	G DIA4

Figure 2.63: transformations in the passage from "The Birth Feast" in Figure 2.62, with CoS spaces arranged according to the circle of diatonic *ffths*. Dotted lines denote transformations between phrases, which in this passage tend to be larger leaps in tonal space. The progression begins with B Dorian (dia2). The top row represents triads within B Dorian, and the bottom row those borrowed from B Aeolian.

In terms of style, the harmony in this cue might be described as a twenty-first-century reimagining of Renaissance polyphony.⁸⁷ It does not matter that Desplat evokes both an older era (and a newer era, by way of clarinet) than the story's Baroque setting; what he is doing in this cue is creating a fantastical, stylized, and idealized representation of a Europe of a bygone century. Many cues in the film do not acknowledge the period at all, focussing purely on emotional matters. One advantage to employing quasi-Renaissance harmony rather than Baroque harmony is that it allows Desplat an expanded modal vocabulary that is closer to his normal harmonic style. It means he can use Dorian, for example, to evoke 'folkish' connotations that resonate with the status of Griet and Pieter as humble peasants.

⁸⁷ Style flags for Renaissance polyphony used here include Dorian mode, harmonic functions within Dorian rarely used in Common Practice Period (IV#, v, ii, and bIII), sequential harmony, phrases resembling plagal cadences (bars 3-6), and a bass line moving half the speed of the other parts.

Aeolian/Phrygian mixture (dia6/dia3) generally comes in the guise of dia6-1-DIA4 or dia6-10-dia2, in which $\flat\text{II}$ or $\flat\text{vii}$ are borrowed from Phrygian, respectively, and placed in an otherwise Aeolian context that includes $\sharp\hat{2}$. By establishing a *dynamic* expectation of $\sharp\hat{2}$ in addition to the usual *schematic* expectation, the $\flat\hat{2}$ sounds even more potent than usual. The dia6-10-dia2 examples are consistently associated with narrative contexts in which a character is extremely disillusioned or disappointed, which implies that the breach of musical expectations is functioning as a metaphor for the breach of the character's expectations. The dia6-10-dia2 transformation also owes its strongly negative associations from its status as a *flat-degree mXm*. Some examples of this include the following:

- *Syriana*: Migrant oil workers are made redundant, becoming vulnerable to poverty and deportation. ("Fields of Oil", 0:12:52)
- *The Painted Veil*: Kitty arrives at her new home in Shanghai and is very disappointed in it (0:10:24). She is even more disappointed with her run-down house in a cholera-stricken remote village (0:34:19).
- *Harry Potter VII*: Snape tells Dumbledore he will be dead within a year after wearing a cursed ring (1:19:36)
- *Godzilla*: Elle Brody farewells her son, fearing they will not see one another again (1:18:50)

The dia6-1-DIA4 transformation is not so strongly negatively valenced because of its major triad. It is brighter in affect than its close relative dia3-1-DIA4 because the $\sharp\hat{2}$ sounds both "raised" and familiar in the context, somewhat like $\sharp\hat{6}$ in Dorian. The dia6-1-DIA4 transformation tends to be used by Desplat in tender, poignant moments including the following:

- *Philomena*: Philomena reveals that she kept the secret of losing her son hidden because she did not want to sin (0:59:11). Shortly after this she is troubled because she has learned that her son never talked about her (1:02:39)
- *The Golden Compass*: a tearful Mrs Coulter reveals that she is Lyra's mother (1:26:36)
- *Rise of the Guardians*: Jack remembers how he self-sacrificially saved his younger sister from falling into a frozen lake (1:03:26)

- *Rise of the Guardians*: Jamie (a young boy) earnestly addresses his soft toy bunny, on the verge of losing his belief in existence in the Easter Bunny (1:06:32)
- *Harry Potter VII*: before the battle, the Weasley twins, one of whom will be killed, check up on each other (0:49:35)
- *Fantastic Mr. Fox*: Rat (an antagonist) dies after redeeming himself (0:55:15)
- *Godzilla*: Joe Brody dies with his son holding his hand (0:39:13)

In summary, modal mixture has many of the familiar, readily coherent qualities of a passage that is entirely within one mode, but it heightens a scene emotionally by creating surprise. This surprise might be cast as pleasurable and positive or unsettling and negative, depending on the narrative context and the presence or absence of negative topic flags such as flat degrees, and minor triads, or topic flags for psychological tension.

2.4.3 Uses of chromatic TTPCs

In this section, I look at particular chromatic TTPCs that are treated by Desplat as *absolute progressions*, and consider their expressive functions. By “chromatic TTPC”, I specifically mean those which are necessarily CoS or CoTCaS transformations, by virtue of at least one chromatic ic1 (A1/d8) occurring between the two triads, as discussed in section 1.4.7. The sections will address the SLIDE (m11M or M1m), the Tarnhelm (m8m), Tarnhelm-like TTPCs (m4m, m9m, m3m, and M8M), chromatic mediant Wechseln (m4M, M8m, m9M, and M3m), and tritonal TTPCs (m6m, M6M, m6M, and M6m). This section will also assume reader familiarity with the twelve categories of TTPC presented in Table 1.17, offering only minimal reminders of the concepts outlined in that table. Finally, to ease the discussion of these progressions, I will usually use roman numerals and scale degrees on the assumption that the root of the more tonicised triad is $\hat{1}$, because usually this is the case.

2.4.3.1 The SLIDE: m11M and M1m

The SLIDE (**S**) transformation displaces the root and fifth of a triad by semitone, while retaining the same pitch-class as third, as in $G\flat/F\sharp \text{ min} \Leftrightarrow F \text{ maj}$. Depending on tonicisation, it can create either m11M or M1m, but Desplat favours the former. Rare use of the SLIDE within the Western tradition can be traced as far back as Monteverdi.⁸⁸ Mid-twentieth-century Hollywood composers such as Bernard Herrmann used SLIDE occasionally,⁸⁹ but it became much more frequent in the 1990s, especially in the work of James Horner and James Newton Howard. The progression now has broad importance to early twenty-first-century film music, as well as to Desplat.

Murphy suggests that the SLIDE evokes “liminal states.” Lehman agrees, associating it with “boundary spaces”. According to Lehman (2012),

Boundary spaces include liminal psychological and metaphysical states such as dream, (un)death, and virtual reality, in which an ostensibly untraversable border between two fundamentally opposing conditions is uneasily straddled.

For Lehman, SLIDE is apt to express these paradoxical boundary spaces because the progression itself contains an intrinsic paradox. If he were to frame this in terms of metaphor theory, he might say that the relevant metaphor is PARADOX IN NARRATIVE IS PARADOX IN MUSIC. Lehman writes, “the paradox is a pure matter of harmonic proximity: it is near and distant, utterly foreign and perfectly accessible.” Simply put, two SLIDE-related triads are near in terms of parsimonious voice-leading work,⁹⁰ but distant in that their roots and fifths are related by a rare interval: ic1. A second paradox is that the pc of the shared third does not physically change, but is the agent of positive affect in one chord and of negative affect in the other. As Mazel’ put it, the pitch is “re-interpreted and made opposite in colour”.

To nuance this further, it is necessary to differentiate between different kinds of SLIDE. Riemann wrote about two kinds: the *Doppelterzwechsel*, in which roots are related chromatically (in the corpus this is most often $i \Leftrightarrow \flat I$) and the *Gegenterzwechsel*, in which the roots are related diatonically (in the corpus this is most often $I \Leftrightarrow \flat ii$).

⁸⁸ The example of the madrigal “M’è più dolce il penar” and other is provided by Karg-Elert (1930).

⁸⁹ For one example, see (Cooper 2005, 26).

⁹⁰ For instance, in $F\sharp \text{ min} \Rightarrow F \text{ maj}$ there are only two movements of one semitone, $F\sharp \Rightarrow F$ and $C\sharp \Rightarrow C$, assuming idealised voice-leading conditions.


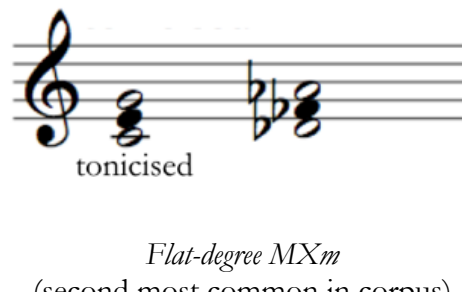
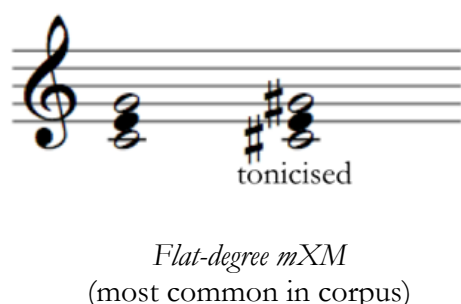
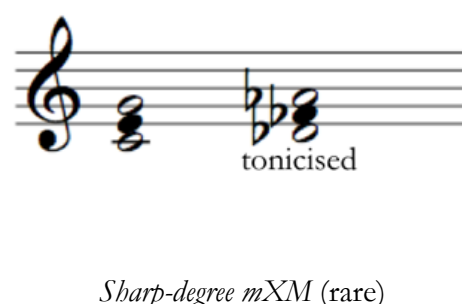
Ironically, the one in which the roots are related diatonically is the strangest and rarest⁹¹ because *overall* there are rarer intervals between the two triads, including a d2/A7 (i.e. an enharmonic equivalence) between the two thirds.

Both Doppelterzwechseln and Gegenterzwechseln have their own unique paradoxes in addition to the paradox I have stated that is general to all SLIDEs. For Doppelterzwechseln, the paradox is that the two chords fulfil the same function within the scale (tonic, submediant or mediant, usually), which give the two chords a high degree of “sameness”, in the sense that they can be used interchangeably. Yet it is the only triadic progression that forces *two* of its pitches to be chromatically altered, and they are the two structural pillars of the chord: root and fifth. In other terms, it has no CoTC component, contrasting with an unusually extreme CoS component. The combination of sameness and difference suggests a radical transformation from A to A', not a wholesale change from A to B, as in Gegenterzwechseln. Doppelterzwechseln also have an affect-related paradox, in that they are in the *flat degree mXM* or *sharp degree Mxm* categories. This means that flatter than expected degrees coincide with major triads (an affective mixed message) or sharper than expected degrees coincide with minor triads (also an affective mixed message), respectively.

For all SLIDEs, the sense of paradox and tonal surprise is focussed on the less tonicised triad: $\flat I$ in the case of $i \Leftrightarrow \flat I$ and $\flat ii$ in the case of $I \Leftrightarrow \flat ii$. Mazel' (1982, 172), writing about SLIDE-related keys, notes that “the non-primary key is perceived as a certain mirage or hallucination, and the rapid transition back to the primary key as its disappearance, dispersion, or return to reality.” As discussed in section 1.5.5, the triadic mode of the more tonicised triad signals the affective state when the progression is “at rest”, or to use Mazel's term, in a state of “reality”. The $\flat ii$, however, carries negative affect for two reasons: its minor triadic mode and its use of flatter-than-expected scale degrees ($\flat \hat{4}$ and $\flat \hat{2}$). Therefore $\flat ii \Rightarrow I$ might tend to be heard as return to a relatively positive “reality” from a very negative “mirage”. $\flat I \Rightarrow i$, conversely will tend to be heard as a return to a relatively negative “reality” from a more positive “mirage”. So, the M1m versus m11M distinction is just as important as the Doppelterzwechsel versus Gegenterzwechsel distinction. The resulting four categories of SLIDE are shown in Table 2.6.

⁹¹ It is certainly the rarest in the corpus, and I suspect it is also rarer in twenty-first-century film music generally.

Table 2.6 Four categories of SLIDE. In each quadrant, one triad has been designated as “tonicised”, as indicated by the word below one of the triads. This difference in tonicisation is the sole factor that makes an M1m distinct from the m11M in the quadrant below it.

	Doppelterzwechsel	Gegenterzwechsel
M1m	 <p><i>Sharp-degree MXm (most rare)</i></p>	 <p><i>Flat-degree MXm (second most common in corpus)</i></p>
m11M	 <p><i>Flat-degree mXM (most common in corpus)</i></p>	 <p><i>Sharp-degree mXM (rare)</i></p>

I will start by discussing examples of the m11M Doppelterzwechsel category, which includes approximately 80% of Desplat’s SLIDEs in the corpus. The first example I will discuss is from “Jack and Sandman”, from *Rise of the Guardians* (Figure 2.64). In the scene this excerpt accompanies, the Sandman (mythical bringer of good dreams) is in magical combat with his antithesis, Pitch (bringer of nightmares). Already, a Doppelterzwechsel seems metaphorically appropriate: the triads in a Doppelterzwechsel m11M are the antithesis of one another: alike in some ways and opposite in others, with one of the two being more “negative”. Unfortunately, Pitch wins the fight, dissolving the Sandman into black sand. The negative member of the antithetical pair (Pitch) prevails, while the positive member (Sandman) is rendered subservient. It is therefore metaphorically apt that vi is more tonicised than \flat VI in this passage. An additional interpretation of the passage is that the SLIDE functions as a metaphor for a radical transformation, exploiting the $A \Rightarrow A'$ sense of Doppelterzwechseln mentioned earlier. Sandy is physically transformed and a cataclysmic shift in power occurs that will result in children having only nightmares from this moment forward. Another notable feature of the example is that presents the SLIDE in two transpositions ($A \Rightarrow A\flat$ in bars 2-3 and $E \Leftrightarrow E\flat$ in bars 6-

8), with this the modulatory nature of the whole excerpt arguably functioning as a metaphor emphasising that the situation is in flux and extremely unstable. It also incorporates the “Tarnhelm” (m8m) associated with magic and antagonism, which will be the subject of 2.4.3.2.

An associative interpretation of this passage is that Desplat is using SLIDE as a topic flag for a topic associated with boundary spaces, the metaphysical, dream and death: an association that Lehman (2014) traces back to Schubert, and which could hardly be more appropriate for this scene. The metaphorical and associative interpretations are inter-related in that the topic probably arose *because* of its metaphorical qualities. In general, I find metaphorical explanations for SLIDE more plausible than associative ones, because its associations are arguably too diffuse and not as well defined as those of the Tarnhelm.

The musical score consists of four systems of piano accompaniment. The tempo is marked as quarter note = 79. The score features complex sixteenth-note passages with many sixteenth-note groups beamed together and marked with a '6' (likely indicating a sextuplet). The key signature changes from one flat to two flats. The systems are labeled with measure numbers and repeat signs: m11M, m8m, m11M, and m11M.

Figure 2.64: dia6-11-HMIN6 SLIDES in “Jack & Sandman”, from Rise of the Guardians (0:44:28)

In “Rescuing the Children”, from *The Golden Compass* (Figure 2.65) another m11M Doppelterzwechsel is used. This accompanies the scene in which Lyra has ventured into an arctic wasteland to rescue some missing children. The children’s kidnappers wish to cure them of original sin, but (paradoxically) at the expense of removing their soul. Lyra has just stepped into a place where good and evil have become oddly muddled, becoming almost indistinguishable from one another. The m11M Doppelterzwechsel is an apt metaphor for this confusion of affect.

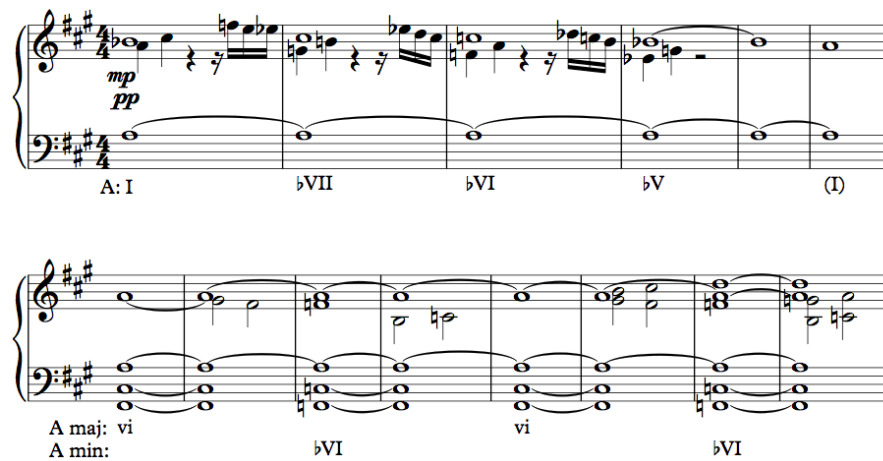


Figure 2.65: excerpt of "Rescuing the Children", from *The Golden Compass* (1:19:19)



Figure 2.66 excerpt from “Griet's theme”, from *Girl With A Pearl Earring* (0:03:35)

The m11M Doppelterzwechsel is used prominently throughout *Girl with A Pearl Earring*, usually as $i \Leftrightarrow bI$. It arguably functions as a metaphor for boundary spaces of various kinds, particularly in relation to the interior processes of Griet, the protagonist. The boundary space is arguably between: home and work; childhood and adulthood; family and strangers; poverty and affluence; Protestantism and Catholicism; the known and the unknown; comfort and unease; the ordinary and the extraordinary; prudery and sensuality; repression and expression; and artlessness and artistic enlightenment. One interpretation is that Griet hardly knows herself at various points in the film whether to be uneasy or enthralled by the unfamiliarity of her new surroundings, although she tends more towards the former, an interpretation reinforced by the fact that the tonic triad is minor. The contrast between the normality of i with the extraordinary bI , with its

ambiguous affect, seems an apt metaphor for this complex of emotions that Griet experiences.

A passage in the cue “Griet’s theme” (Figure 2.66) introduces the m11M Doppeltertzwechsel. This plays near the beginning (0:03:35) when young Griet leaves home for the first time to work as a live-in maid for the painter Vermeer. A development based on this progression (Figure 2.67) plays near the end when she returns along the same path after being fired. In another scene, an aspect of this dualism is highlighted by a Doppeltertzwechsel (Figure 2.68) in collaboration with a piece of visual symbolism. Griet owns a tile with an image of herself and her brother, painted by her father. To her this cherished object seems to symbolise home, family, and childhood. In the scene in question, Griet finds that it has been maliciously snapped in two by Vermeer’s daughter; the image of her is now separated from the image of her brother, which seems symbolic of her current state of being in an uneasy boundary space between a lost childhood and her new situation. The music perhaps implies that Griet recognises the symbolism of the broken tile. Certainly, it at the very least implies that she recognises some more profound significance in the breakage than the cruelty of Vermeer’s daughter. The metaphysical associations of the SLIDE, its paradoxes and its surprising of expectations all lend the progression a quality of spiritual or emotional profundity. This sense of emotional gravitas is also reinforced – unlike the B-section of her theme – by slow tempo and use of *espressivo* strings. Similar in its profound tone is the use of the m11M Doppeltertzwechsel in the scene in which Griet sees a *camera obscura* (a precursor to a camera) being carried into Vermeer’s studio, and wonders what it is. The SLIDE here endows the object – as seen through Griet’s eyes – with a sense of otherness. The music helps to convey the fact that this is a completely unknown object to Griet, which she regards with deep fascination and caution in equal measure.



Figure 2.67: excerpt from “Colours in the Clouds”, from *Girl With A Pearl Earring* (1:26:18)



Figure 2.68 excerpt of “Cornelia”, from *Girl with a Pearl Earring* (0:34:42)

In *The Ghost Writer*, a unifying element of the score is the m1m oscillation $i \Leftrightarrow \flat ii$. In “Prints”, a variant of this is created by inflecting the tonic triad to be major. The result is $I \Leftrightarrow \flat ii$ (M1m), a rare M1m Gegenterzwechsel. Later in the cue, Desplat tonally inverts it, creating $i \Leftrightarrow VII$. The scene, towards the end of the film (1:51:33), depicts a machine printing the autobiography that the ghost-writer has been working on throughout the film. Soon after this scene it is learned that the book contains a coded message revealing a political conspiracy of international importance.

On one hand, the music and images are suggestive of the satisfaction of a publishing project being completed and going to the printers. This much is achieved by the fast tempo, and major tonic triad. The $\flat \hat{6}$ as a neighbour tone to $\hat{5}$ (and related by rare $d4/A5$ to $\flat \hat{3}$) contributes the sense of fascination in the process. The $\flat ii$ is, as was mentioned earlier, negative for two reasons, being both a minor triad and containing two hyper-minor scale degrees ($\flat \hat{2}$ and $\flat \hat{4}$). Its role is to create a stark contrast with the positivity and normality of I. This unexpected element of darkness can function as a reminder of the dark secrets that the ghost-writer has uncovered while writing the book, and/or an anticipation the biggest, darkest secret that will be revealed shortly at the book launch. The book launch features a wonderful example of Doppelterzwechseln treated sequentially that will be covered in section 2.4.6.

A fuller exploration of the use of SLIDE in Desplat’s work is beyond the scope of this study, however the tree diagram in Figure 2.69 presents a summary of narrative elements that seem to coincide with SLIDE, all of which relate to boundary spaces and/or the enigmatic more broadly.

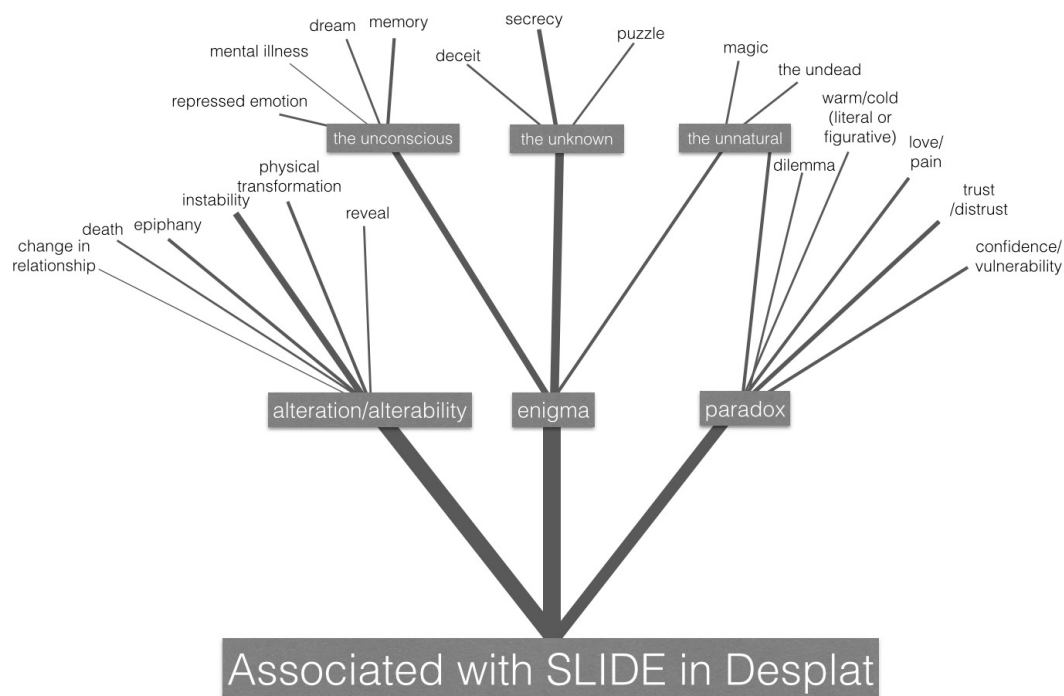


Figure 2.69 Associations of SLIDE in Desplat's scores

2.4.3.2 The “Tarnhelm” progression: m8m

In Desplat’s work, m8m – which usually functions as $i \Leftrightarrow \flat vi$ – is more frequent than any other chromatic TTPC, being used in all but five of the corpus films. It was dubbed “The Tarnhelm progression” by Bribitzer-Stull (2007) in reference to its famous use by Wagner as the leitmotif for a helmet that allowed its wearer – by dark magic – to become invisible, shape-shift, and teleport (Figure 2.70). Bribitzer-Stull writes:

In the case of the “Tarnhelm”, Wagner may have succeeded too well in his effort to establish an emotional association...frequently evoking the sinister, the eerie, and the eldritch. Most recently, the “Tarnhelm” progression has achieved an iconic role – one could even say a topical one – in music for science fiction-, fantasy- and horror-themed movies composed during the post 1975 renaissance of the orchestral film score.⁹²



Figure 2.70: The Tarnhelm motif in Wagner's *Der Ring des Nibelungen*⁹³

⁹² Bribitzer-Stull (2015, 137) notes that the m8m progression was used as early as Carlo Gesualdo (1566-1613), albeit very rarely. Nevertheless, Wagner’s *Tarnhelm* leitmotif remains the most important example.

⁹³ First heard in *Das Rheingold*, scene 1, bars 1-768.

Murphy (2014a) makes a similar observation, writing that of all TTPCs, the Tarnhelm progression “enjoys perhaps the most consistent and pointed narrative association within this style: antagonism, with offshoots of the eerie and sinister.” There are several reasons that the m8m was prone to accrue these associations. The Tarnhelm progression is a member of the maximally negative category *Flat degree mxm*, so is negative in affect when at rest on the more tonicised triad, and negative for two reasons when the less tonicised triad is sounding (the triad is minor *and* includes a flatter-than-expected scale degree). But the flat degree in m8m is unique in being $\flat\hat{1}$: the tonic itself – usually the context-defining pillar of tonal stability – is undermined. Because $\flat\hat{1}$ is so rare, listeners might even be inclined to hear it as $\sharp\hat{7}$ (particularly as it returns to $\hat{1}$), but to do that they would no longer be hearing $\flat vi$, but its enharmonically equivalent cousin which contains two rare intervals: $\{\flat\hat{6}, \sharp\hat{7}, \flat\hat{3}\}$. This perceptual ambiguity contributes to m8m’s sense of the uncanny. Another noteworthy attribute of the progression is its parsimonious voice-leading, which is caused by its small motion in the CoTC dimension. This allows it to invoke the metaphor ENTRAPMENT⁹⁴ IS SMALL TONAL SPACE CONTAINER. On the other hand, it has a relatively *large* motion in terms of the CoS dimension, so there is a near/far paradox that gives m8m a sense of trickery: the progression manages to leap into distant harmonic territory while scarcely moving a muscle. There are also two very strong melodic attractions ($\flat\hat{6} \Rightarrow \hat{5}$ and $\sharp\hat{7}/\flat\hat{1} \Rightarrow \hat{1}$) that magnetise the tonic triad, enabling the metaphor ENTRAPMENT IS MAGNETIC TONIC.

This metaphorical view of m8m helps to explain why m8m can work for Desplat outside of the specific associations that Wagner established. The scenes in which he uses m8m in the corpus fall into three categories. In the first, scenes strongly conform to the associations Wagner established, in that there is both antagonism and magic or otherworldliness. In the second category, there is antagonism, but nothing other-worldly. In the third category, there is no focus on antagonism, and nothing otherworldly – just painful, bitter heartbreak, and/or psychological entrapment.

⁹⁴ The “entrapment” metaphor is more likely than the “rest” metaphor also associated with magnetic tonics, given the maximally negative *Flat degree mxm* status of m8m.



Figure 2.71: Deathly Hallows theme, from *Harry Potter VIII* (0:08:20)

One of the clearest examples in the first category is found in Desplat’s two *Harry Potter* scores. The progression is the basis of a leitmotif for the “Deathly Hallows”, which are a trio of powerful magical objects comparable to Wagner’s *Tarnhelm*, which together make the owner immortal, and one of which, like the *Tarnhelm*, makes the wearer invisible. This theme is stated in *Harry Potter VIII* at 0:08:20 (Figure 2.71), when the wizard Ollivander describes the Hallows. The suggestion of the sinister is supported by the use of low register and slow tempo, both of which tend to function as flags for negative topics. The theorbo, a Baroque lute, is suggestive of the ancient and perhaps also – by way of its unfamiliarity – of otherness.

Desplat uses the *Tarnhelm* to highlight the dark magic of an object at least two other times in the same score: at 0:18:04 when Harry discovers one of the horcruxes (objects containing part of the Dark Lord’s soul to keep him alive), and at 0:25:30 when a magical sword vanishes following the death of its user (Griphook). *The Golden Compass* and *Rise of the Guardians* provide numerous similar examples, involving both antagonism and the supernatural. *The Curious Case of Benjamin Button* peppers some dark, magic-related moments with the *Tarnhelm* progression, such as when Benjamin dies as an 85-year old infant, after steadily growing younger in his appearance throughout his life. The *Tarnhelm* does not always *directly* relate to magic even in *Harry Potter VIII*, however. For instance, in one transition in “Panic inside Hogwarts” (0:41:14), a chain of successive *Tarnhelms* follow the ic4 interval cycle all the way around from C min and back to C min Figure 2.72. As the title of the cue suggests, such a tonal disturbance in this narrative context is arguably metaphorical for panic in the midst of battle. But the *Tarnhelm*’s association with dark magic is still indirectly relevant in that it is battle of Wizards.



Figure 2.72: chain of *Tarnhelms* in “Panic inside Hogwarts”, from *Harry Potter VIII* (0:41:14)

We turn now to instances of m8m in which there is antagonism but nothing otherworldly. The first example is from *Philomena*, and the presence of antagonism here is subtle: here the antagonists are puritanical and secretive nuns. Philomena is an older lady who is still haunted by a traumatic event of fifty years ago when she was living at Roscrea Abbey with these nuns. At the nuns' instruction, Philomena's toddler was adopted out to foreigners against her will. Figure 4.9 presents the opening of "Adoption", which underscored the moment Philomena recalls (in flashback) the day a car arrived that would take away her son. In the absence of much visual antagonising on the part of the nuns, and in the absence of a voice-over that overtly states that the nuns were corrupt, the music here is useful in providing a clear subtext about the sinister nature of the events. The tonic pedal reinforces the ENTRAPMENT IS MAGNETIC TONIC metaphor, while also creating additional dissonance. There is a sense in this music that Philomena's memory of this moment still holds her prisoner. The pair of suspensions in a sequential passage arguably function as a style flag for liturgical music, which in combination with m8m in the narrative context suggests a religiosity that is corrupted. The same figure re-occurs as a leitmotif in similar ways throughout the film. To a lesser extent, *The Ghost Writer* and *Girl with a Pearl Earring* also include a number of m8m progressions to evoke real-world antagonism.



Figure 2.73



Figure 2.73: Beginning of "Adoption", from *Philomena* (0:15:41)

Scenes in the third category use m8m to evoke bitter heartbreak and/or psychological entrapment. Such instances are especially prevalent in the three British biopics: *Philomena*, *The Queen*, and *The King's Speech*.⁹⁵ The heartbreak in these scenes is often related to a great loss such as bereavement. Scenes in this category are slightly more numerous than scenes in the first two categories, and it is also the most interesting category in that it challenges the dominant scholarly view that film scores tend to use m8m for its Wagnerian associations with dark magic.

The first example of this (Figure 2.74) also comes from *Philomena*, in a scene only a few minutes after the previous example. In the scene, Philomena watches through a barred gate, distraught and calling “Anthony!” as her son is driven away from the Abbey by his new adoptive parents. While there is certainly antagonism behind the events of the scene, the focus of the scene is very clearly on the emotional trauma that Philomena is suffering.

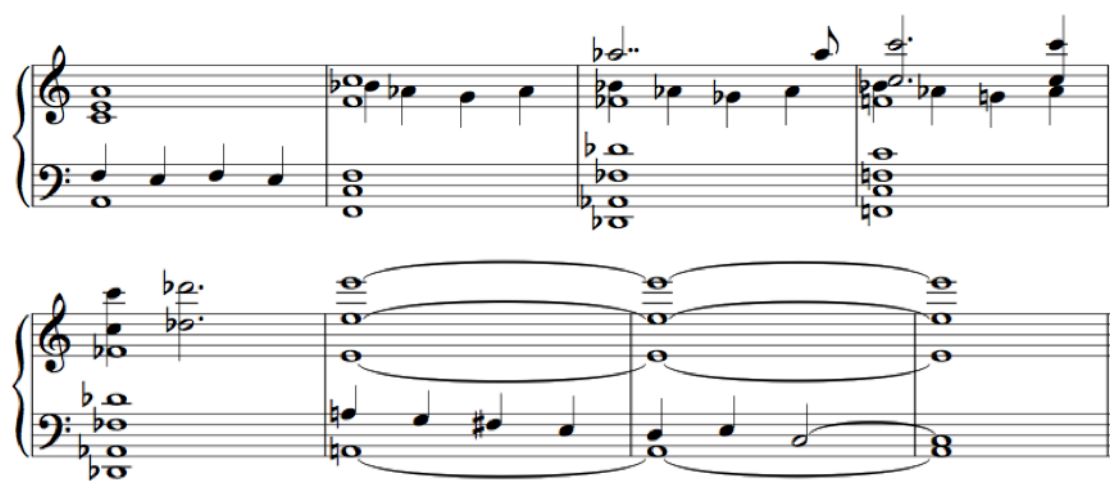


Figure 2.74: Excerpt from “Adoption”, from *Philomena* (0:19:01)



Figure 2.75: Tarnhelm during Tony Blair’s speech, in *The Queen* (0:24:44)

⁹⁵ John Williams uses m8m in real-world dramas such as *Angela's Ashes* and *Memoirs of a Geisha*, which may have aided the emancipation of m8m from its earlier associations with the other-worldly, paving the way for Desplat’s broad use of the progression.

Another example comes from *The Queen*. In this scene, Tony Blair is delivering an emotional tribute following the death of Princess Diana. This is one of three scenes in which the Tarnhelm is used in relation to the heartbreak following Diana's death. I find it interesting that Queen Elizabeth's *formal* and *public* expressions of grief for Diana towards the end of the film are scored mostly by a diatonic progression of major triads (tonic and subdominant), in stark contrast to the Tarnhelm progression used in Blair's speech. Chromaticism and minor tonality are therefore paired with impassioned expressions of grief – almost to a point of parody – while major triads and diatonic tonality are paired with a restrained, stoic, dignified and formal gesture of grief. This is important, because the difference between these two kinds of grieving is a central theme of this film.

A similar kind of bitter grief is again expressed by a Tarnhelm-laden passage in *The King's Speech* (Figure 2.76). In the scene this accompanies, George V has just died and his son has become King against his will. He sobs bitterly, and when asked to give an explanation for his extreme reaction, says "Poor Wallis."⁹⁶ Now I'm trapped." This is an excellent example of m8m creating strong attraction to the tonic, exploiting the metaphor ENTRAPMENT IS MAGNETIC TONIC. The Tarnhelm is again used shortly after this scene, when David announces his abdication, and a little while later, when his brother has become King and must admit to his wife that his first speech as King was a nightmare due to his stammering. In all such scenes, the Tarnhelm eloquently underlines complex and dark emotional low-points.

⁹⁶ Wallis Simpson was his intended wife who he would not be able to marry if King, as she was a divorcee.



Figure 2.76: excerpt from “The King is Dead”, from *The King's Speech* (0:43:13)

From the fifty-four scenes that I have looked at in my preparation for this section, it is evident that Desplat is aware of the more stereotypical uses of the Tarnhelm to evoke antagonism or dark magic. This shows itself most obviously in the films directed at younger audiences, especially when they touch on fantasy, science-fiction and horror themes. What is more interesting is the great extent to which Desplat has explored the use of the Tarnhelm outside of these contexts. The metaphorical capacities of m8m offer one explanation that it works in contexts other than those established through the Wagnerian association.

2.4.3.3 Tarnhelm-like TTPCs: m4m, m9m, m3m, and M8M

The other *mXm* Schritte with roots a third apart are not as strongly associative as the Tarnhelm (m8m), but because they share many of its traits, they arguably have similar expressive potential. This is particularly true of m4m, which is the tonal inversion of m8m. As such, the two TTPCs share the following structural features that contribute to negative valence and a sense of otherness:

- sinuous semitonal voice-leading
- tonal distance between the two triads in the CoS dimension
- the more tonicised triad is minor
- the less tonicised triad is *unexpectedly* minor ($\flat vi$ and iii contravene the expectation of $\flat VI$ and $\flat III$, respectively if the adjacent tonicised triad is minor).

As far as these similarities go, the two TTPCs have broadly similar expressive potential. In regards to the culturally-established associativity of m4m, I agree with Murphy (2014a) that it has less firm associations than m8m. I would add that m4m can borrow traces of the associativity of its more ubiquitous cousin, m8m, including dark magic, antagonism, and negative otherness more broadly. This is especially true in instances in which neither triad is much more strongly tonicised than the other, in which case the m8m/m4m distinction fades into insignificance.

However, in at least one musical idea, Desplat has used a clear example of m4m in a context of antagonism and negative otherness, where m8m might have been the more conventional choice. This is the leitmotif (Figure 2.77) for one of the antagonists in *The Golden Compass*: the king of the armoured bears, Ragnar Sturlusson. The piano plays an austere, bare four-octave harmonic interval for the tonic sonority.⁹⁷ Listeners know from bar 2 that there is a $E\flat$ -as- $\flat\hat{3}$, and G -as- $\flat\hat{5}$ in the scale, so they will arguably hear the bare octave in bar 3 as an incomplete C min tonic triad, and therefore bars 3-4 are heard as

⁹⁷ The metaphor at work in this bare four-octave interval seems to be something along the lines of ABSENCE IS MUSICAL ABSENCE. The interval highlights the absence of all of the other pitches and pitch-classes that we are accustomed to hearing between such registral extremities. In this narrative context – Lyra is walking into a dark cathedral-like chamber in the arctic, surrounded by intimidating polar bears – spectators might infer the absence of the mid frequencies in the musical texture to be a metaphor for the absence of warmth, light, colour, humanity, and/or friendliness.

$i \Rightarrow iii$, $m4m$. A distinctive feature of $m4m$ is that the root of chord iii (in this case the E^b of bar 4) is heard as a semitone higher than dynamically expected.

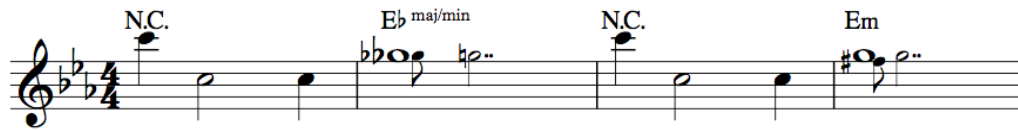


Figure 2.77: Ragnar Sturlusson’s motif, from *The Golden Compass*, as heard in “Ragnar Sturlusson” (1:07:20)

If $m4m$ can express antagonism and negative otherness, what are the differences between $m8m$ and $m4m$? In brief, I argue that $m4m$ has more mitigated negativity, and a more extreme sense of uncertainty. Its negativity is mitigated because it is an example of the *sharp-degree mXm* affect category, which I argue in section 1.5.4 is less negative than the *flat-degree mXm* category to which $m8m$ belongs. This also means that $m4m$ invokes more of a sense of paradox, with iii being an aberration from the expected $bIII$ by **S**-mixture. (Whereas in $m8m$ bvi^b is an aberration from the expected bVI by the more conventional **P**-mixture.) This SLIDE-like quality of $m4m$ is made quite explicit in the “Ragnar” example, in that bars two and four are SLIDE-related, albeit with a complication arising from the mixed thirds in bar two.

The stronger sense of uncertainty in $m4m$ compared to $m8m$ can be explained as follows. When $i \Rightarrow iii$ is heard, listeners might be somewhat inclined to hear it as $bvi \Rightarrow i$, once both chords have sounded. This is true even if the tonic status of i is affirmed by factors such as strong position in the hypermeter, lower register and coming first, as in the “Ragnar” motif. As Murphy argues (2014a, 491) this phenomenon could be caused, in part, by listener awareness that $m8m$ is more common (and therefore more expected) than $m4m$. It could also be to do with the rarity of the mediant chord in tonal harmony, compared to the submediant. In any case, if the iii in $m4m$ accrues some tonic-like stability of its own, there will be little melodic attraction back to i , and this endows $m4m$ with a greater tonal uncertainty than $m8m$, which can become metaphorical for uncertainties in the narrative.

Returning to Ragnar’s motif, $m4m$ ’s combination of uncertainty with connotations of negative otherness seems even more apt for this character than $m8m$, in that the king is uncertain of himself. He displays attributes of a fragile narcissist in that his behaviour alternates between the rage of a tyrant – he comes close to mauling Lyra on their first

meeting, for example – and feelings of inadequacy – he desires to be less like a bear and more like the humans of the story, possessing a *dæmon*. As well as evoking Ragnar's underlying emotional fragility, m4m is apt to convey other characters' emotions in the scenes in which it is deployed, such as young Lyra's caution when approaching the dangerous king in his palace, at 1:07:20. Like much good film music, the musical choices are over-determined, meaning they are apt for multiple reasons.

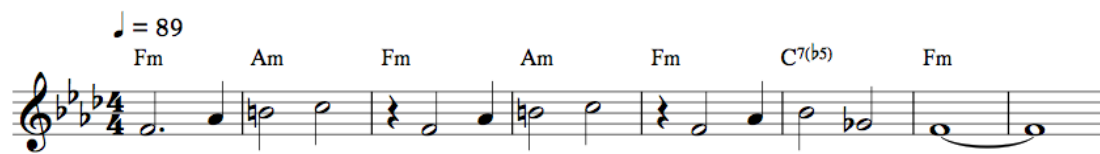


Figure 2.78: main theme from *Zero Dark Thirty*

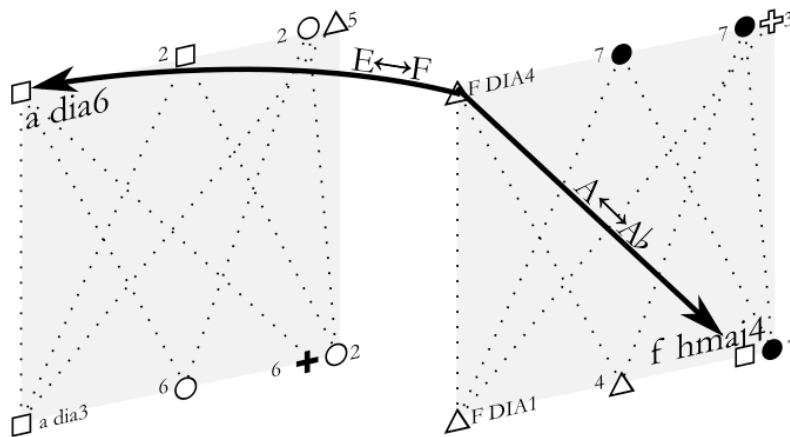


Figure 2.79: hmaj4-4-dia6 on F in *Zero Dark Thirty*'s main theme

A salient feature of this leitmotif is the repeated upwards-resolving appoggiatura on $\hat{\#4}$ (B) first heard in the second bar of the melody. As mentioned in the introduction to 2.2, $\hat{\#4}$ in the context of a minor tonic can be a flag for exoticist topics. Another flag for exoticist topics used here is the duduk, discussed in section 1.5.2. In this narrative context, these flags will clearly be inferred to relate to the Pakistani setting. The theme is quite unusual in its combination of Eastern topic flags and triadic chromaticism.

The most prolonged statement of the theme is in the cue “SEALs Take Off”. The SEALs (“Sea, Air and Land”) are a team of forty US Navy fighters, and in this scene, they are preparing to take off in helicopters to assassinate Osama bin Laden. Desplat’s

motivation for using m4m for this moment may be, in part, its connotations of antagonism due to its similarities to m8m. The antagonism of Bin Laden and his allies is the looming, largely unseen presence that triggers the whole film's whole plot, including the torture of terrorism-related suspects. Unlike m8m, however, m4m is also apt to express uncertainty, which in this narrative context may be inferred to be anxiety and jeopardy relating to the raid on Bin Laden. The anxiety might be attributable to the fighters themselves, or to the slant of the cinematic narrator, or to Maya, the watching CIA agent who found Bin Laden, and the film's protagonist. The fact that the theme is played in orchestral brass (horns and trombones), with their military connotations, might suggest that the theme is more directly related to the SEALs themselves, at least in this instance.



Figure 2.80: The master's house theme, from *Girl with a Pearl Earring*

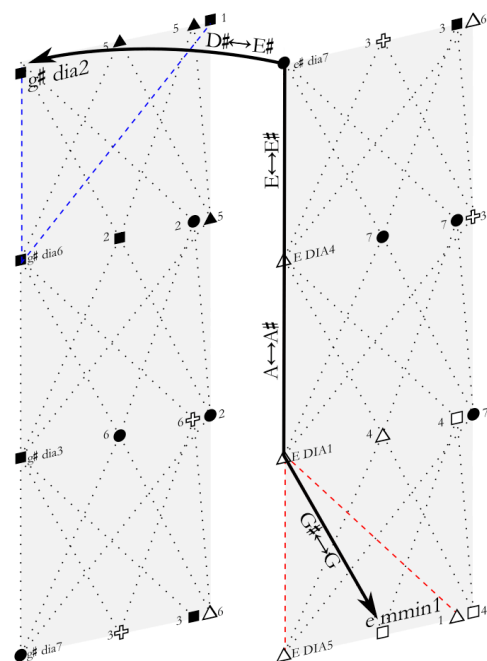


Figure 2.81: mmin1-4-dia2 on E in "The Master's House" theme, from *Girl with A Pearl Earring*

Another theme employing m4m is found in *Girl with A Pearl Earring*, and occurs in the cue “*The Master’s House*” and its reprises. This m4m is an instance of mmin1-4-dia2,⁹⁸ which is charted in Figure 2.81.⁹⁹ A comparison between this and the *Zero Dark Thirty* example (Figure 2.79) reveals that, while they are both m4m, the extra-triadic tones make the *Girl with A Pearl Earring* example a much more substantial motion in tonal space: more a modulation than a chord change, which is also a result of the longer duration on each chord. However, despite the *Girl with A Pearl Earring* example being more modulatory, its function as an oscillation is the same. In both cases, oscillation is a kind of stasis in which the vacillation between two locations in tonal space is the expressive object. Perhaps the vacillation can be interpreted as metaphorical for uncertainty, and lack of stability.

All four of the instances of this theme accompany sequences containing a hurried anxiety. In the second and fourth instance, this involves Vermeer’s paranoid wife and conniving daughter antagonising Griet. This shows that, like m8m, m4m can be a topic flag for antagonism, as well as a variety of other unsettled and negative states, such as paranoia or anxiety. Here the uncertainty of m4m is apt, given the somewhat unhinged mental state of Vermeer’s wife.

A close analysis of m3m and m9m is beyond the scope of this study, and there are too few strong examples of these to form generalisations of how they might be used, except to say that they are Tarnhelm-like. In particular, m3m is similar to m8m in that it is a *flat-degree mXm*. Because there is only one semitonal voice-leading in these progressions rather than two, there are weaker melodic attractions between the two chords, which makes them less apt to fulfil the entrapment metaphor involving a magnetic tonic. These TTPCs tend to occur as part of triadically chromatic passages rather than becoming the

⁹⁸ The setting is as an ostentatious Baroque household, and the ostentation is an important element of its mood, as perceived by Griet. These factors of setting may have been motivators for Desplat to employ melodic minor ascending (mmin1) as the tonic mode. Its associations within the corpus include ostentation – due to its potential to function as a style flag for Classical music – as well as antagonism, as covered in section 2.3.4. On a more practical level, the ♭6 and ♭7 also provide a bridge of common scale degrees to the Dorian (dia2) scale on the mediant, as seen especially in bar 4. This is important in counter-balancing the discontinuity of the three scale degree alterations.

⁹⁹ Two colourful deviations from this TSPC are the C natural (♭4/iii) in the antepenultimate bar of Figure 2.80, and the F* (♯7/iii) that can occasionally be heard in an accompaniment part in the last quaver of the fifth bar. These contribute to a sense of volatility in the music.

focus of a passage as *absolute progressions*. However, they provide additional TTPC resources that can provide interesting substitutes for m8m, which is so effective that it tends to be overused in film music.

M8M is in some ways the antithesis of m8m, both being of the **LP/PL** family, and both involving a flat submediant, but being of opposite mode and therefore opposite affect. It is sometimes exploited for the metaphor REST IS SMALL TONAL SPACE CONTAINER and REST IS MAGNETIC TONIC. For instance, it is used this way, over a tonic pedal, in order to give a sense of finality and closure at the end of *Philomena* (1:27:56). Similarly, in *The King's Speech*, it is used immediately following the death of King George V to give a sense that he has come to rest. In both cases, the chromaticism heightens the sense of dramatic significance. Because M8M is a *flat-degree MXM*, it is positive at rest, otherwise positive mitigated by a subtle negative. This “subtle negative” created by the flat degrees in the non-tonicised triad adds poignancy in the case of these two examples, while the resolution from this to the more positive tonic triad (which involves a $b\hat{3} \Rightarrow \natural\hat{3}$ alteration) feels like a resolution in more ways than one: the tonic triad is not only more stable but is without any negative topic flags.

2.4.3.4 Chromatic mediant Wechseln: m4M, M8m, m9M, and M3m

The chromatic (sub-)mediant *Wechseln* include the *hexatonic pole* TTPCs (m4M and M8m) and the **PRP** TTPCs (m9M and M3m). Unlike chromatic mediant *Schritte*, they cannot be derived from Aeolian or Ionian TTPCs by simple **P**-mixture, but require either **S**-mixture, or **P**-mixture in addition to an already chromatic transformation. They also differ from chromatic mediant *Schritte* in that their sense of tonal distance is not mitigated by parsimonious voice-leading. They are therefore even more outlandish and enigmatic than m8m and its close relatives discussed in the last section. As such, triads related by these transformations sound very much like they do not belong together at all, making them apt to convey perplexity, strangeness, the supernatural, and/or enormity. The most prominent use of one of these transformations as an *absolute progression* is in the “Enigma motif” from *The Imitation Game*, which was used in to illustrate node and arrow diagrams and is notated in Figure 1.6. This motif is based on the m4M (*hexatonic pole*) oscillation $C\sharp \text{ min} \Leftrightarrow F \text{ maj}$. Mark Richards (2015b) calls this theme “Secrets”, and accurately observes its leitmotivic connection to the theme of secrets in the film, especially the secret of the Enigma code. As was mentioned in section 1.4.7, Cohn (2004) associates the *hexatonic pole*

progression with the uncanny. In this narrative context, m4M is evoking perplexity, complexity and mystery; the otherness of the unknown. The theme is first introduced on the first shot of the “Enigma machine”, used to decipher encrypted Nazi messages.

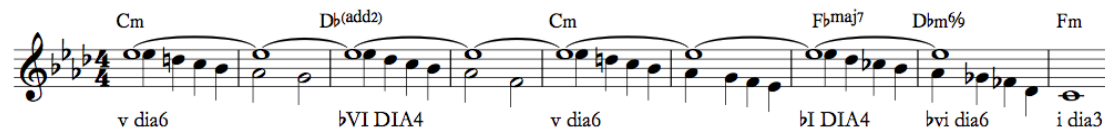


Figure 2.82: B-section of the main theme from *The Imitation Game* (0:06:12)

Desplat also manages to incorporate an m4M into the B-section of his main theme (Figure 2.82), integrated into a relatively tonal context. The radical flat-ward shift occurs just as Neville Chamberlain declares war with Germany and footage of marching Nazi soldiers is shown. The ♭vi (in the penultimate bar) acts as a kind of post-tonal dominant-substitute, but remarkably, ♭I acts as its pre-cadential chord, and more remarkable still, it is approached from v, which is where the *hexatonic pole* occurs. The expressive impact is of a dark shadow being cast over the nation as it enters war. But Desplat does this in such a way that is remarkably smooth by dividing the shift into two steps. In the first stage – the v dia6 ⇌ ♭I DIA4 progression – does all the CoS work, lowering three scale degrees. This strikes the ear as a radical shift, but not necessarily one for the worse, because while flattening degrees it simultaneously brightens the local mode from Aeolian to Lydian. But from ♭I, it only takes the smallest of CoTC movements and the music has arrived at ♭vi, which is negative both due to its triadic mode and its inclusion of a hyper-minor scale degree (♭ $\hat{1}$). The root motion C ⇌ F♭ is an extraordinarily rare d3/Λ6 (with a span of eight). Consequently, there is a tremendous capacity for “re-purposing” of pitches to vastly different local scale degrees. E♭-as-♭ $\hat{3}$ /v becomes E♭-as- $\hat{7}$ /♭IV, and B♭-as-♭ $\hat{7}$ /v becomes B♭-as- $\sharp\hat{4}$ /♭IV. These pitches are the same pc, but change “colour” dramatically, and (paradoxically) in the direction of positive affect. Whether treated as *absolute progressions* or integrated into more tonal contexts, the chromatic mediant *Wechseln* provide Desplat with another potent resource for expressing the uncanny and the perplexing.

2.4.3.5 The tritonal TTPCs: m6m, M6M, m6M, and M6m

Murphy (2006) observed that M6M has come to be associated with outer space in film music, by virtue of conveying colossal distance through the metaphor of tonal distance. Because none of the corpus film are about outer space, there are no strong examples of this association in the corpus, however Desplat certainly uses M6M in connection to outer space in *Valerian and the City of a Thousand Planets* (2017).¹⁰⁰ In regards to m6m, the minor equivalent of M6M, Murphy (2014a, 488) argues that it is “quite at home accompanying antagonism”, but more so than m8m, is associated with “mortal threats and dangers issued less from adversarial characters, and more from situations, objects, or natural phenomena.” Desplat certainly exploits this association between m6m and mortal threats. In *The Painted Veil*, at 0:42:13, an oscillating m6m accompanies a disturbing sequence showing the horrors of cholera in the overrun hospital of a Chinese village. In *The King's Speech*, at 1:31:15, an oscillating m6m evokes “The Threat of War”, to quote the cue title.

I have grouped the tritonal TTPCs together in this section, not only because they share the tritonal root relationship and are distant in tonal space, but because Desplat uses all of them in *Godzilla*, which suggests that he considers them to be interrelated. The opening title music for *Godzilla* (Figure 2.83) contains two auxiliary m6m progressions (bars 7-9 and 11-13), along with a more prominent oscillating m11m. *Godzilla* is more about a mortally threatening situation and nature running amok than any antagonistic individual, thus the use of m6m in this situation accords well with Murphy's observation.

¹⁰⁰ See, for example, 0:35 in the track “Valerian's Armor”.

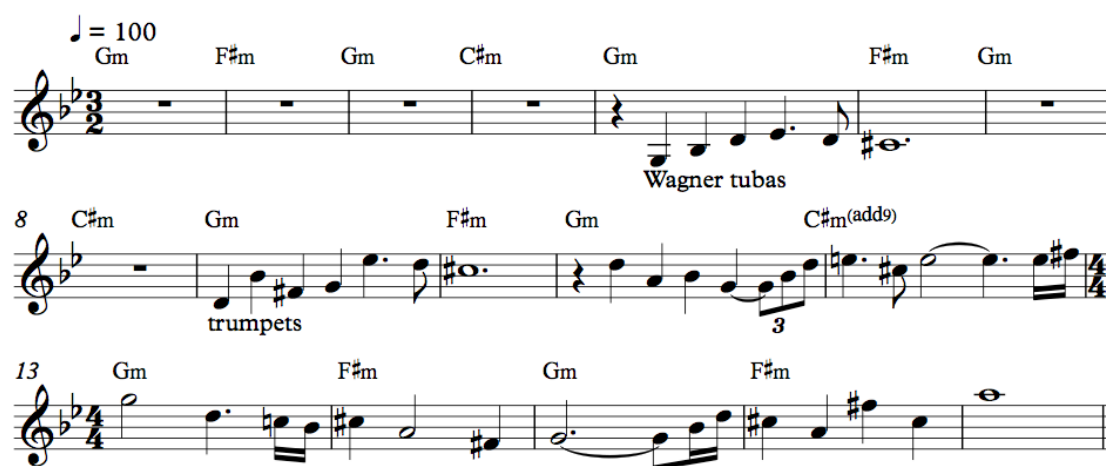


Figure 2.83: Opening bars of "Godzilla!" from *Godzilla*

The most prominent use of M6M in *Godzilla*, and indeed in the corpus, is at the end of the film, in “Back to the Ocean”, when Godzilla, triumphant over the more antagonistic *MUTO* monsters, rises from apparent death and returns to the sea. This is accompanied by a long oscillation of M6M played loudly in full orchestral *tutti*. In this narrative context, M6M is not representative of outer space – although the association of other-worldliness is relevant – rather it is metaphorical for the colossal size and power of Godzilla. It is using the metaphor PHYSICAL SIZE IS TONAL SPACE CONTAINER SIZE. This perhaps also implies that the other tritonal TTPCs in *Godzilla* – including the m6m shown in Figure 2.83 – were also chosen with this metaphor in mind, as all occupy large tonal spaces.

Little has been written about the tritonal Wechseln, m6M and M6m. While these do occur in *Godzilla*, the best example is found in *Rise of the Guardians* (Figure 2.85), in the leitmotif for the Man in the Moon. This example shows that M6M’s association with outer space is transferrable to its close relative, m6M. The Moon is a God-like presence in *Rise of the Guardians*: powerful, silent, supernatural, and actively involved in the events of the story. His theme is first heard when he communicates through magical imagery that Jack Frost must become a Guardian (0:08:43). The harmony consists of an oscillating hmaj4-6-DIA4, first on B# min,¹⁰¹ then on E min. The associations between tritonal TTPCs and space is of obvious value in a cue about the Man in the Moon, and Desplat is also using the metaphor PHYSICAL SIZE IS TONAL SPACE

¹⁰¹ B# min is of course equivalent to C min, but I spell it thus so as not to obscure the flat-wards trajectory of the scalar transformations. (It could equally start on C min and end on Cbb.)

CONTAINER SIZE, as the moon is very large. If m6M were played with no extra-triadic tones, it would likely be inferred to be dia3-6-DIA4, because this changes the scale as little as possible (by one degree). In this passage, however, Desplat decorates the minor triad as Lydian $\flat 3$ (hmaj4), which means there are three additional scale degrees to flatten in order to get to the DIA4. In other words, he uses extra-triadic tones to make the m6M a much more chromatic event than it would otherwise be. The size of the hmaj4-6-DIA4 progressions – in both CoS and CoTC dimensions – is shown in **Figure 2.84**.

The progression from bar four to five is even larger in a sense, because of its three (rather than two) horizontal steps in the CoTC dimension. The overall trajectory of the passage is large enough to come full circle in both the CoTC and CoS dimensions of the toroidal space, so that the passage ends relatively near where it started, perhaps adding to a sense of the uncanny. But the overriding impression is of the moon's vast size, distance from Earth and apparently limitless power.

The extra-triadic tones do more than just adding to the tonal distance of the m6M progressions. They also colour the minor triad, allowing the connotations of Lydian $\flat 3$ (hmin4) to be evoked during the odd-numbered bars. Readers will recall that this mode is associated with antagonism, especially in the adventure films. Here the sense of antagonism is offset by timbral connotations of the angelic (choir, celeste and harp) and the pure major triads in every second bar. These mixed associative signals shroud the Moon in mystery and give a sense of awe comprising an equal measure of reverence and fear. This passage is a strong example of the usefulness of considering extra-triadic tones, which in this case both increased the chromatic magnitude of a triadic progression and contributed additional associative meaning.

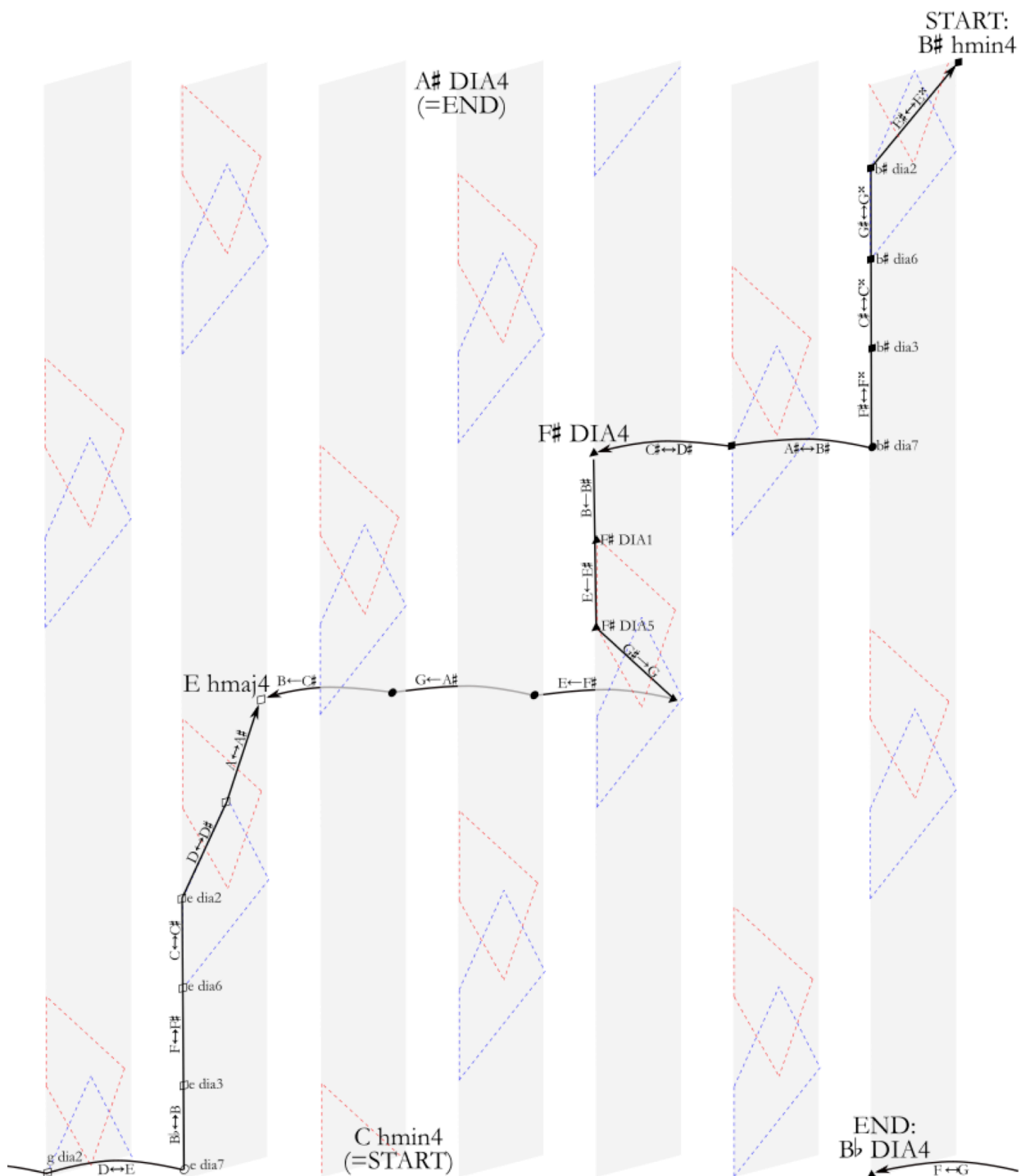


Figure 2.84: Transformations in “Moon” from *Rise of the Guardians*

The musical score for "Man in the Moon's theme" is presented in two systems. The first system includes parts for sopranos, celeste, harp, and piano. The second system includes parts for Em, Bb, Em, and Bb. The score is in 4/4 time and features various musical notations including notes, rests, and dynamic markings.

Figure 2.85: Man in the Moon's theme from *Rise of the Guardians*, as heard in “Moon” (0:08:43)

2.4.4 CoTCaS *absolute progressions* that change the scale using extra-triadic tones only

In the last section, I showed how extra-triadic pitches could increase the reach of a chromatic TTPC in the CoS dimension, making it even more surprising that it would otherwise be. They can also do the same with a TTPC that would otherwise not be chromatic; one that would be a CoTC if one ignored extra-triadic pitches. Even the most common TTPCs, such as m7M, can be presented as something quite exotic and unsettling. This might be expressively apt in that Desplat wishes to convey something that is in one sense familiar, and in another sense idiosyncratic or unsettling. Or it may be that a chromatic TTPC – where the CoS occurs at the hierarchically important triadic level – would imply more enigma or narrative import than is warranted, while a CoTC progression would imply too little. Or it could be that a chromatic TTPC would do the job just as well, but the composer wishes to use these sparingly, for fear they are cheapened through overuse, in the film or in film music generally.



Figure 2.86: The A-section of Mrs Coulter's theme, from *The Golden Compass* (0:14:25)

The theme for Mrs Coulter (Figure 2.86), who is one of the antagonists in *The Golden Compass*, provides an excellent example. In this case, a common m7M occurs in the fascinating guise of hmaj4-7-NMAJ4. This is achieved by way of the accented chromatic passing tones on B \flat -as- $\sharp\hat{4}/V$ in the melody and the lower neighbour tone on E-as- $\sharp\hat{4}/i$ in the accompanying line (second stave). Of these, the B is particularly interesting, as it is $\sharp\hat{1}$ relative to the B \flat tonic. This alteration of what should be the most stable pitch in the scale has parallels with the use of $\flat\hat{1}$ in m8m, only this time the radical alteration of the tonic is more underhand: it is not a flat degree (an obvious signifier of negative affect), but rather it masquerades as a sweet, alluring Lydian fourth over a major triad. This suggests that Mrs Coulter is a wolf in sheep's clothing, as does the chromatic inflection of what is otherwise a relatively ordinary TTPC. This is perfectly apt for Mrs Coulter's character, who is a *femme fatale* character of sorts in that she uses her beauty and glamour to attract and wield power over somebody.

The attraction of the $\hat{4} \Rightarrow \hat{5}$ appoggiaturas seems an apt metaphor for Mrs Coulter's allure, especially in the eyes of young Lyra, her target.¹⁰² Desplat's choice of m7M is also significant for two reasons: it relates Mrs Coulter's theme to that of the Magisterium (Figure 2.31), the evil organisation that she is working for, and it is a style topic for common practice tonality, which, along with the symphonic orchestration, exploits present-day associations of that style with glamour and capital in order to emphasise these aspects of her character. There are two good reasons why Desplat was wise to avoid using an *mxm* chromatic TTPC for Mrs Coulter. First, to use such obvious signifiers of antagonism would be a musical "spoiler" in that the theme is introduced before the audience knows whether or not she can be trusted. Second, is also not entirely evil: she has some good intentions and ultimately is unwilling to harm Lyra.¹⁰³

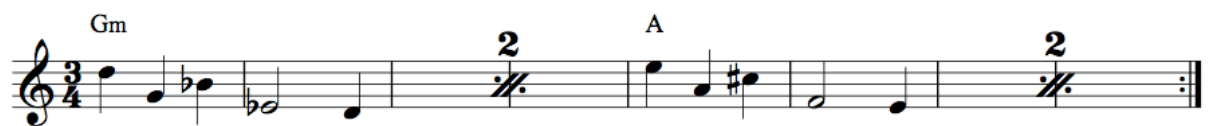


Figure 2.87 motif representing the Golden Compass, from *The Golden Compass* (0:00:04)

The next example is again from *The Golden Compass*, and is similar in that it uses a *sharp-degree mXM* TTPC. I am referring to the opening of the opening cue, which is a melody accompanied by an oscillation of m2M in the guise of nmin4-2-HMIN5 (Figure 2.87). This is the leitmotif for the Golden Compass, a magical device with an oracle-like function. According to Murphy, "The TTPC m2M is extremely common in mainstream film music and tends to match up with a general experience of suspense of mystery, or perhaps dark humour." In this case, the sense of suspense and mystery is the association that is corroborated timbrally. Desplat has said in an interview: "It had to be haunting and spiritual, so I used Tibetan bowls, gongs, vibraphone, song bell, violin harmonics, [and] electric cello." (Koppl n.d.). One reason m2M has attracted associations of suspense and mystery is probably the use of $\hat{4}$, which tends to evoke tension and otherness in a minor context, as discussed in the introduction to Chapter 4. Another

¹⁰²The girl-to-woman non-sexual attraction here is of course a departure from the femme fatale archetype.

¹⁰³ Going by this *femme fatale* leitmotif and that for Ruth Lang in *The Ghost Writer* (see section 2.3.8), Desplat favours the following musical features for this character archetype: slow tempo; *espressivo* melodic lines; symphonic strings; triadic oscillation; minor tonic triad; unusual extra-triadic tones resolving by step; Lydian $\flat 3$ (hmaj4); and/or linear chromaticism. The use of minor key, chromaticism and suspensions or appoggiaturas is consistent with Scheurer's account (2007, 90) of the *femme fatale* topic used in hard-boiled detective films.

reason is probably that m2M is a maximal movement on the *LRP map*. But in the opening of *The Golden Compass*, Desplat adds an Eb-as-b $\hat{6}$, as a neighbour tone over G min. This means that to get to the A maj, an Eb \Rightarrow E chromatic alteration is required, which amplifies the sense of tonal distance and makes the shift to A maj even more enigmatic. In this narrative context – a prologue about supernatural travel to other worlds – a large tonal space container has obvious metaphorical utility. This is an instance of the metaphor UNRESTRICTED TRAVEL IS A LARGE TONAL SPACE CONTAINER. Moreover, the Eb-as-b $\hat{6}$ also suggests tension within the duration of the G min chord, because of the strong b $\hat{6}\Rightarrow\hat{5}$ attraction which is somewhat slow to resolve. Desplat uses the same m2M as the basis for what he calls “The Travelling Theme” (Koppl n.d.). In statements of this theme (Figure 2.88), such as when Lyra travels with Mrs Coulter in a Zeppelin, the large tonal space is suggestive of vast distances travelled, in the sky, on the sea or on vast ice plateaus. This time the m2M occurs as a CoTC: hmin4-2-HMIN5, which can also be heard as HMIN5-10-hmin4. The evocation of Phrygian dominant (HMIN5) in a sweeping orchestral context alludes to Jarre’s *Lawrence of Arabia* theme, which uses the mode to evoke a topic Tagg calls *distant desert*.¹⁰⁴ This allusion is apt, because, as Desplat explains, the filmmakers wanted to approach the snow deserts of the arctic in this film like the deserts in *Lawrence of Arabia*.¹⁰⁵

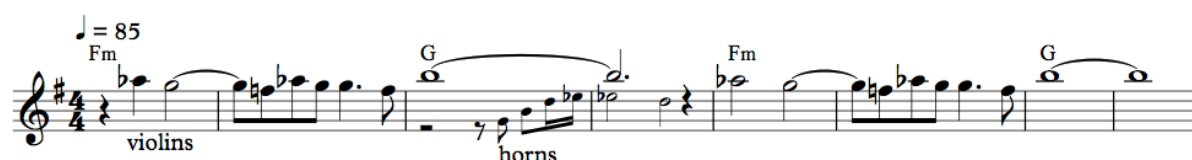


Figure 2.88: The Travelling Theme, as heard in “Sky Ferry” from *The Golden Compass* (0:21:38)

¹⁰⁴ Phrygian dominant (HMIN5, { $\hat{1}$, b $\hat{2}$, $\hat{3}$, $\hat{4}$, $\hat{5}$, b $\hat{6}$, b $\hat{7}$ }), is known in Arabic music theory as the maqam *hijaz-nahawand*. The *distant desert* topic is an exoticist representation of a Middle Eastern locale. Tagg (2009, 120-121) says that an early example of the topic is Alfred Ketèlbey’s *In A Persian Market* (1920). Maurice Jarre’s famous theme for *Lawrence of Arabia* (1963) was offered as a later example. Tagg points to b $\hat{2}$ and the augmented second intervals on {b $\hat{2}$, $\sharp\hat{3}$ } and/or {b $\hat{6}$, $\sharp\hat{7}$ } as the topic flags that Westerners tend to accentuate when representing Middle Eastern music.

¹⁰⁵ Desplat reveals this in an interview (Koppl n.d.).

The A-section of the cue “Crosswords” from *The Imitation Game* (Figure 2.89) provides another good example of Desplat building an interesting TSPC from m2M: in this case hmin1-2-MMIN4,¹⁰⁶ which features the chromatic alteration $\flat\hat{6} \Rightarrow \natural\hat{6}$ like the Golden Compass motif, but also $\hat{4} \Rightarrow \sharp\hat{4}$ and $\hat{5} \Rightarrow \sharp\hat{5}$. The context here is that, during the Battle of Britain, members of the public are completing a crossword in order to win a job opportunity as a codebreaker for the war effort. Part way through the cue, the London Blitz begins and people hurry to bomb shelters, some feverishly continuing with their crosswords in the shelter. The slant of the cinematic narrator, aided by the music, is making a point of ironically contrasting one kind of war effort – bombing – with an unlikely response: crossword puzzles. The hmin1-2-MMIN4 evokes tension, as well as the complexity and mystery of the puzzles. Concurrently, the minimalist texture and structure invokes Leydon’s *motoric* minimalist trope (“indifferent mechanised process”), the process here being logical problem solving.¹⁰⁷ The expressive, slower melody line (mostly in cellos or violins) is not indifferent however, adding wistfulness, especially through the long-held 9-8 appoggiatura over C min, the long-held 6 (B) over D maj, and the $\sharp\hat{4} \Rightarrow \hat{5}$ appoggiatura in bar 8.



Figure 2.89: A-section from "Crosswords", from *The Imitation Game* (0:25:35)

Another example of an oscillating m2M used in a mysterious, suspenseful narrative context is “Vegas Aftermath” from *Godzilla* (1:02:30). This accompanies a scene in which scientists are viewing footage of a giant insect-like *MUTO* which is causing havoc, and attempting to problem solve the situation. This is a hmin-2-HMIN5 over a tonic pedal, so does not strictly belong in this section, as it is a CoTC, but I include it here in connection with m2M. Another example of the same device is in “Pr. Paul Emmett” from *The Ghost Writer*, when the ghost-writer starts following the directions of a satellite navigation system in order to find out where his predecessor drove to before

¹⁰⁶ The flutes, when they enter at bar 9 of this excerpt, play figures that diverge from hmin1-2-MMIN4, but the melody and most prominent ostinati remain in hmin1-2-MMIN4.

¹⁰⁷ This metaphor also applies in the main title of *The Imitation Game*.

mysteriously dying (1:11:44). In various other mysterious and tense cues in *The Ghost Writer* and throughout the corpus, m2M is used in a context of mystery, but not as a prolonged oscillation. Very often it is chromaticised by its extra-triadic tones.

The examples I have offered thus far of a CoTCaS made interesting by its extra-triadic tones have tended to be tense and mysterious. An example that is mysterious, but in a beautifully luminous way is the oscillating dia2-1-DIA4 oscillation that occurs in “Vermeer’s Studio” from *Girl with a Pearl Earring*. This is used when Griet, after she begins as Vermeer’s maid, opens the shutters in his studio, letting in the light that famously resulted in many of his paintings being lit from the left. The dia2-1-DIA4 is striking in that both Dorian (dia2) and Lydian (DIA4) have “sharp” scale degrees relative to Aeolian-centric and Ionian-centric expectations, respectively. The sharp scale degrees seem to function as metaphors for the increased light in the room, suggesting the existence of a metaphor BRIGHTNESS IS SHARPENED SCALE DEGREES. In the context of *Girl with a Pearl Earring*, in which Phrygian and Aeolian are frequent, the impact of the raised $\hat{6}$ is enhanced because it contrasts with the schematic expectations established in other cues, as well as Aeolian-centric schematic expectations.

The transformations in this section show that Desplat can write interesting, surprising music with idiosyncratic or affecting chromatic twists, even while using relatively ordinary TTPCs.

2.4.5 Tonic-preserving CoS progressions

Often harmonic stasis has metaphorical implications of rest or entrapment, as has been discussed. Tonic-preserving change of scale (CoS) transformations are used by Desplat as a way of maintaining such stasis, while implementing subtle changes of mode and therefore of association and affect. The most common tonic-preserving change of scale (CoS) TSPC in the corpus is dia6-0-dia3, a movement between Aeolian and the parallel Phrygian, which is mostly found in the thrillers *Syriana* and *Argo*. The general strategy here seems to be to use Phrygian for the associative qualities outlined in section 2.3.6, but by interspersing it with Aeolian, the $b\hat{2}$ gets some opportunities to surprise dynamic as well as schematic expectations, making it a more potent signifier of tension and danger. In *Syriana*, the dia6-0-dia3 arises through a synth bass ostinato (Figure 2.90), used in “Electricity” (0:24:59), “Access Denied”, and cues that reprise this material. In the

case of “Electricity”, the music gives a sense of danger and foreboding in a scene in which an electric malfunction in a swimming pool light causes Woodman’s son to be killed by electrocution. In *Argo*, dia6-0-dia3 does not arise through oscillation, but by movement from one mode to the other, often in slow, atmospheric passages that are tokens of the *Dysphoric East* topic.

Figure 2.90: danger ostinato, from *Syriana*

Figure 2.91: Main theme from *Argo*, as heard at 0:10:00

Birth is perhaps the strongest example in the corpus of Desplat's use of tonic-preserving CoS transformations, and includes many examples that operate within the set of scale degrees $\{\hat{1}, \hat{2}, \hat{3}, \hat{4}, \sharp\hat{4}, \hat{5}, \hat{6}, \flat\hat{7}, \hat{7}\}$, usually in D major. The $\sharp\hat{4}$ is often made more potent and uneasy through its (often simultaneous) contrast with $\flat\hat{4}$, with which it creates a rare A1/d8 interval. Similarly, $\flat\hat{7}$ is often made more potent and uneasy through its (often

simultaneous) contrast with $\flat\hat{7}$. CoS transformations in *Birth* include DIA4-0-MMIN4/DIA4 (adding or removing a $\flat\hat{7}$ played over Lydian), DIA4-0-DIA1/DIA4 (adding or removing a $\sharp\hat{4}$ played over Lydian), and DIA4/DIA1-0-MMIN4/DIA5 (a change between Ionian/Lydian bimodality and the equivalent with $\flat\hat{7}$ instead of $\sharp\hat{7}$). This frequent movement between various modes with major triads (or bimodal combinations of these) maintains interest by subtly varying the mode-based associations. The bimodality creates a sense of unease and duality, as was discussed in section 2.4.1. One possible reason for the number of CoS transformations in *Birth* (and relative lack of CoTC and CoTCaS transformations) is that Desplat decided to keep the score largely within D major until the end, at which point the eventual change of tonal centre to the relative minor key heightens the dramatic import of the tragic moment in which Anna almost commits suicide. This is an example of a singular modulation (enhanced by the rarity of previous modulations) carrying an expressive purpose. Passages in which multiple modulations occur are the subject of the next section.

2.4.6 Modulatory passages

In this section, I will discuss three modulatory passages with reference to the PATH image schema and the charts showing scalar transformations. Because Desplat's music is so frequently harmonically static (or oscillating between two points, which is a kind of stasis) his relatively rare modulatory passages stand out, and something is clearly meant by the harmonic flux.

In Griet's theme – whose main statement is played as the young woman leaves her home to become a maid – the harmonic flux seems to be metaphorical for her journey into the unknown. This theme is notated in Figure 2.93 and graphed in Figure 2.92. The theme starts in G minor, but modulates in the second phrase to $B\flat$ minor and resides there before returning to G minor in the final phrase. This is an apt metaphor for Griet's journey: she leaves home at the beginning, stays in a new place away from home (the Vermeer's), and returns home at the end. More significantly, the theme sounds somewhat restless throughout, because all but two of its transformations are CoTCaS transformations, so it never settles for long on any one scale or tonal centre. This is an apt metaphor for Griet's restlessness in the story; she never quite finds her feet at the Vermeer's and is torn between two worlds, as discussed in section 2.4.3.1.

I will now discuss the theme's transformations in detail. The opening phrase moves from G Aeolian to D Neapolitan minor (nmin1): a transformation that is represented in the graph and in the transcription by a dark green arrow. This is an ordinary m7m at the triadic level, but is an interesting CoTCaS on the scalar level, because of the change from C to C#, which provides the dominant chord (D min) with its own leading-tone, creating a modulation of sorts. This is followed by a modulation up a minor third (in orange), and the first transformation is revisited (in teal), this time starting on B♭ min. The graph shows what a dramatic movement in tonal space the modulation up a minor third is: the tonal centre changes, *and* three scale degrees are lowered, taking the harmony substantially lower (flat-ward) on the graph. The next transformation (in pink) is an m10m from F Neapolitan minor (nmin1) to E♭ Dorian (dia2). This is dramatic mostly for its magnitude in CoTC space, but it also alters the scale, moving to a diatonic (DIA) mode for the first time. The next transformation (in purple) departs the left edge and emerging on the right edge. While it may seem on the page to take the music further from the tonic, it in fact returns the harmony to the new tonic chord of B♭ min, exploiting the cyclic nature of the CoTC dimension. The music then backtracks, returning to F min (along the purple and light blue arrows). This reversal – as opposed to following the path in one consistent direction – could be heard as metaphorical for a mental state of indecision or hesitation to follow a certain path.

The harmony then ventures via an m3m (in brown) into new territory both in terms of tonal centre and scale: A♭ Dorian (dia2). This is another step in the flat-ward direction (downward on the graph) and further from the home key of G minor. A brief oscillation between A♭ min and B♭ min (in light green) again seems metaphorical for indecisiveness. The two chords compete for tonicisation – A♭ min by virtue of position in the hypermeter and B♭ min by virtue of being a more stable mode (Aeolian) and having been previously tonicised. These triads are then quitted in by far the most dramatic CoTCaS transformation of the theme (in dark blue) that leads back to the G min tonic by way of a $\flat ii \Rightarrow V \Rightarrow i$ cadence. The graph clearly shows what a substantial leap in tonal space the m6M from A♭ min to D maj is: *five* of the seven scale degrees are raised simultaneously, and there are two steps of motion in CoTC dimension. Readers may recall something similar in “Philomena’s theme”, but with a major rather than minor Neapolitan chord. Additionally, the main theme of *The Curious Case of Benjamin Button* – to discussed in section 3.1.1 – returns home by way of $\flat ii \Rightarrow I$, skipping the dominant. In all three cases,

there is a very dramatic scalar transformation towards the end of a theme, in the Neapolitan-to-tonic direction, after more incremental steps away from the tonic.

It seems wrong-headed to try to map specifics of this harmony onto Griet's situation in minute detail. However, I will go so far as to say that the harmony seems metaphorical for Griet's venturing deeper and deeper into unknown territory, with mixed feelings and indecisiveness along the way. The sudden and dramatic return home is also a neat metaphorical fit for Griet's return home at the end of the film, but it is more likely that Desplat simply wanted to end the theme in a dramatic fashion, as he did with the other two main themes mentioned.

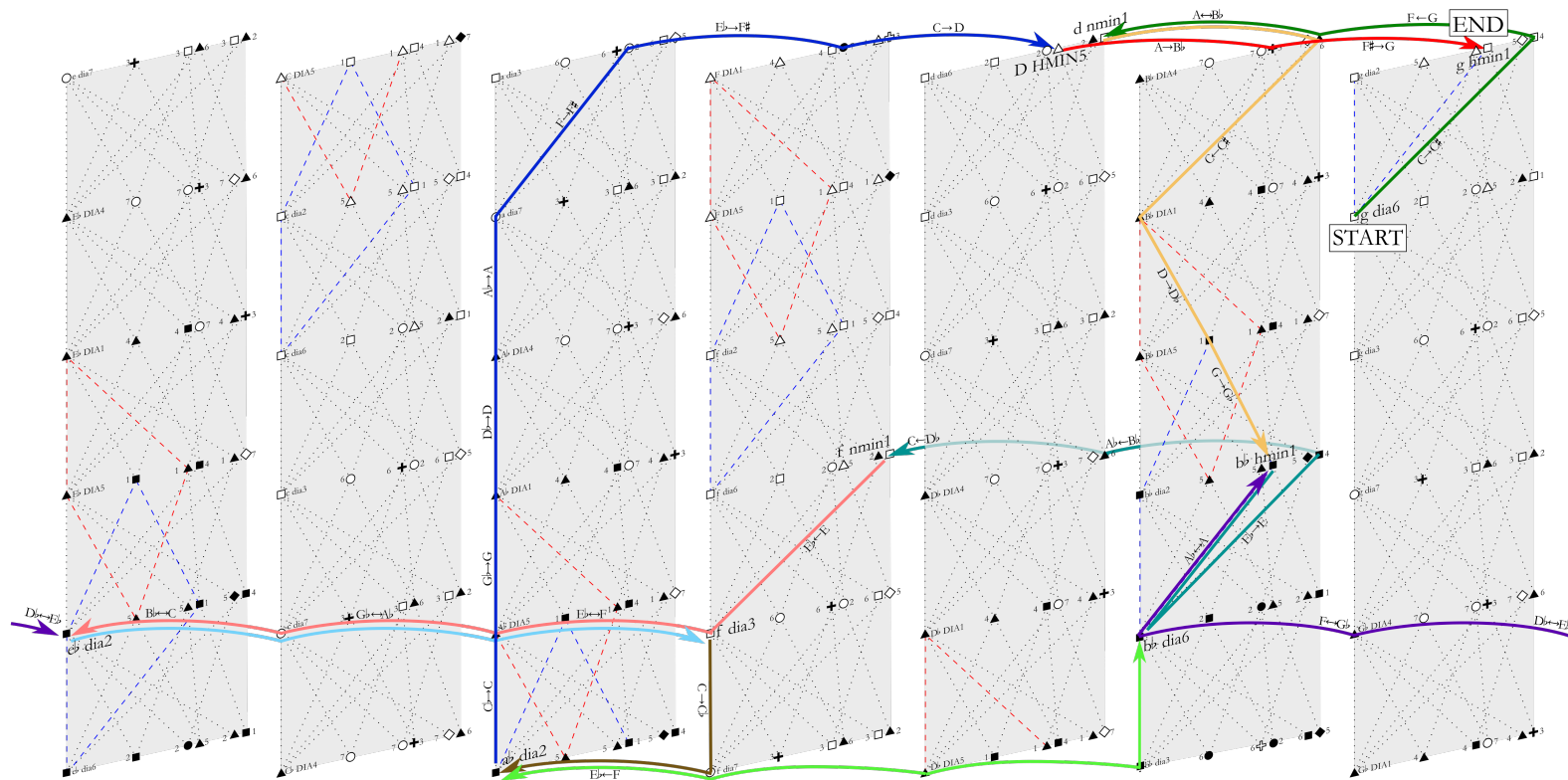


Figure 2.92: Transformations in Griet's theme, from *Girl with A Pearl Earring*

♩ = 168

g dia6 → d nmin1 → bb hmin1 → f nmin1 → eb dia2

bb hmin1 → eb dia2 → f dia3 → ab dia2 → bb dia6 → ab dia2 → D HMIN5 → g hmin1

Figure 2.93: "Griet's Theme", from *Girl with A Pearl Earring*, as heard at 0:02:51

The next modulatory passage I will investigate is from the climactic final passage of “The Truth About Ruth” at the very end of *The Ghost Writer*. The graph (Figure 2.94) shows that the passage is full of CoS transformations – which are all m11M Doppelterzwechsel SLIDEs – and this extravagance in the CoS (vertical) dimension is mitigated by very modest movement in the CoTC (horizontal) dimension. The m11Ms come in a variety of TSPCs. The most common is dia6-11-HMIN6, which occurs in three transpositions and both directions, all represented by dark green arrows in the graph. The $\hat{2} \Rightarrow \hat{3}$ appoggiaturas over the Lydian #2 (HMIN6) modes (bars 7, 15, and 23) give the SLIDEs a unique and tense flavour because of the accentuation of the rare scale degree ($\hat{2}$) and interval (A2/d7).

The narrative context is as follows. At a book launch, the ghost writer has just given Ruth Lang a note that tells her that he knows her darkest secret, which is a conspiracy of global significance. Suddenly anything could happen. Ruth looks terrified. The ghost-writer knows she is a dangerous woman, and that he is now in danger, so raises his glass to Ruth sarcastically before leaving the building. A car speeds down the street, and (off-screen) seemingly kills the ghost-writer, which is the last shot of the film.

On one level, the extreme mobility in the CoS dimension is simply an emotional amplifier. It emphasises the significance of the moment, signalling that something important is about to happen to the ghost-writer, although the affective ambiguity of the SLIDE means that the audience is unsure whether the outcome will be in his favour. The harmonic mobility of the passage does not just heighten the drama, however; it is a metaphor that emphasises that the narrative situation is in flux. Moreover, the liminal qualities of the SLIDE add a further sense of instability. Everything has now changed, or is about to change for Ruth and the ghost-writer. What makes this metaphor so effective is that the harmony immediately preceding this passage is extremely static, employing the metaphor ENTRAPMENT IS SMALL TONAL SPACE CONTAINER. But once Ruth knows that her secret is out, the opposite occurs: that which was contained is released in dramatic fashion.

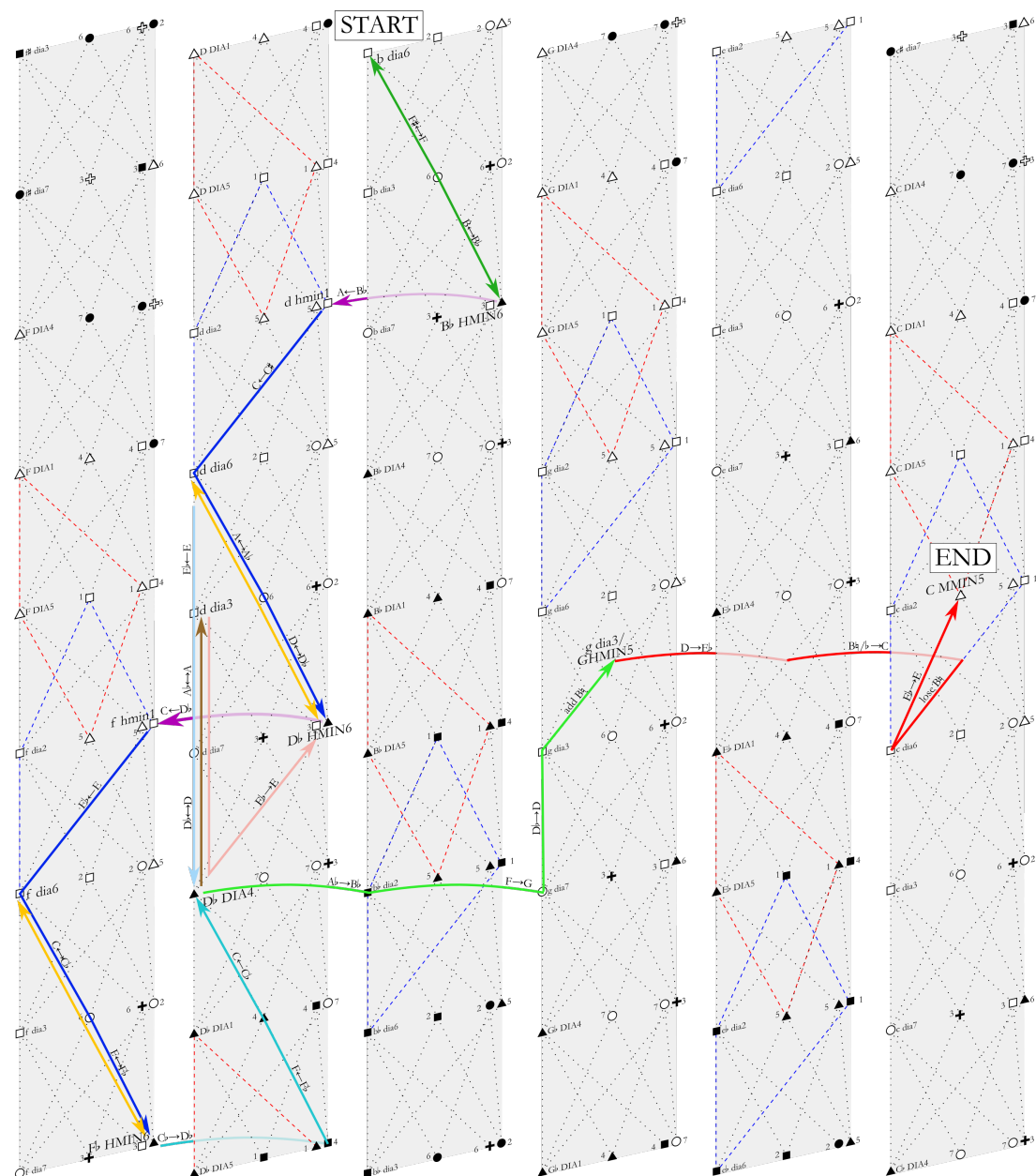


Figure 2.94: transformations in “The Truth About Ruth”, from *The Ghost Writer*. Transformations follow the order shown in Figure 2.95. Transformations with dark blue, yellow and purple arrows occur in two

Figure 2.95 shows an excerpt from “The Truth About Ruth”, from *The Ghost Writer*, with musical notation and transformation labels. The tempo is marked as $\text{♩} = 184$.

The musical notation is in 3/4 time, with a key signature of one flat (B-flat). The excerpt consists of three staves, with measures 13 and 25 marked. The transformations are indicated by colored arrows and labels below the notes:

- Measure 13: Bm (b dia6), Bb (m11M HMIN6), Bm (m11M dia6), Bb (m11M HMIN6), Dm (d hmin1), Db (m11M HMIN6), Db (m11M).
- Measure 14: Dm (d dia6), Db (m11M HMIN6), Dm (m11M dia6), Db (m11M DIA4), Dm (d dia3), Db (m11M HMIN6), Db (m8M).
- Measure 25: Fm (f hmin1), Fb/Ab (m11M HMIN6), Fm (m11M dia6), Fb/Ab (m11M HMIN6), Db (M3M DIA4), G7 (M6M g dia3/GHMIN5), C (M7M C AC2), C (X10).

Figure 2.95: excerpt from “The Truth About Ruth”, from *The Ghost Writer*

The linear trajectories of the passage, revealed in the graph, suggests that the plot is heading decisively towards some goal. This includes the sequence alternating between m11M and m8M, drifting downward and leftward in the graph, but also the right-ward CoTC trajectory at the end of the passage. These trajectories create musical arrows that point towards the culmination of the story. The final C maj chord is a dominant (because F min has been tonicised prior to this), building anticipation of the final event, with no resolution provided by either camera or score.

The last modulatory passage I will investigate is the opening of *The Golden Compass*. The voice-over in the prologue that this music accompanies starts with the words “There are many universes and many earths, parallel to each other”, over an image of distant galaxies. The next section goes on to describe “dust” which metaphysically connects all of the parallel worlds. The sweeping tonal mobility in this passage – with exclusive use of CoTCaS transformations and the traversal of an enormous tonal space – is arguably a metaphor for the vast spaces being described, and the miraculous, mysterious, and paradoxical interactions between such far-flung places. The progressions in this passage are not so ordered and linear as in “The Truth About Ruth”. They are whimsical and unpredictable. The idiom of triadic chromaticism is also a topic flag for the sublime and mysterious in science fiction and fantasy, so the harmony works on an associative level as well as a metaphorical one. The implied modes are also associative, with the frequent implication of Phrygian dominant (HMIN5) alluding to exotic adventures like *Lawrence of Arabia*, as discussed in section 2.4.4.

The prominent use of chromatic mediant Wechseln¹ is particularly noteworthy. Specifically, M8m (a kind of *hexatonic pole*) and M3m are used.² These two TTPCs share another affinity: both are in the category *flat-degree Mxm*, which is the most negatively-valenced category in which the more tonicised triad is major. Such affectively mixed transformations evoke a sense of mysterious ambiguity in this passage by

¹ This category is introduced in section 2.4.3.4.

² In Figure 2.96, the M8m transformations are represented by dark blue and grey arrows, respectively. At the triadic level, the latter M8m merely a reversal of the former, but fewer extra-triadic pitches are altered, hence the grey arrow being shorter than the blue. The two M3m transformations – which are both HMIN5-3-dia2 – are represented by a teal arrow and a brown arrow.

presenting the magic being described as neither obviously good nor obviously evil. This is apt for a film that tends to subvert Judeo-Christian notions of good and evil.³

To conclude, in all three of the modulatory passages I have examined, the harmonic mobility functions as a metaphor for something being unfettered in some way and venturing into the unknown with a heightened sense of significance. The three passages all drift flat-ward as they venture into new tonal territory, which is characteristic of Desplat's style. Reasons for this may include the fact that introducing unexpectedly flat degrees tends to be more impactful in terms of affect. Alternatively, progressing flat-wards may be the more expectation-defying route to take based on Classical norms. A more in-depth investigation of this phenomenon is beyond the scope of this study.

³ For instance, witches in the film – including the one speaking in this prologue – are trustworthy, while a religious organization seeking to remove “original sin” is decidedly evil.

2.4.7 Expressive uses of linear chromaticism

I define linear chromaticism as linear melodic material that moves primarily by semitone through a section of three or more adjacent pitches of the chromatic scale. In Desplat's music, it almost always exists as a decorative layer over a scalar structure. It integrates itself into the underlying scalar logic by way of using the members of the scale as well as chromatic passing tones filling the gaps. Occasionally it also occurs in atonal or near-atonal contexts. The chromatic lines frequently traverse a melodic third whose lower or upper scale degree is $\hat{1}$. Instances of linear chromaticism might be either foregrounded, or part of an accompaniment. They might coincide with a passage of triadic chromaticism, or the underlying triadic progression might be more diatonic. They might simply ascend, descend, or they might have a more complex contour such as a zigzag.

Linear chromaticism is only occasionally employed in Desplat's scores, although my impression is that he employs it more than is typical in contemporary Hollywood film music, thus it could arguably be a style-flag of Desplat's personal style.

Desplat tends to use linear chromaticism in narrative contexts involving any combination of the following elements, roughly in this order of frequency:

- tension
- comedy
- chaos, dizziness, or disorientation
- linear onscreen motion
- temporally sequential events

It can impart tension by virtue of the metaphor between dissonance and psychological tension,⁴ because of its tendency to result in dissonance, including rare intervals. As discussed in section 1.5.2.6, rare intervals are surprises that can result in the inference of humour or psychological tension, or a combination of both, creating a kind of black humour. Linear chromaticism is also arguably a topic-flag for the topic "clown music", whose archetypal example is Julius Fucik's *Entrance of the Gladiators*.⁵

⁴ See page 108.

⁵ This is characterised by linear chromaticism and was often used in early 20th century circuses to introduce the clowns.

Linear chromaticism's propensity to produce dissonance combined with its overcrowding of pitch-classes relative to heptatonic scales makes it an apt metaphor for chaos, as compared to diatonic "order". This chaos is often made frenetic through use of fast tempo, exploiting the metaphor ACTIVITY LEVEL IS TEMPO. The sensations of dizziness or disorientation are specific kinds of chaos that linear chromaticism might help to evoke.

Linear chromaticism can sometimes be used as an iconic metaphor for simultaneous linear onscreen motion, exploiting the VERTICAL SPACE IS PITCH FREQUENCY metaphor. More abstractly, a chromatic scale can also function as a metaphor for temporally sequential events, such as a ticking clock. Here, discreet, evenly spaced locations within pitch space function as a metaphor for discreet, evenly spaced locations in time.

Linear chromaticism is particularly well suited to chase scenes, because they are likely to exhibit many of the elements listed above. Desplat accompanies chases with linear chromaticism in the following four scenes:

- *Harry Potter VIII*, 0:54:02. Neville Longbottom makes a mad dash to get off a ravine-crossing bridge that he just blew up, pursued by Voldemort's army. Linear chromaticism decorates octatonicism. (Tension, frenetic chaos, and linear motion, traces of comedy).
- *The Curious Case of Benjamin Button*, 0:10:29. Police chase Mr Button, who is considering throwing his new baby into a river. Linear chromaticism decorates a looped chromatic progression $i \Rightarrow iv \Rightarrow bI \Rightarrow bIV$ underpinned by a tonic pedal oscillation of $\hat{1}$ and $\hat{5}$. (Tension, linear motion, and disorientation).
- *The Ghost Writer*, 1:24:25. The CIA pursue the protagonist in a car chase through the woods (Tension, linear motion, and disorientation)
- *Rise of the Guardians*, 0:13:15. Jack Frost flies, alongside Jamie, who sleds through town. (Tension, frenetic chaos, linear motion, and comedy).

Chromatic planing is a type of linear chromaticism that involves moving a chord through the chromatic scale, usually moving by semitone steps, without altering the chord in

order to conform to a scale. It is often applied to a major, minor, or augmented triad, or an ic4 or ic5 dyad.⁶ It usually evokes tension mingled with a form of tonal disorientation, especially when applied to minor triads, augmented triads, or ic4.

For an example of chromatic planing of ic4, see the excerpt from “Bicycle Ride”, from *The Ghost Writer* (Figure 2.98). In the strings, the lowest voice maintains an A tonic pedal, while in the upper two voices chromatically plane on a major third interval, creating various chords – some dissonant, others consonant – across the three voices. The planing third has a home position on {C, E}, which, with the A pedal tone, completes a minor tonic triad.⁷ When on {D, F#} it completes the subdominant triad, D maj (suggesting A Dorian), and when on {D♭, F} it completes an augmented triad, which could be thought of as a dissonant “passing chord” between A min and D maj. The frequent movement between {C, E} and {D♭, F} against the A tonic pedal is suggestive of m4M (the *hexatonic pole*), a topic flag of the uncanny. This suggestion is encouraged by the G#m/A♭ in the melody in bars 1-2, which be heard as an A♭ completing a D♭ maj triad in bar 1, beat 2, and bar 2, beat 3. Similarly, the movement between {C, E} and {B, D#} in bar 4 can be heard as an incomplete m2M progression (i ⇔ II), which is a style flag for suspense or mystery.⁸ When the major third is {B♭, D} in bar 4, the mode of A Phrygian (dia3) is momentarily evoked, with its connotations of negative affect and otherness.



Figure 2.98: excerpt from "Bicycle Ride", from *The Ghost Writer* (0:50:41)

⁶ For an example of chromatic planing on a major triad, see 1:13:44 of *The Curious Case of Benjamin Button*. For a minor triad example, see 1:09:06 of *The Ghost Writer*. For an augmented triad example, see 1:11:44 of *The Golden Compass*. For an ic5 example, see 0:37:11 of *The Queen*.

⁷ In this respect, the technique is the same as that used by Bernard Herrmann in an earlier suspenseful film, *Vertigo* (1958). See, for example, 1:25 in the piece “Madeleine and Carlotta’s Portrait” on the soundtrack. The technique can therefore function as a topic flag for Herrmann-inspired suspense.

⁸ See section 2.4.4

By moving through these various chords in a linear fashion, a range of different modes and TTPCs are suggested in turn, along with their associations. This is a rich feature of chromatic planing: it can move through a wide range of associative topic flags in a short space of time while maintaining a form of coherence because it follows a logic: the logic of a chord travelling by step within the chromatic scale. As well as hinting at the various mode-based and TTPC-based associations mentioned above, the overall sense of the passage is of tonal disorientation. There might be a clear tonic, but the music never settles on one scale for very long. The melodic line in the upper two staves adds a further layer of tonal confusion, because it employs linear chromaticism that follows no clear contrapuntal logic in relation to the ostinato in the strings, except for sharing A as tonic.

All of this is pertinent in the narrative context, in which the ghost-writer, who seems troubled and endangered by the mysterious conspiracy he is beginning to uncover – embarks on a bicycle ride, gets lost in the rain, and seeks shelter at a creepy-looking derelict cottage. Becoming lost in the rain seems to be a metaphor for his mental disorientation, as it seems likely that he is mulling on the mystery as he rides. The tonal disorientation in the music reinforces both his mental and geographic disorientation.

Chromatic planing of triads can also function as a style flag for jazz, and is not always brooding and suspenseful, as will be seen in section 3.1.3, and was also demonstrated in Figure 2.9. It is unfortunately beyond the scope of the present study to offer a fuller exploration of chromatic planing; however, this section should offer an insight into the kind of expression that can result from this interesting technique.

2.5 Desplat's musical expression: a summary of findings

In this chapter I have sought to describe and illustrate the most significant findings of my corpus study of twenty Desplat film scores. The main goal was to answer research question 1: “How does Desplat relate his music, semiotically and metaphorically, to specific narrative contexts?”. To this end, it was necessary to address research question 2a – “What chords, scales and harmonic transformations does Desplat typically employ in the twenty scores in the corpus?” – and 2b – “What semiotic or metaphorical rationale seems to be guiding Desplat to use these features as he does?”

Section 2.1 presented graphs showing the relative frequency with which each TTPCs was present in the corpus, answering one aspect of question 2a, about *what* harmonic

transformations Desplat typically uses. In this section I also identified some TTPCs that were widespread in the corpus, and some that were widespread except in certain genres. I also pondered why certain TTPCs or TTPC categories might be particularly prominent in certain films or film genres.

In section 2.2 I examined Desplat's expressive use of chord types. Major and minor triads significantly outnumbered any other chord types, with the minor triads being more inclined to function as a topic flag for negative topics. I observed that certain chord types associated with particular styles of music could function as style flags for that style. Two particularly associative chord types that Desplat uses are minor-major-seventh chords – which can function as style flags for Herrmann-influenced suspense – and half-diminished seventh chords, which can evoke love, longing, and/or pathos. I briefly discussed Desplat's use of accumulating clusters to build tension.

Section 2.3 explored Desplat's expressive use of fifteen modes. Findings about specific modes were summarised in section 2.3.16. Some important general findings that were provided in the introduction to section 2.3 are as follows. Modes with similar scale degree and tonal interval class content tend to have similar expressive uses with one another. Emphasis of flat scale degrees – for instance, in Phrygian $\flat 4$ (hmaj3) and Phrygian (dia3), tends to be associated with negative emotional states. Modes with few or no flat scale degrees – such as Ionian (DIA1), Lydian (DIA4), and Mixolydian (DIA5) are the most likely to be associated with happiness, fun and other positive states, but are not immune to more neutral or even melancholy treatments with the help of other musical parameters.

Rare scale degrees and tonal interval classes tend to express otherness, including exoticism. Chromatic Lydian inverse (cli1) and its more moderate cousin, Lydian $\flat 3$ (hmaj4), were quite consistently associated with Others, such as the antagonists of adventure films. The diatonic modes have fewer rare intervals and therefore less propensity to express otherness, however they can still contain rare scale degrees – such as the $\flat 2$ in Phrygian (dia3) – which is associated with otherness or exoticism. Table 2.1 provided a list of scale degrees and combinations of scale degrees that tend to function as topic flags for tension. These mostly included the semitonal neighbours to $\hat{1}$ and $\hat{5}$. Passages that exhibited a strong magnetic attraction to the tonic triad were also discussed in terms of entrapment metaphors. This often also included the use of a confined tonal

space. Finally, certain modes had culturally established associations based on their use in various styles or topics. These various factors – including topical and stylistic associations, flat scale degrees, rare scale degrees, rare tonal interval classes, and tension through melodic attraction – mean that modes provide Desplat with a diverse and potent range of expressive resources.

Section 2.4 surveyed a range of ways that Desplat uses chromaticism expressively. Bimodality – the overlaying of two modes on the same tonic – can convey a sense of duality and/or tension through its *false relations*. It can also allow the connotations of the two individual modes to be articulated simultaneously. In modal mixture, most chords and non-harmonic tones belong to a prevailing mode, while other chords are “borrowed” from a parallel mode. The borrowed chords tend to heighten the emotion of a scene by creating surprise relative to the dynamic expectations established by the prevailing mode. Aeolian/Dorian mixture (dia6/dia2), which can sometimes function as a topic flag for heroism in an Adventure films. Aeolian/Phrygian mixture (dia6/dia3) can either evoke extreme disillusionment (if dia6-10-dia2 is prominent) or tender, poignant moments (if dia6-1-DIA4 is prominent).

In section 2.4.3 I looked at Desplat’s use of various chromatic TTPCs as *absolute progressions*, scrutinising their associative and metaphorical qualities. The SLIDE, and especially the m11M Doppelterzwechsel variety, was discussed in relation to boundary spaces and paradox. In my discussion of the Tarnhelm progression (m8m), I showed that Desplat sometimes exploits the specific association established by Wagner, of dark magic and antagonism, whilst at other times he uses it to express antagonism in non-fantastical contexts, bitter heartbreak, and/or psychological entrapment. I then looked at some Tarnhelm-like TTPCs, notably m4m, which had similar expressive potential to the Tarnhelm, but with mitigated negative affect and a greater sense of uncertainty. I noted that M8M had been used by Desplat in the context of poignant resolution or closure. The chromatic mediant Wechseln (m4M, M8m, m9M, and M3m) sound particularly strange because their chromaticism is combined with non-parsimonious voice-leading. This enigmatic quality is what makes m4M apt in the “Enigma motif” from *The Imitation Game*. Finally, I looked at the tritonal TTPCs. While M6M is associated with the outer space, I showed that m6M could also be used in this capacity (as in the Man in the Moon’s theme from *Rise of the Guardians*). Meanwhile, M6M was not limited to the context of outer space, and could also function as a metaphor for colossal size.

In section 2.4.4 I discussed some CoTCaS *absolute progressions* that relied on extra-triadic tones to change the scale. For instance, in Mrs Coulter's theme from *The Golden Compass*, an ordinary m7M is made into an intriguing hmaj4-7-NMAJ4 by virtue of its extra-triadic pitches. I also looked at some interesting TSPCs based on m2M and m1M. In all cases, the extra-triadic tones increase the tonal distance travelled, and contribute surprise. They demonstrate the relevance of scrutinising extra-triadic tones as well as triadic tones, by thinking about scalar transformations as well as triadic transformations.

Section 2.4.5 looked at tonic-preserving CoS progressions. These transformations are a way of maintaining harmonic stasis (perhaps as a metaphor for entrapment) while altering the mode, and therefore altering the associations and also creating surprise relative to dynamic expectations. Often the changes of mode are subtle, involving the change of only one scale degree. By contrast, the modulatory passages addressed in section 2.4.6 are mobile in the CoTC dimension as well as the CoS dimension. This mobility often functions as a metaphor – via the PATH image schema – for journey, such as journey to other worlds in *The Golden Compass* or through new life experiences in *Girl With A Pearl Earring*. In the example from *The Ghost Writer*, the harmonic flux emphasises plot instability in the climactic scene.

Finally, section 2.4.7 explored the expressive role of *linear* chromaticism in Desplat's scores. It's aptness to evoke or emphasise tension, comedy, chaos, and/or linear motion make it particularly well suited to chase scenes. Chromatic planing is linear chromaticism applied to chords. An example of chromatic planing of ic4 was discussed as a way of providing access to a wide range of modes and TTPCs with suspenseful associations.

All forms of chromaticism represented in section 2.4 are ways in which Desplat departs from the purely modal writing described in section 2.3. Nevertheless, heptatonic scales and triads are still almost always involved in some way, albeit subjected transformations including CoS or CoTCaS transformations. Even in the passages of bimodality and linear chromaticism, certain layers of music articulate heptatonic scales. Thus, while section 2.3 explored the metaphorical and associative meanings of the modes, section 2.4 has explored the metaphorical and associative meanings of their subversion, mixture and transformation.

In Chapter 2, I have discussed how all of these pitch-related techniques – in conjunction with other musical elements such as tempo, orchestration, and register – express extra-musical meanings through metaphor and/or association in their narrative contexts. The next chapter will apply this understanding to the analysis of two specific scores: *The Curious Case of Benjamin Button* and *The Grand Budapest Hotel*.

Chapter 3 Close Analyses of Two Desplat Scores

Having established the methodology for analysis in Chapter 1, and having applied this methodology to the corpus in Chapter 2, the present chapter offers an opportunity to show how the methodology can be applied to individual films. In Chapter 2, each section focussed on one musical technique with reference to a range of films. In this chapter, the focus will be on one film, with reference to a range of musical techniques. This has certain advantages, for instance, it will allow greater discussion of issues that pertain to the whole film, and issues that pertain to more than one musical technique.

The Grand Budapest Hotel was an obvious candidate for in-depth study, because it is arguably the highest achievement of Desplat's celebrated partnership with Wes Anderson, building on previous successes with *Fantastic Mr. Fox* and *Moonrise Kingdom*. Certainly, it is the Desplat score that has received the highest accolade, in the form of an Academy Award. *The Curious Case of Benjamin Button* was chosen for in-depth study because it exemplifies a high degree of mastery in the romance genre, which contrasts with comedy of *The Grand Budapest Hotel*. It also incorporates elements of the fantasy genre, which tends to illicit a wide range of interesting modes and scalar transformations. More substantial studies of both film scores by the author are forthcoming; this relatively brief chapter offers a glimpse of what such longer studies might contain.

3.1 Music of *The Curious Case of Benjamin Button*

The protagonist of this magical realist romance, Benjamin Button, was born in New Orleans in 1918, with a strange condition. He was born old, and throughout his life grew younger in appearance. Benjamin's story is told as a reflection back on his life, through the journals he wrote before dying. The two characters reading and experiencing the journals together are his main love interest, Daisy, and his daughter, Caroline, both of whom he chose to leave during Caroline's infancy, so her life was not negatively impacted by his condition.

Because the story is told as a reflection back on an entire lifetime, spanning most of the twentieth century, sentimentality is an important element of the slant of the cinematic narrator. This sentimentality is also readily attributable to Benjamin's metadiegetic character narration through his journals and often made audible as voice-over narration. Musically, a sense of sentimentality and nostalgia is often achieved through the use of

style flags (usually subtly) for styles such as jazz that carry nostalgia in a present-day context⁹ and also relate to the time and place of the setting. I have already mentioned Desplat’s use of jazz instruments in the score. This is corroborated by jazz-connoting chord types, especially major seventh chords, which occur more frequently in this film than the others in the corpus. My analysis of this charming score is divided up according to leitmotifs.

3.1.1 Main theme



Figure 3.1: Main theme from *The Curious Case of Benjamin Button* (first heard at 0:03:15)

The main theme of *The Curious Case of Benjamin Button* is arguably the one introduced in the opening cue, “Mr. Gateau” (Figure 3.1). This accompanies a story – told as a symbolic prelude to the main narrative – about Mr Gateau, a man who made a backwards-running train station clock. He says at its 1918 unveiling: “I made it that way, so that perhaps the boys we lost in the war might stand and come home again ... to live long, full lives”. The film eventually implies that Mr Gateau was, in a small way, supernaturally granted his wish in the life of Benjamin Button. Benjamin’s lifespan was the same as that of the clock (1918-2002), his aging process ran backwards, and he also returned home from a world war in 1945 to live a long, full life. According to Frances McGonigle (2013, 174) writing about semiotics and audio description in films, “the clock that runs backwards in *The Curious Case of Benjamin Button* is ... connotative of Time, rejuvenation, memory and nostalgia, which signals the genre of fantasy”.

The theme’s second statement, in “Postcards” (2:22:13), is a montage in which Benjamin travels to India and Cambodia, whence he writes postcards in which he reflects on life.

These offer some advice to his daughter:

It’s never too late – or in my case, too early – to be whoever you want to be. There’s no time limit; start whenever you want. You can change or stay the same ... I hope you live a life you’re proud of.

⁹ Phrases like “Roaring Twenties” capture the retrospective idealization of the prosperous and peaceful times that the jazz era can connote.

From these two clearest statements of the theme, we can conclude that it is symbolic of Mr Gateau's clock and especially the wish it embodied for turning back time and the living of long, full lives. The theme's aptness to symbolise the clock itself is mostly to do with its arrangement in "Mr Gateau", which is suggestive of clockwork. This suggestion includes a pulsating triangle (both metallic and mechanical in its repetitiveness), and the use of static, pulsating patterns generally, including the oscillating $\hat{1}$ and $\hat{5}$ that create a pedal. The theme itself, regardless of its arrangement, sounds like a melody a clock might play, in its limited number of pitches (especially within each four-bar phrase), simple rhythms, and detached note-rest-note-rest articulation.

The phrase "You can change or stay the same", spoken during "Postcards", may have been one driver behind Desplat's harmonic choices in the theme. For instance, the theme's second four-bar phrase is clearly a "change" that has been wrought on the first four bar phrase: via the alterations $\flat\hat{3}\Rightarrow\flat\hat{3}\Rightarrow\flat\hat{3}$ and $\flat\hat{2}\Rightarrow\flat\hat{2}$, and the substitution of $\flat vii$ in place of iv . The use of vertically explicit harmonic major (HMAJ1) as the home mode, and the borrowing of $\flat vii$ from the tonic Phrygian also emphasises the romanticised exoticism of the locations in India and Cambodia that Benjamin is visiting. Unusual touches like the use of HMAJ1 and the $\flat vii\Rightarrow I$ cadence (M10m) are arguably also suggestive of the supernatural otherness that both Benjamin and the clock exemplify.

Figure 3.2 graphs and

Figure 3.3 notates the triadic and scalar transformations that occur in "Postcards" (2:22:13) and its reprise at the start of the end credits. By way of the PATH image schema, the overall harmonic design of this passage is arguably metaphorical for increasingly adventurous exploration away from home, or from one's comfort zone. This is what Benjamin is doing and is encouraging his daughter to do in the scene. The first harmonic motion from the home mode (E HMAJ1) is a relatively conservative CoTC to the submediant by $m5m$ (in dark green on the graph). There is then a more adventurous CoS (M0m, in orange), that alters the mode of the tonic triad, followed by a very adventurous CoTCaS all the way to $d\ dia2$ ($\flat vii$) by $m10m$ (in purple). This returns "home" by M10m, a maximal *LRP map* move (in dark blue). The B-section (from the double bar) explores further new territory, and does not return "home" to the tonic until then end; the harmony has become nomadic, like Benjamin as depicted in the montage. After moving to the submediant by a CoTCaS M9m (in brown), there is an oscillating $m11M$ Doppelterzwechsel SLIDE ($dia6-11-DIA4$, in light blue). This occupies a large

tonal space container in CoS space, but moves freely between the two modes as if this were no big deal, suggesting an increased capacity for mobility and exploration, and emphasising a lack of fixed abode: a kind of liminal space with which SLIDEs are associated. From here, the harmony incrementally wanders yet further from the tonic via an **R**, an **L**, and a **P**, before finally returning home with surprising ease by a rare Gegenterzwechsel SLIDE (M1m, in red). The graph reveals that this last transformation is similar to the return to the tonic at the end of the A-section (in blue). Both are CoTCaS transformations with root motions by diatonic step (i.e. three diatonic thirds, octaves aside), and both traverse a similar path through the E CoS space, via E Phrygian (dia3) or E Phrygian $\flat 4$ (h \flat ma \flat j3). Both transformations seem to suggest that no matter how far one ventures from home (or one's comfort zone), the pull to return home can be yielded to with ease.

The B-section counterbalances its adventurous tonal mobility by generally being more conservative than the A-section in terms local modes, keeping mostly to diatonic modes. It also has a higher concentration of minor triads. This combination of negative affect topic flags with simple local modes increases the level of melancholy and sentimentality, in contrast to the A-section, which is more associative of exoticism and the theme of time, via its leitmotivic connection to the clock. This affective quality in combination with the sense of venturing beyond one's comfort zone is consistent with the metaphor of an emotional journey.

3.1.2 Benjamin's theme

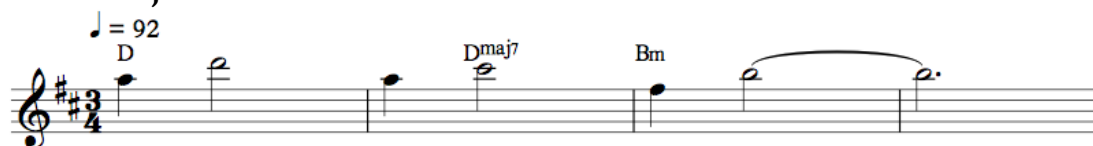


Figure 3.4: Benjamin's theme, from *The Curious Case of Benjamin Button*

Benjamin's theme comes to symbolise him, but more specifically his relationship to his home, the nursing home run by his step-mother, Queenie. It is played when:

- Benjamin is adopted by Queenie as a new-born, thus finding a home (cue at 0:16:44)
- Benjamin's early childhood at the home is recounted (cue at 0:18:03)
- Benjamin leaves home to go to sea (in "A New Home", 0:55:36)
- Benjamin returns home from WWII (cue at 1:26:43)
- Benjamin is living at Queenie's at the end of his life, suffering dementia and looking 5 years old (in "Dying Away", 2:35:15)¹

The chord progression of the main subject is $I \Rightarrow I^{MA7} \Rightarrow vi$, although I am inclined to hear it as $I \Rightarrow I^{MA7} \Rightarrow i/vi$, with every chord being tonicised to some degree. Chord vi in this context is very easily tonicised, for four reasons. First, the resultant Aeolian is a very stable mode because of Aeolian-centric expectations. Second, it concludes the phrase. Third, it is a resolution of the slight instability of the top line major seventh. Fourth its root ($\hat{1}/vi$) is in both the melody and bass. If every chord sounds tonicised (that is, at "home"), or nearly so, this makes the progression extremely apt to symbolise Benjamin's sense of being comfortable and safe at home. Here a small tonal space container functions a metaphor for home, rather than entrapment.

Being to do with his sense of home, it is also a sentimental theme. The sentimentality is partly achieved by tender performance (usually with prominent strings), and partly by the use of a major seventh chord with the seventh prominently in the top voice.

¹ For greater detail on these instances, refer to the cue breakdown in Appendix A.

The use of Ionian (DIA1) is appropriate both because of that mode's association with moral goodness discussed in section 2.3.9. Benjamin is portrayed as kind and gracious almost constantly. It is also apt as a topic flag for child-like musical simplicity. Benjamin is a child for the theme's early statements. Ionian also helps to give a sense of beauty through simplicity. Benjamin is a wise but relatively simple, unsophisticated man. Early in the film he is proud to introduce himself as a "tugboat man". Benjamin's narrations often reflect a love of simple beauties, such as the "breathing" of the nursing home when its inhabitants are asleep.²

Finally, it is interesting to note that Benjamin's theme is characterised by simplicity: a more universal character trait than his magical condition. However, there is one subtle way in which Desplat acknowledges Benjamin's condition. This is an arrangement-specific feature at 0:17:26 that Desplat himself points out in the "making of" documentary on the DVD (Fincher 2009). He points to a variation on the theme's first subject that goes thus:



Figure 3.5: A variation on Benjamin's theme inspired by his backwards aging, from *The Curious Case of Benjamin Button*

In each bar, there is downward octave displacement of the minims, which inverts the interval travelled from the first to last note in each bar. This is a playful metaphor for Benjamin's "backwards" ageing.

3.1.3 Daisy's theme

If Benjamin's theme expresses charm through simplicity, Daisy's does so through cool, swing-inspired urbanity. This is especially the case when it is harmonised using voicings based on chromatically planning minor triads, as when it is first introduced in the scene in which young Benjamin (who looks elderly) meets seven-year-old Daisy (Figure 3.7). In its first hearing at least, the theme seems to reflect or emphasise four things: 1) the setting of 1930 New Orleans, and the onset of the swing era, 2) Daisy's feminine beauty, 3) how Benjamin feels when he first saw Daisy: he falls in love at first sight, and 4)

² This is in the cue starting at 0:20:03.

Benjamin's apparent elderly age. The 1930s era is evoked by style flags of swing music, especially cup-muted trumpets playing chromatically planing triads. Daisy's girlish beauty is arguably expressed by all instruments playing softly, and particularly the delicacy of the attack-decay accompaniment instruments: vibraphone, celesta, and fender electric piano. Benjamin's romantic feelings are expressed by the fact that it is relatively slow swing-inspired music; reminiscent of something two lovers might dance to in the 1930s.



Figure 3.6: Daisy's theme, from *The Curious Case of Benjamin Button*

A multi-staff musical score for the scene "Benjamin Meets Daisy". The tempo is marked as ♩ = 80. The top staff is for flutes and trumpets with cup mutes, playing a chromatic planing triad. The middle staff is for vibraphone, celesta, and fender, playing a soft accompaniment. The bottom staff is for pizzicato, playing a simple bass line. The score is in 4/4 time, key of D major, and consists of 8 measures.

Figure 3.7: Daisy's theme as heard in "Benjamin Meets Daisy", from *The Curious Case of Benjamin Button*

Benjamin's elderly appearance is perhaps given emphasis by the swing style flags because in 2008 when the film was released, many of the most avid listeners of jazz were elderly. Desplat might be exploiting this present-day association to help the cinematic narrator to highlight the contrast between Benjamin's elderly appearance and Daisy's youth.

The quotation of Daisy's theme is not bound to always conjure these specific notions of romance or the elderly. In some of its later appearances, it is probably better understood to be a leitmotif that is symbolic of Daisy, modified to suit the mood of the current scene in some way. For example, the setting for solo harp used in the cues at 0:34:33 ("Children's Games") and 2:10:33 does not use the chromatic planning and is stripped of its swing-based connotations, but nevertheless retains the element of delicate feminine beauty and the symbolic connection to Daisy. In "Daisy's Ballet Career" (1:50:50) the theme is appropriately developed to be part of a style reminiscent of Romantic Ballet music.

3.1.4 Loss theme

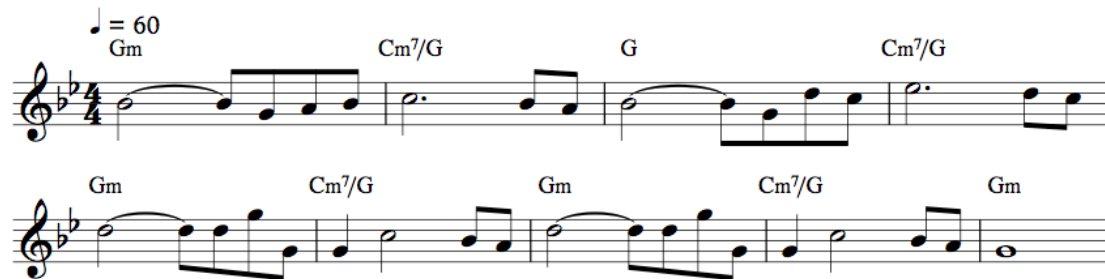


Figure 3.8: Loss theme - A-section, from *The Curious Case of Benjamin Button*



Figure 3.9: Loss theme – B-section, from *The Curious Case of Benjamin Button*

The two parts to this theme comes to symbolise sadness and longing, respectively. It is usually representative of Benjamin's feelings, and is mostly stated in moments focussing on loss that Benjamin experiences, often as a result from his condition. These moments are more concentrated in the second half of the film, and are when:

- Young Benjamin is harshly scolded for playing with young Daisy, and cries on Queenie's shoulder ("Children's Games", 0:34:33);
- Adult Benjamin learns that his mother died at his birth and his father abandoned him due to this and his condition (1:38:01);
- Benjamin and Daisy, finally looking similar in age, become lovers (2:01:43)
- Benjamin laments that "nothing lasts", thinking specifically of his romance with Daisy, which will be impossible to sustain in his condition ("Nothing Lasts", 2:04:41);

- Benjamin, during the birth of his daughter, seems to fear that she will be like him, and/or that Daisy will die in childbirth like his mother did (2:16:07); and
- Aging Daisy receives a phone call that Benjamin is now a street kid (2:31:10)

The cue at 2:01:43, accompanying the blissful love scene between Benjamin and Daisy in the Florida Keys, is an interesting example, in that it is far from being a moment of trouble for Benjamin. Benjamin's personal feelings are not being represented here, at least no more so than Daisy's. Rather, the score is offering a comment on the love scene and its broader implications. The slant of the cinematic narrator here arguably includes a sense of regret that this happiness can only be fleeting because of Benjamin's condition.

Above all, this cue expresses romance, which is partly achieved through the rich orchestration dominated by *espressivo* strings. Having said this, at the start of the cue, when the focus is more on the emotions of the characters themselves, Desplat does adapt the theme to suit the warmer mood. This includes making the tonic triad of the A-section major rather than minor. The Florida Keys love scene is not the only instance of the loss theme in which Benjamin's personal feelings are not represented. In the final statement at 2:31:10, the emotional point-of-view in the scene is Daisy's. *She* is feeling the loss expressed by the music, having learned that Benjamin is now a child living on the street. However, the sadness of the loss theme begins just before Daisy receives the information that Benjamin is living on the streets. This subtle detail of music placement hints at the fact that the sadness of this cue is also attributable to the slant of the cinematic narrator, and not purely to Daisy's emotions, because otherwise it does not make sense for the sad music to begin before Daisy learns the news about Benjamin.

The A-section of the loss theme expresses sadness in a strong, unambiguous way via the use of the TSPC dia6-5-dia2. There is a sense of immobility – perhaps of being trapped in the sadness – due to the pervasive tonic pedal and oscillation between only two chords, metaphorical for entrapment via the CONTAINER schema. The B-section, as is often the case in Desplat's music, contrasts to the A-section by being more complex both harmonically and emotionally. It uses twice as many chords and four times as many bass notes as the A-section, which means it gives a sense of increased mobility. The increased mobility might be inferred to be an emotional attempt to escape the trap of sadness expressed in the A-section, in other words, yearning or longing. This sense of yearning is amplified by the use of dia3-1-DIA4, which enables drawn out Lydian

suspensions (locally $\#4 \Rightarrow \hat{3}$) which relate to yearning as explained in section 2.3.10. The B-section is interesting in that within the two-bar phrases there is a negative to positive trajectory in terms of the connotations of the local mode (Phrygian to Lydian). However, at a slightly deeper level of the contrast between the first four bars and second four bars, there is the opposite trajectory towards the negative, caused by the transformation down a major second, which lowers both the overall pitch height and flattens two scale degrees ($A \Rightarrow A^b$ and $D \Rightarrow D^b$). This arguably gives an impression that the longing expressed in each two-bar phrase – the desire for happiness – only ultimately results in deepening sadness.

The contrast between the A-section representing sadness and the B-section representing longing is sometimes explicitly synchronised with the narrative content of the scene. For instance, in the cue “Children’s Games”, the A-section (at 0:36:32) accompanies the initial aftermath of Benjamin being scolded, which is sadness: he drops his head in dejection, and Queenie enters, saying that people will misunderstand him because of his condition. The B-section accompanies Benjamin getting up off the ground, tearfully asking “what’s wrong with me, Mama?” – which is his articulation of longing for answers and solutions – and Queenie embracing him in comfort, saying “God hasn’t said yet”, which shows that she shares Benjamin’s longing for answers.

3.1.5 Murmansk motifs

The Murmansk episode of the film (1:01:00 – 1:15:00) occurs after Benjamin has left home and gone to sea. While docked in Murmansk, in the Russian arctic, he has an affair with a well-to-do middle-aged English woman, Elizabeth Abbott. This is his first sexual encounter outside of a brothel. The fourteen-minute episode is accompanied by a suite of six cues³ that are largely thematically independent from the rest of the film. All but the third of these cues has a G maj tonic, which also differentiates the cues contained in the episode from those that precede and follow it. This is an instance of a CONTAINER metaphor, in that the self-contained musical structure emphasises the self-contained

³ As is detailed in the cue breakdown in Appendix A, the six cues are: 4M3 “Benjamin Meets Mrs Abbot”, 4M4 “Evenings Benjamin & Mrs Abbott”, 4M5 “Swimming the Channel”, 5M1 “Murmansk Stroll”, 5M2 “Love Affair, Until One Night” and 5M3 “It Was Nice To Have Met You”.

narrative episode. Four of the cues are waltzes,⁴ which is appropriate because of the associations between the waltz topic and romance. It is also geographically fitting given the embrace of the waltz by Russian composers including Tchaikovsky. The cimbalom – which has Eastern European origins and a close Russian relative called the tsymbaly – is Desplat’s main timbral style flag emphasising the Russian setting.⁵



Figure 3.10: Murmansk A, from *The Curious Case of Benjamin Button*, as heard in “Love in Murmansk” (1:11:17)



Figure 3.11: Murmansk B, from *The Curious Case of Benjamin Button* (as heard at 1:02:26)

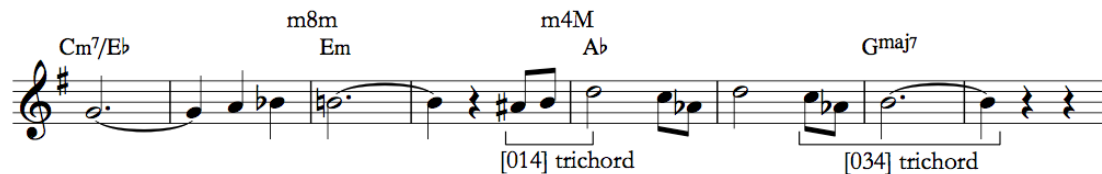


Figure 3.12: Murmansk C, from *The Curious Case of Benjamin Button*, as heard in “Love in Murmansk” (1:10:48)

The Murmansk cues are structured around three main motifs, A (Figure 3.10), B (Figure 3.11), and C (Figure 3.12). All three come to symbolise Benjamin and Elizabeth’s romance in their own way. The order in which these are deployed across the six cues resembles rondo form: AABAA, BAA, C, AAC, BAA, A.⁶ This shows that Desplat carefully constructs long-range musical structures as well as being mindful of narrative concerns.

⁴ All but 4M5 and 5M2 are waltzes.

⁵ The cimbalom is used to help evoke a central European locale in Desplat’s score for *The Grand Budapest Hotel*, as will be seen in section 3.2.2, which this gives a sense of its wide geographic application in Desplat’s output.

⁶ Some non-recurrent and less important melodic material is also included in the last three cues, and is not accounted for here.

In terms of pitch organisation, Murmansk A (Figure 3.10) has a topic flag relating to both the Russian setting and to the sensual nature of the episode. The feature of interest is the $\flat\hat{6}$, which is rare in a major context,⁷ but more specifically associative is its use in a chromatic pass concluding the motif: $\hat{6} \Rightarrow \flat\hat{6} \Rightarrow \hat{5}$ ($E \Rightarrow E\flat \Rightarrow D$, excluding the consonant skip to $B\flat$). Taruskin (1992) writes:

The reversible chromatic pass between the fifth and sixth degrees is in fact the essential *nega* undulation...[I]n opera and song, *nega* often simply denotes S-E-X *à la russe*, desired or achieved.

Taruskin traces the origin of the $\hat{6} \Rightarrow \flat\hat{6} \Rightarrow \hat{5}$ “marker” of *nega* (i.e. *nega* topic flag) back to a passage from Glinka’s 1842 opera, *Ruslan i Lyudmila*, in which sirens in the garden of an evil sorceress (Nanina) sing exotic melodies to seduce men.⁸ Taruskin argues that the association between $\hat{6} \Rightarrow \flat\hat{6} \Rightarrow \hat{5}$ and *nega* thereafter became conventional in Russian art music, being perpetuated by Anton Rubinstein and Alexander Borodin, for example. For Glinka, Rubinstein and Borodin, this orientalist gesture was “simultaneously and ambiguously a self-constructing and an other-constructing trait”.⁹ But Taruskin notes that French audiences (who embraced *nega* in 1909-1910 thanks to Diaghilev’s *saisons russe* ballet seasons) *nega* “meant Russia, for to them Russia was East and Other”. In Murmansk A, Desplat is invoking *nega* to signal the Russian setting as well as the sensual nature of Benjamin’s time there. In Murmansk A, the $\flat\hat{6}$ occurs as the root of $\flat VI$ in a $I \Leftrightarrow \flat VI^6$ (DIA1-8-DIA4) oscillation. The extravagance of the motion in the chromatic dimension (seen in the large vertical motion in the space in Table 3.1) combined with the positive affect of the two major triads is arguably a metaphor for Benjamin and Elizabeth’s indulgence in each other. At the same time, I hear the two entrapment metaphors,¹⁰ due to the parsimonious triadic voice-leading (seen in the small horizontal motion in Table 3.1), the tonic pedal and the strong $\flat\hat{6} \Rightarrow \hat{5}$ and $\flat\hat{3} \Rightarrow \hat{3}$ melodic attractions that magnetise the tonic. This may be suggestive of the tight confinement of the romance – it is confined to a small hotel (due to the arctic weather), to secrecy, to nights, and to a few weeks.

⁷ See Table 1.6.

⁸ The chromatic pass in question occurs in bars 99-100 and 103-104 of no. 12.

⁹ It was self-constructing in the sense of creating a Russian style distinct from that of Western Europe, and other-constructing in the sense that they did not consider themselves oriental, but were representing orientalism that existed within Russia.

¹⁰ These are ENTRAPMENT IS MAGNETIC TONIC and ENTRAPMENT IS SMALL TONAL SPACE CONTAINER.

Table 3.1: DIA1-8-DIA4 on G in Murmansk A, from *The Curious Case of Benjamin Button*

G DIA1	e dia6
G DIA5	e dia3
g dia2	e dia7
g dia6	E♭ DIA4

Murmansk C (Figure 3.12) is even more exotic than Murmansk A. Its first three chords – C min⇒E min⇒A^b maj – combine two rare transformations: a Tarnhelm (m8m)¹¹ and *hexatonic pole* (m4M). An equally interesting chromatic melodic line twists and turns over this progression, and includes melodic articulations of the rare chromatic trichord [014] and its inversion [034], as indicated in Figure 3.12. Of particular note is the augmented second that closes the motif, because Taruskin (1992, 257) identifies such intervals as another marker of Russian orientalism. The expressive motivation for this angular chromaticism is arguably also to express Mrs Abbott’s negative emotion of regret. Murmansk C is first played in 4M5, accompanying a flashback in which Mrs Abbott is remembering, bitterly, her failed attempt to swim across the English Channel. Its second appearance, in the following cue, accompanies her reflection that if she were young again, she would undo all her mistakes.

Murmansk B is less exotic, sharing three harmonic attributes with the B-section of the Loss theme (Figure 3.9), which is external to the Murmansk episode:

- There are two-bar phrases containing one m1M in minor-to-major order, which are treated sequentially
- Transformations between the last chord of a phrase and the first chord of the next phrase are either **L** or **R**
- These B-sections are more tonally mobile than their respective A-sections

This inter-leitmotivic similarity provides cohesion across the score. It arguably also establishes a subtle connection between the Murmansk affair and Benjamin’s more general longings symbolised by the Loss theme. In another such similarity, the $\hat{6} \Rightarrow \flat \hat{6} \Rightarrow \hat{5}$ descent from Murmansk A is also found in a passage that plays as a B-section to the

¹¹ This is a rare instance of an m8m in which the less tonicised triad comes first. E min sounds more tonicised than the preceding C min to my ears, because it is a closer relation to the overall key of the episode, which is G major. There is certainly a dash of m8m/m4m, ambiguity, however, which perhaps mitigates the negative connotations that an m8m might bring while also making the progression more surprising and whimsical.

main theme (0:03:53, 2:23:39, and 2:24:26). However, this is harmonised by a minor tonic triad – creating a darkening gesture from Dorian to Aeolian – so is melancholy and not exotic, lacking the rare $\{\hat{3}, \flat\hat{6}\}$ interval. It is first heard when Mr Gateau learns that his son died in the World War I (0:03:53).¹²

3.1.6 Conclusion

Desplat's score for *The Curious Case of Benjamin Button* is an extremely engaging and elegant piece of work, in my opinion. It is sweet without being saccharine, nostalgic without being dated, simple without being simplistic, and sophisticated without being pretentious. The score makes evocative use of associations – from jazz to Russian *nega* – and provides its own internal leitmotivic associations that usher the viewer through the long film, building coherence and maintaining continuity. The score is also an excellent example of Desplat's style, including his characteristic timbres, strong melodies, well-crafted ostinati and balance of affecting lyricism with minimalist restraint.

¹² One final leitmotif in *The Curious Case of Benjamin Button* is Mr Oti's motif (Figure 2.50), discussed in section 2.3.11.

3.2 Music of The Grand Budapest Hotel

Desplat's Oscar-winning score deserves special attention not just because of its deserved acclaim, but because it represents Desplat's celebrated collaborations with Wes Anderson. In this section, I will look at the relationship between Desplat's score and Anderson's style, and at Desplat's invention of a unique musical sound for a fictional country. I will then take a closer look at some of the key leitmotifs in the score, and at the cue that accompanies the film's climactic sequence.

3.2.1 Music and Wes Anderson's style

When writing about the music of *Fantastic Mr. Fox* in section 2.3.9, I proposed that Desplat's aesthetic in his Anderson collaborations has metaphorical correlations to Anderson's visual aesthetic. Desplat himself has acknowledged this:

Wes invented a tone, a world that is peculiar and inspired and melancholic – and at the same time filled with farce and with moments of extreme ecstasy. It is a very special world. Musically, of course, I want to reflect all of the emotions that I just mentioned. A touch of melancholy, a lot of fun, but at the same time, it's never heavy. Comedy can't be heavy.¹³

David Bordwell provides a helpful and detailed description of Anderson's visual aesthetic:

Anderson has one of the most distinctive styles of any American filmmaker ... committing himself to “planimetric staging” and shooting, matched by “compass-point” editing ... A rigid perpendicular angle can endow action with an absurd geometry and a deadpan humour, qualities that Anderson has exploited freely. These apparently simple framings enhance the sense that we're looking at the world through a child's eyes, or the eyes of an adult with a childlike sense of innocence ... Centred symmetry, coupled with compass-point editing, may seem a fairly easy strategy ... but there's a stubborn artistry at work here. The very perpendicular framings and cutting patterns seen in Anderson's features weren't used much in the mainstream tradition, because many filmmakers, and some viewers, fear that they're too artificial and confining.

Bordwell later characterises Anderson as a “stringent minimalist”, seeking to do “more with less”. He also points out the fact that Anderson shoots each period depicted in *The Grand Budapest Hotel* in an aspect ratio “that could have been used in a movie at that time”, which is an example of the director's use of the retro visual style for comedic and associative purposes.

¹³ Seitz and Washburn (2015, 135)

I propose that Desplat's musical reflection of Anderson's style can be itemised into five associative qualities. His music for *Grand Budapest Hotel*, like Anderson's visual and narrative style, often evokes associations of childhood, minimalism, bygone eras, eccentricity, and/or deadpan humour. These five associations may function independently or in conjunction with one another.

Both *Fantastic Mr. Fox* and *The Grand Budapest Hotel* have a child-like quality, which is related to the shared theme of education that is common in Anderson's films. Desplat puts it this way: "There is education in all three movies I've scored for Wes. Education is a recurring theme, and you can definitely use that musically; it's something you can refer to."¹⁴ In terms of timbre, Desplat's scores for Anderson often foreground instruments that have present-day associations with childhood, such as glockenspiel, recorder, and instruments that sound like glockenspiel or music box, such as celeste. These timbres tend to be used in high register, which is arguably metaphorical for the high pitch of children's voices, enhancing the sense of the child-like. Desplat frequently foregrounds such timbres across the corpus, but in Anderson's films it seems more prevalent.

The child-like quality in Desplat's Anderson collaborations is also partly a product of the very frequent emphasis on primary triads and progressions with root movement by fifth, with unambiguous tonicisation of the tonic triad. This exploits an association between basic tonal harmony and early musical education, and by extension all education. (This is similar to the association between children and the mode Ionian (DIA1) mode, discussed in section 2.3.9.) When a secondary triad is used, it is often the most commonplace of the secondary triads, such as chord vi in Ionian (DIA1), or a conventional secondary dominant like that in the closing cadence of the "Boggis, Bunce, and Bean" theme¹⁵ from *Fantastic Mr. Fox* (Figure 3.13), which is only ever sung by young boys in the film, reinforcing its child-like quality. Straightforward hypermeters and sectional durations that tend to consist of four, eight or sixteen bars add an additional connotation of child-like simplicity.

¹⁴ Seitz (2013, 135)

¹⁵ This is an example of what Bribitzer-Stull calls leitmotif song (2015, 280): a leitmotif that is also featured as a diegetic song at one point in the narrative.



Figure 3.13: theme for Boggis, Bunce, and Bean, from *Fantastic Mr. Fox* (as sang at 0:08:56)

In his Anderson scores, Desplat achieves a post-minimalist style through the rare use of modulation (other than inflections such as secondary dominants) and frequent long expanses of repetition – notably of the “Adventure theme” that will be discussed in section 3.2.3.3. As in much cinematic post-minimalism, harmonic stasis is not only an aesthetic and stylistic choice, but can carry metaphorical meanings, which will be discussed on a case-by-case basis.

The retro visual style of the film is at times matched by equally retro musical elements. Take, for instance, the moment (0:27:44) in which the villain’s henchman, Jopling, becomes the focus of attention for the first time, when he punches Zero in the face after an altercation about who should inherit the painting *Boy With Apple*. After the savage punch, which leaves onlookers shrieking in horror, Jopling appears in close-up for the first time. He is baring his fists, which are adorned with skull-shaped knuckle-dusters, and glowering intimidatingly. An iris shot – a technique from the silent film era that blacks out all but a circle that frames the subject – is used to give this shot the quality of an old-fashioned portrait. The iris shot seems to say, “take note of this man: he’s a dangerous villain!” This old-fashioned visual feature is accompanied by a similarly old-fashioned musical feature: a stinger chord. Neumeyer (1993) defines a stinger as

a sforzando chord or sharply marked short gesture which draws attention to something on the screen, a sudden turn of action or a shocked response—as it were, an accent in the imagetrack coordinated with an accent in the music. Stingers were used in silent-film accompaniment but came into their own with the recorded soundtrack and extensive employment by Max Steiner. (Later on, they were used most often in cartoons.)

The particular stinger in question is an isolated minor triad played fortissimo on a pipe organ and doubled with a bombastic timpani roll. It begins exactly as the iris closes in to frame Jopling’s face, thus the chord and the iris shot are a united audio-visual gesture that humorously parodies the silent film era in style and in the shamelessly exaggerated

characterisation of a villain. Jopling's stinger chord receives a kind of reprise later (at 0:52:25), after he emerges from brutally killing Deputy Kovacs at the Kunstmuseum, collecting his victim's severed fingers. This time it incorporates Jopling's five note descending leitmotif that will be discussed in section 3.2.3.4.

The use of pipe organ here – and of pipe organ and Hammond organ in multiple cues throughout the film – serves the stylistic allusion to the silent film era, because organs often accompanied silent films. More generally, interesting timbral choices and combinations contribute much of the eccentricity in the style of the score, as will be discussed in the next section. In terms of *harmonic* eccentricity, certain cues achieve this via triadic chromaticism, as in “A Troops Barracks”, to be discussed in section 3.2.4. Triadic chromaticism is relatively atypical of Desplat's Wes Anderson scores, however. The more typical harmonic eccentricity is the harmony based almost exclusively on primary triads, combined with a tendency to use unexpected triadic modes at times. For example, “Zero's theme” employs chords I, iv and v, surprising Ionian-centric expectations, while the “adventure” theme does the opposite, employing chords i, IV and V, surprising Aeolian-centric expectations. Both themes will be discussed in more detail in section 3.2.3.

The musical qualities described above are, to some extent, observable in the music of Anderson's films scored by other composers, notably by Mark Mothersbaugh, and in the existing music curated by Anderson's music supervisor, Randall Poster. This is not to say that Desplat has not contributed some of his own unique sensibilities to these films – he certainly has – but it reinforces Desplat's own point that he and Anderson have mutually arrived at this musical “tone”, or set of aesthetic preferences.

Some of the qualities outlined above – the rarity of modulation and clear sectional boundaries – probably have partly practical motivations as well as aesthetic ones. I say this because the process by which Desplat scores a Wes Anderson film includes a degree of input from the music editorial team,¹⁶ and music is edited with much greater ease and flexibility if modulation is rare and sectional boundaries are distinct.

¹⁶ Seitz and Washburn (2015, 117).

Another element of Wes Anderson's style, which makes his films stylized rather than realistic and contributes to the eccentric, deadpan tone, is that the artifice of the cinematic apparatus is often highlighted, rather than being disguised. Some visual examples of this are his use of patently unrealistic matte painting backgrounds, and the artificial-looking framings and cutting mentioned by Bordwell. This aspect of Anderson's aesthetic (and sense of humour) makes its way into the score at moments when diegetic sounds are played in time, or in tune, with the diegetic score. The cue "Canto at Gabelmeister's Peak" provides two memorable examples. Firstly, at 1:11:37 the diegetic noises of a rhythmically squeaking cable car are synched with the non-diegetic score's tempo. Shortly after this, monks encountered at the abbey sing the "Adventure theme" as diegetic music, set to words from the Catholic mass, accompanied by and incorporated into the non-diegetic score. This momentarily breaks down conventional separations between story and discourse (diegesis and non-diegesis), in that the depiction of the story departs realism to the point that the film's identity as an artificial discourse is laid bare. Thus, the audience are explicitly invited to enjoy the quirks and musicality of the film-as-discourse, as much as enjoying the story. As Anne Washburn writes, Anderson's movies "are not only about the love of the tale, but always, also, about the love of telling it."¹⁷

All the musical choices described in this section are attributable mostly to the implied filmmaker, although this does not prohibit them from also serving other, more expressive functions. While the Wes Anderson factor explains certain stylistic similarities in the scores for *Fantastic Mr Fox* and *The Grand Budapest Hotel*, the factor of setting – the subject of the next section – explains their many differences.

¹⁷ Seitz and Washburn (2015b, 9)

3.2.2 Music of Zubrowka

As has been outlined in number of popular press writings about this score, including Olivia Collette's book chapter (2015), Desplat was tasked with adding a musical dimension to Wes Anderson's creation of a fictional country: Zubrowka. The country, according to Anderson, is a "mixture of Hungary and Poland and Czechoslovakia, or something."¹⁸ Anderson explains in the same interview that the film depicts three periods in Zubrowka's fictional history, which parallels real-world history, although World Wars I and II are conflated into one, starting in 1932. The three periods are pre-war (the country in its luxurious, innocent state), war with fascist occupation, and a communist post-war period represented in the 1968 scenes.

Hungary, Poland, and Czechoslovakia all occupy a middle-ground between Western Europe and the East, including Russia. Accordingly, their cultures reflect this mixture of influences. In correlation with Anderson's desire for Zubrowka to reflect these places – which themselves have diverse cultural influences – Desplat employs musical elements from a range of real-world geographic regions, spanning from Western Europe through Eastern Europe to Russia. The fictional status of Zubrowka afforded Desplat a degree of freedom, in which, for example, Russian balalaikas could accompany Italian mandolins, as they do in Gustave's theme, discussed in section 3.2.3. This kind of multicultural troping achieves a balance between exploiting real-world connotations and making them into something fictional that does not quite exist in the real world.

One of the most prominent instruments in *The Grand Budapest Hotel* is the cimbalom, which was also used to represent Russia in *The Curious Case of Benjamin Button*, but which is even more at home in the pseudo-Central European setting of this film. Other instruments, such as the pipe organ and a choir of monks singing in pseudo-renaissance style, are more pan-European in their associations, but nevertheless contribute to the musical portrait of Zubrowka. Some style flags seem to be more motivated by the 1932 time-period than the geographical location, such as the use of jazz drumming (especially brushed snare drum) and swing rhythms more generally.

¹⁸ The quote is from a transcribed interview in (Seitz 2013, 34).

In terms of harmony and scales, Desplat creates a sense of Eastern European folk music in a variety of ways. First, he largely restricts himself to a kind of common-practice tonality (a Western European influence), which is also a product of the emphasis on primary triads. Raised leading-tones in minor tonalities (including local tonicisations of non-tonic minor triads) arguably function as style flags of common-practice tonality. Second, its folk quality comes from its lack of developmental and modulatory complexity. Third, its Eastern quality comes from its abundance of scale types that include rarer tonal interval classes, such as melodic minor (MMIN), harmonic minor (HMIN) and harmonic major (HMAJ). Rare modes of these scales, including rare scale degrees, also at times provide broadly Eastern style flags. More specifically, many of these modes can function as style flags for Hungarian-Gypsy music.¹⁹ Examples will be provided in relation to the description of leitmotifs in the next section.

At 0:08:09, Desplat's music makes a diegetic appearance as background music in the 1968 hotel. This, along with the use of the diegetic monks, implies that the musical styles Desplat has created are situated within the world of the story – as much a part of the Zubrowkan cultural landscape as the production design – and are not *merely* a product of the cinematic discourse external to that world.

3.2.3 Leitmotifs

Two leitmotifs in the film are both frequent and clear in their associations: themes for the protagonist, Gustave, and the protagonist/narrator, Zero. A third, which I have called the “Adventure theme”, is frequent but less clear in its symbolism. A fourth, Jopling's theme, is less frequent but is clearly symbolic of one of the antagonists, Jopling. In addition to these melodic leitmotifs, it is possible to associate certain instruments with elements of the narrative – leit-timbres. Finally, Desplat occasionally makes use of leitharmonie, either by stripping a leitmotif of its melody, or by associating a chord progression with a narrative element – in this case, the Society of the Crossed Keys – without using recurrent melodic material.

¹⁹ See the footnote on page 142.

3.2.3.1 Zero's Theme



Figure 3.14: Zero's theme, from *The Grand Budapest Hotel*, A-section (bars 1-4) and B-section (bars 5-14).

The most salient feature of Zero's theme (Figure 3.14), is arguably the $\hat{6}-\flat\hat{6}-\hat{5}$ chromatic pass in the top voice of bars 2-3, which, as is discussed in section 3.1.5 as a style flag for Russian music, and which here is being exploited for its more broadly Eastern connotations as part of Desplat's invention of Zubrowkan music.²⁰

Desplat opts for Zero's theme to be in a major mode; this might be to express the simple innocence of the character, in contrast to Gustave. It could also be because this seemed the right emotional tone for the parts of the film in which it is employed. The theme is heavily used at the bookends of the film, and therefore needs to provide the audience with a clear indication of the film's overall tone – the overarching slant of the cinematic narrator – which is *primarily* light-hearted. Mark Richards accurately notes that the hints of melancholy in Zero's theme lie in the use of the $\flat\hat{6}$ in its A-section (bars 1-4 in Figure 3.14), as well as the use of unexpectedly minor tonal regions – v and iv – in the B-section (bars 5 onwards in Figure 3.14). I would add that their positioning in the B-section clarifies the melancholy character as being secondary to the relatively cheerful character of the A-section. This is arguably an instance of a broader metaphor: If a musical unit (A) is given more structural importance than another musical unit (B), then the expressive content of A is consequently given greater emphasis than the expressive content of B. In the case of Zero's theme, the A-section is given more structural

²⁰ The same sequence of scale degrees is arguably invoked in a slower, more disguised fashion in that A-as- $\hat{6}$ is prominent in bars 5-8, Ab-as- $\flat\hat{6}$ is prominent in bars 9-12, and G-as- $\hat{5}$ is present (albeit in an inner voice) in bars 13-14.

3.2.3.2 Gustave's Theme

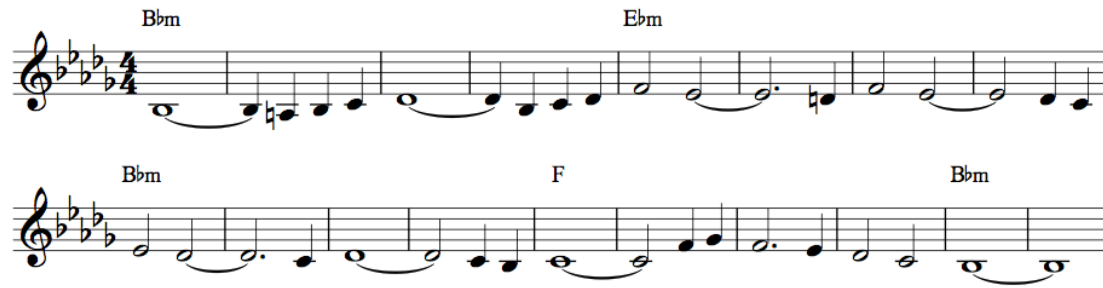


Figure 3.16: Gustave's theme, from *The Grand Budapest Hotel*

Mark Richards (2015a) proposes that the minor mode of Gustave's theme (Figure 3.16) "establishes an air of seriousness that aptly describes the character's attitude towards his duties at the hotel". I would add that the slant of the cinematic narrator is such that the audience is permitted to laugh at Gustave's self-seriousness, in other words, to infer that it is ironic deadpan comedy.²² The music's role in establishing this slant of irony is to overplay the seriousness. The irony lies in the music-narrative juxtaposition, not in the music itself.

Gustave's theme also exemplifies the association between harmonic minor (hmin1) and both classicism and ostentation, discussed in section 2.3.3. According to Zero, he is living in a lost past even in 1932. As well as dying with one of the largest fortunes in Europe, he always values – or at least puts on a show of valuing – the lifestyle of the wealthy, including fine art, food, cologne, opera, etc.

Gustave's exaggerated camp sensuality – he admits, "I sleep with all my friends" – is captured in the use of lyrically played tremolo mandolins, by Desplat's own admission (Blair 2015). The tremolo mandolins more typically function as a style flag for romantic Italian music, as do the appoggiaturas (bars 5, 7 and 9 of Figure 3.16). But, while the exaggerated romanticism of this style is important, its Italian association is disguised by the use of more Eastern style flags in the accompaniment: Russian balalaika ensemble and a cimbalom, arpeggiating in swung quavers. This is a prime example of the ethno-geographical melange that makes up Desplat's Zubrowkan music, discussed in section 3.2.2.

²² Ralph Fiennes, who played Gustave, refers to Anderson's desire for deadpan delivery of lines in Seitz (2013, 68).

In its sensuality, ostentation, and comedic over-seriousness, Gustave's theme – at least in its most lyrical guises – might be interpreted as a musical metaphor for the eight poems that Gustave partially recites during the film. The one below is intended to soothe Madame D, and is accompanied by Gustave's theme:²³

While questing once in noble wood of grey medieval pine,
I came upon a tomb, rain-slick'd, rubbed cool, ethereal;
Its inscription long vanished, yet still within its melancholy fissures...

These poems, written by Anderson, are seriously intended by Gustave but humorous to the audience because of their caricature of Romantic poetry, and because Gustave reveres the poetry much more than the other characters (and the cinematic narrator), who abruptly interrupt his recitations on all but one occasion.

3.2.3.3 Adventure Theme

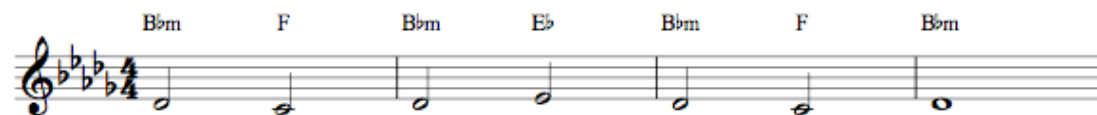


Figure 3.17: Adventure theme, from *The Grand Budapest Hotel*

The theme I have called the Adventure theme tends to play when the main characters are travelling somewhere, and their adventure is advancing. For instance, its first two statements are during train journeys in which Zero and Gustave travel to Lutz (0:18:05) and home again (0:30:52). The theme's most prolonged statement – with many repetitions of these four bars in various orchestrations – is in “Canto at Gabelmeister's Peak” (1:11:16). This accompanies a journey up a mountain by cable car, through a church full of monks – who sing the theme as diegetic music – and back down the mountain on a sled, chasing Jopling, who is on skis. When the theme is harmonically altered, it tends to be less to do with travel, although it is still related to the adventure of Gustave and Zero.²⁴

The Adventure theme is an example of an important reoccurring theme whose leitmotivic associations are rather ill defined, but its various reprises and developments provide a thread of musical unity that runs through the film. It almost functions like a main theme in this sense, except that it does not feature at the bookends of the film. The

²³ The cue is “A Prayer for Madame D” (0:10:23).

²⁴ See for example, its use in “Last Will and Testament” (0:24:13), “The Lutz Police Militia” (0:33:45), “Checkpoint 19 Criminal Internment Camp Overture” (0:34:23), and “A Troops Barracks” (1:17:37).

theme, in its normal harmonisation (Figure 3.17) fits entirely into melodic minor ascending (mmin1), and this topic flag of common practice period tonality suits the pseudo-historical, pseudo-European setting. However, common practice period tonality tends to use melodic minor's $\natural 6$ for *melodic* advantage (avoiding the A2 between $\flat 6$ and $\natural 7$), whereas Desplat uses the $\natural 6$ in a purely harmonic capacity to create an m5M (rather than the more common m5m) in the $i \Rightarrow IV \Rightarrow i$ section of the theme. According to Murphy, m5M is “associated with experiences of wonderment, optimism, success, or transcendence” in Hollywood film music. The associations of optimism and success seem the most relevant in this case. For instance, in the first hearing of the theme, Gustave is travelling to attend the reading of a will, and he tells Zero that he hopes his wealthy deceased friend may have bequeathed him something. The m5M thus reinforces Gustave's optimism. On the return journey, when the theme is reprised, Gustave's wish has come true and the m5M seems pertinent with this success. The upbeat tempo and jazz-influenced, brushed drum-kit patterns that tend to accompany the theme support the sense of positive affect and light-heartedness.

Another element of the theme is the solemnity of the $i \Rightarrow V \Rightarrow i$ progressions that open and close each chord cycle. This articulation of m7M contributes a sense of solemnity due to its clear articulation of minor mode and its function as a style flag for the “serious” style of common practice period tonality. The suggestion of solemnity is likely to be perceived as ironic, however, because of the overall light-hearted nature of the theme due to its tempo, and drumming. It is a musical analogue for Gustave's demeanour in the train journeys. He outwardly expresses sorrow at his friend's death, but this outward display of grief is ironically contrasted with his thinly veiled pleasure at becoming an inheritor. In the version sung by monks there is a similar ironic solemnity. The solemnity of the monks is represented, but the scene is comedic, in that Gustave and Zero are poorly disguised as monks and look hilariously out of place.

Changes in orchestration are Desplat's main means of varying the theme to make it suitable in a range of different contexts. For instance, the orchestration is full when there is no dialogue, and light under dialogue. Different timbres are also used associatively, such as when trombones and French horns enter prominently to signify the presence of the military at 0:19:16. In “Canto at Gabelmeister's Peak”, choral voices in the non-diegetic score signify that they are nearing a place of worship. When Gustave and Zero are talking to Serge in the confessional box at the Abbey, solo pipe organ maintains the

sense of being in a place of quiet worship.²⁵ Later, when the pursuit of Jopling on sled begins, sleigh bells are used, in a playful reference to their means of transport down the mountain. During the ski chase, French horns enter, suggesting the heroism of Zero and Gustave as they bravely pursue their enemy at high speed. At the climax of this chase, involving large jumps one might encounter at a Winter Olympics, a surprising and virtuosic cimbalom solo enters, adding a lot of fun and a sense of technical mastery, which seems an apt metaphor for Zero's surprising mastery of high-speed sledding.

3.2.3.4 Jopling's Theme

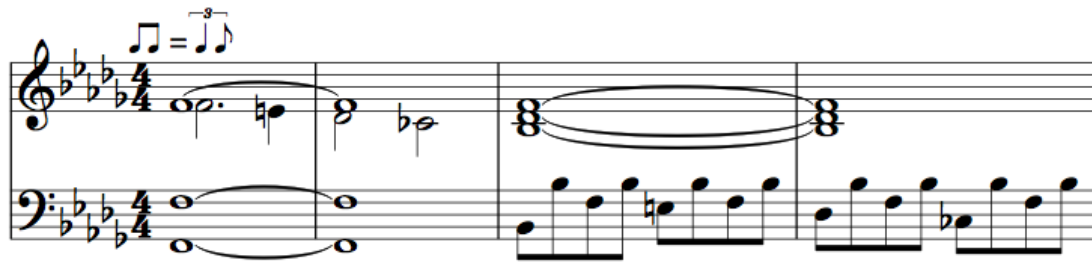


Figure 3.18: Jopling's theme, as heard in "J.G. Jopling, Private Inquiry Agent", from *The Grand Budapest Hotel* (0:37:19)

Jopling is a brutal henchman working for Dmitri, the film's main antagonist. He does not have an extended melodic theme that symbolises him, but rather an ostinato (bars 3-4 of Figure 3.18), and a five-note descent from dominant to tonic ($\hat{5} - \hat{\#4} - \flat\hat{3} - \flat\hat{2} - \hat{1}$), often played in pipe organ to announce his presence (bars 1-2 of Figure 3.18). Additionally, a distinctive set of instruments, notably including pipe organ, timpani, and sometimes cimbalom, become leit-timbres for both Jopling and his boss, Dmitri. Jopling's association with pipe organ and timpani was first firmly established in the stinger chord where he is first shown in close-up.

The most significant outing of Jopling's musical material is in the cue "J.G. Jopling, Private Inquiry Agent", which accompanies Jopling's hunt for Serge, who he intends to murder. At 0:37:40 in this cue, Desplat uses a variant of Gustave's theme to add melodic material to Jopling's ostinato, although Desplat's intention does not seem to be to connote Gustave, as this character has no direct relationship to the scene in question.

²⁵ It is ambiguous whether the organ is diegetic or non-diegetic, because the timbre is congruent with it being diegetic, yet the harmony becomes increasingly chromatic, aptly underscoring the tense dialogue. The usual Eb (IV) is substituted for D (III), creating a *hexatonic pole* progression between Bb min and D maj, which is a topic flag for the uncanny.

The variant of Gustave’s theme cadences to $\sharp\hat{4}$ at the end of the first phrase, making it an instance of Hungarian minor (gyp4) rather than the usual harmonic minor (hmin1). The addition of a rare scale degree ($\sharp\hat{4}$) and rare intervals – including the extra A2/d7 between $\sharp\hat{4}$ and $\flat\hat{3}$ – serves as a harmonic distortion of this theme, making it apt in the context of Jopling’s antagonism. Further unease is created by a bimodal juxtaposition of the Hungarian minor melody with the ostinato in bars 3-4 of Figure 3.18, which is in chromatic Lydian inverse (cli1). As Table 3.2 shows, the former mode includes $\hat{2}$, while the latter includes $\flat\hat{2}$. Readers will recall that chromatic Lydian inverse (cli1) evokes an abundance of tension topic flags (see Table 2.1) and tends to be associated with antagonism (see section 2.3.7).

The variant of Gustave’s theme is followed by a walking bass line played by jazz double bass.²⁶ This is played with the ostinato mentioned earlier (which uses $\{\hat{1}, \flat\hat{2}, \flat\hat{3}, \sharp\hat{4}, \hat{5}\}$), and features a $\flat\hat{7}-\hat{6}-\flat\hat{6}-\hat{5}$ chromatic descent. While the $\flat\hat{6}$ might be considered a chromatic passing-tone here, the use of $\flat\hat{7}$ and $\natural\hat{6}$ in this context is suggestive of the octatonic mode half-whole diminished (oct1), whose scale degrees are listed in Table 3.2. This implication is noteworthy in that half-whole diminished is also used in “A Troops Barracks” as part of a tension topic, as will be discussed in section 3.2.4. The walking bass line, including its prominent $\flat\hat{7}$, also function as style flags for jazz. As in the main theme of *The Ghost Writer* discussed in section 2.3.3, jazz seems apt here because of its associations with gangsters and corruption, established in the hard-boiled detective films of the 1930s-1970s. Finally, the linear chromaticism in the walking base line also exploits the various associations of linear chromaticism – including comedy, tension, and the linear motion of Jopling’s pursuit of his victims.

Table 3.2: three similar modes used in “J.G. Jopling, Private Inquiry Agent” (0:37:19) and “The Cold-Blooded Murder of Deputy Vilmos Kovacs” (0:49:54), from *The Grand Budapest Hotel*

Chromatic Lydian inverse (cli1)	$\hat{1}$	$\flat\hat{2}$	$\flat\hat{3}$	$\sharp\hat{4}$	$\hat{5}$	$\flat\hat{6}$	$\natural\hat{7}$
Hungarian minor (gyp4)	$\hat{1}$	$\natural\hat{2}$	$\flat\hat{3}$	$\sharp\hat{4}$	$\hat{5}$	$\flat\hat{6}$	$\natural\hat{7}$
Half-whole diminished (oct1)	$\hat{1}$	$\flat\hat{2}$	$\flat\hat{3}/\natural\hat{3}$	$\sharp\hat{4}$	$\hat{5}$	$\natural\hat{6}$	$\flat\hat{7}$

²⁶ This bass line is also used in the cue “The Cold-Blooded Murder of Deputy Vilmos Kovacs”, which accompanies one of Jopling’s more horrific crimes.

If the modality of Jopling's material renders his antagonism with the obviousness of a caricature – matching the portrayal of the character more generally – the comical slant of the cinematic narrator is further musically reinforced by means of the bouncy swing rhythms and idiosyncratic instrumentation, which includes a male chorus joining the ostinato with “ah-rumpty-tumpty-tumpty-tumpty” or similar. For one reviewer, Jonathan Broxton (2014), this recalled the comedy sketches of Monty Python involving incompetent soldiers. Here the audience is not so much intended to feel frightened by Jopling, as to experience enjoyment at the recognisable caricature of a villain.

3.2.3.5 Leitharmonie: Society of the Crossed Keys

The cue “The Society of the Crossed Keys” (1:01:44) accompanies a fast-paced comedic montage sequence in which Gustave calls upon the services of The Society, for hotel concierges, via a chain of phone calls between members. In each hotel featured, there is a running gag in which a lobby boy is instructed by his concierge to “take over” whatever the concierge is doing when the call is received. The sequence also functions as a “day in the life” portrait of hotel staff in Zubrowka. In later cues involving the society, especially in the immediately following cue, “M. Ivan”, material is borrowed from this cue. The main element uniting the music associated with the Society of the Crossed Keys is the oscillation $I \Leftrightarrow vi$, an instance of M9m, which is pervasive in “The Society of the Crossed Keys”. Because no melodic phrase from this cue is re-used as a leitmotif, one can only call the M9m a *leitharmonie*.

Because M9m is such a common TTPC in common-practice tonality, albeit not as an oscillation, it is rather unmarked and not prone to associativity. It is the most expected (and therefore least marked) way of pairing a major tonic triad with a minor triad. The minor triad is arguably needed in “The Society of the Crossed Keys” to slightly mitigate the strongly positive connotations of the major tonic triad, fast tempo, and bouncy rhythms. The minor triad is arguably correlated with the sense that the Society take *themselves* very seriously, even if the slant of the cinematic narrator is to present their activities humorously.

The M9m is derived from the A-section of Zero's theme, whose second bar could be interpreted as chord vi^6 rather than I with $\hat{6}$ as an upper neighbour tone. This connection is made explicit when this very phrase makes a brief appearance in “The Society of the Crossed Keys”. Having said this, as Mark Richards notes, this connection has no

narrative obvious meaning (the cue is not about Zero), but rather is purely because Zero's theme (also the main theme, arguably) provides some melodic material in the desired major mode. This highlights the fact that Desplat does not seem to regard leitmotivic associations as unbreakable laws. Some of his themes – such as the Adventure theme in this film – have no leitmotivic associations. Other themes are somewhat loose in their associations. Not every usage of a theme must have a strong leitmotivic rationale underpinning it.²⁷ It does, however, have to suit the scene in terms of its topic flags, style flags, or allusions, because these are likely to be better known by spectators than the leitmotivic associations, so there is a greater need to use them in associatively congruent ways. Having said this, if one *was* to try to find a leitmotivic rationale for Desplat's use of Zero's theme in this cue, one might speculate as follows. Zero's theme is also associated with Zero's relationship to the hotel business, because its first statements were all played against images of the Grand Budapest Hotel. The theme is therefore associatively apt in a cue about hotel concierges and lobby boys. This is an example of thinking somewhat more loosely and laterally about leitmotifs and what they represent, which seems like a valid way of interpreting Desplat's compositional choices.

3.2.4 Close analysis: “A Troops Barracks”

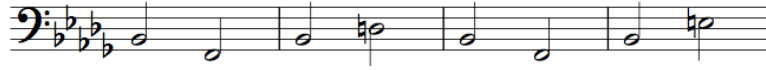
The score's climactic cue, “A Troops Barracks” (1:17:38) – whose title refers to what the Grand Budapest Hotel has regrettably become during the war – provides an excellent case study in Desplat's use of harmony and modality to support the changes in expressive focus during a single sequence. The bass line unifying much of the cue in the passacaglia-like structure is derived from that of the Adventure theme. Both bass lines have a martial zigzagging contour that returns to the tonic on each downbeat, and features the descending perfect fifth ($\hat{1}$ to $\hat{4}$), although this is more prominent in “A Troops Barracks”, being played in bars 1 and 3 of each cycle. The bass line in A Troops Barracks also recalls the first statement of the bass line in The Lutz Police Militia, which finishes with the $A4/d5 \hat{1} \Rightarrow \#4/b\hat{5}$, a move that functions to heighten a sense of comical absurdity in both cases because the interval is a dissonant alteration of the usual perfect fourths and fifths. Figure 3.19 compares the three bass lines:

²⁷ For example, “Lily's theme” in *Harry Potter VIII* is used during a dragon flight that has nothing to do with Lily Potter. This works partly because the theme functions as the “main theme” of the film.

Adventure theme bass line



The Lutz Police Militia bass line (E is in first statement only)



A Troops Barracks bass line

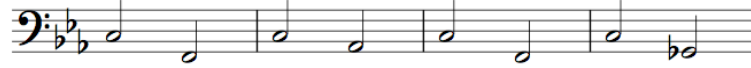


Figure 3.19: comparison of the main bass line in “A Troops Barracks” from *The Grand Budapest Hotel*, with two bass lines from other cues

(♩ = 116)

5

horns

trombones

timpani

m5M IV m5M i m5m iv⁶ m5m i m5M IV m5M i m6M ^bV

Figure 3.20: A-section of “A Troops Barracks”, from *The Grand Budapest Hotel*

In the A-section of “A Troops Barracks” (Figure 3.20), the chord progression over the bass line is $i \Rightarrow IV \Rightarrow i \Rightarrow iv^6 \Rightarrow i \Rightarrow IV \Rightarrow i \Rightarrow bV$. The suitably martial and rigid return to the tonic chord on the downbeat is retained through much of the cue, although the third is sometimes omitted. One consequence of the regular return to the tonic sonority is that every TTPC is underlined by being heard in both directions, and with no ambiguity as to which triad is tonicised, which makes a TTPC-focussed analysis particularly pertinent.

The four non-tonic bass notes are harmonised in various ways, creating the expressively motivated development. The F variously supports (in order of appearance) chords IV (creating m5M), iv (m5m) or bII^6 (m1M). Similarly, the A^b supports iv^6 (m5m), bII_{b4}^6 (m1M), bvi (m8m) or bVI (m8M). Finally, the $G^b/F\#$ supports bV (m6M), II^6 (m2M), and the augmented triad $bVII^{+6}_4$. The overall tonality is minor, and some of the chords (bII , bII_{b4}^6 , bvi , and bV) contain hyper-minor scale degrees. The negative associations of the minor tonality and hyper-minor degrees helps to highlight the negative aspects of the scene, as will be explored below in regards to specific parts of the cue.

The cue can be divided up into a number of sections, most of which are based on the aforementioned bass line or some variant of it. Most of these sections occur more than once, and some become associated with particular strands of the narrative or particular emotional states. For instance, one section is used twice, both times to accompany Agatha's stealthy retrieval of the painting *Boy With Apple* from a safe. The progression for this section is $i \Rightarrow iv \Rightarrow i \Rightarrow bvi \Rightarrow i \Rightarrow iv \Rightarrow i \Rightarrow II^6$. Its final three chords are noteworthy in that they contain the [012] trichord $\{\#4, \hat{5}, b6\}$, which tends to function as a topic flag for tension (see Table 2.1). The uses of the m8m ($i \Rightarrow bvi \Rightarrow i$) and m2M ($i \Rightarrow II^6$) are also significant. The m2M functions here in its typical capacity: to evoke a sense of suspense and mystery.²⁸ The chromaticism of the m8m also supports this sense of mystery. Additionally, because of its associations with antagonism, it can be interpreted in the following two ways. First, m8m could emphasise the mischievous *appearance* of Agatha's actions – she appears to be stealing, although she aims to get the painting for Gustave, its rightful owner. Second, m8m could imply that her actions put her in danger of the real antagonist, Dmitri.

The scene in which Agatha is most in danger of Dmitri is when he chases her down a corridor, hoping to seize the painting. A variant on the above section is played during this chase, with the progression: $i \Rightarrow bvi^6 \Rightarrow i \Rightarrow II^6 \Rightarrow i \Rightarrow bvi^6 \Rightarrow bIII_4^6 \Rightarrow II_4^6 \Rightarrow i \Rightarrow bvi^6 \Rightarrow i \Rightarrow II^6 \Rightarrow i$. This includes three instances of each of m8m and m2M, but particularly foregrounds the former, by placing it at the beginning of the section. The use of pipe organ reinforces Dmitri's antagonism, as the instrument has been a leit-timbre for the antagonists throughout the film.

Earlier in the cue, another section is consistently associated with Dmitri, being introduced upon his arrival at the hotel. This section features the progression $i \Rightarrow IV \Rightarrow i \Rightarrow bII_4^6 \Rightarrow i \Rightarrow IV \Rightarrow i$.²⁹ The most negatively-affected chord in this is the bII_4^6 with its implication of Phrygian mode (dia3). On the first hearing, the sense of danger that Dmitri poses is corroborated by the ominous use of sustained trombone chords in mid-to-low register.

²⁸ This is discussed in section 2.4.4.

²⁹ Open fifth chords are sometimes used in place of i and IV .

An important section that is used on four occasions in “A Troops Barracks” is transcribed in Figure 3.21. This section tends to accompany scenes depicting the bombastic chaos of the Grand Budapest Hotel in its new role as a troops barracks. The prominent use of brass (trombones and French horns) connote the military, while the use of half-whole diminished (oct1) endows the Zig Zags with a sense of otherness due to the many rare intervals. The usual $\flat\hat{6}$ of the bass line is altered to become $\sharp\hat{6}$ in accordance with the mode, and a top line emphasises the characteristic mixture of $\flat\hat{3}$ and $\sharp\hat{3}$, as well as $\flat\hat{2}$, which is an important agent of tension in the mode. C-as- $\hat{1}$ and G-as- $\hat{5}$ are maintained as pedal notes (although they are rearticulated rather than sustained), and these often create acoustic dissonances (ic1 and ic6) when $D\flat$ -as- $\flat\hat{2}$ appears in the top line. This is a good example of dissonant, non-triadic chord types arising through pedal notes, a practice I mentioned in section 2.2.

Figure 3.21: Section of “A Troops Barracks” in half-whole diminished (oct1)

Desplat employs half-whole diminished (oct1) with less strictness in one of these sections, occasionally including scale degrees foreign to the mode, such as $\sharp\hat{7}$ or $\flat\hat{6}$. In combination with $\{\hat{1}, \flat\hat{2}, \flat\hat{3}, \sharp\hat{4}, \hat{5}\}$, these two scale degrees suggest chromatic Lydian inverse (cli1). This occurs at the moment in which Gustave and Zero sneak awkwardly through the lobby of the hotel, poorly disguised as pastry chefs and looking amusingly conspicuous. The mode here expresses both the tension felt by the characters and the comedic slant with which the cinematic narrator portrays them. It provides a good example of how a mode with many rare intervals and scale degrees can also be used in the service of awkward comedy as well as its more typical application to antagonism and otherness, discussed in section 2.3.7. Comedic topic flags here include staccato flutes

doubled by glockenspiel, which seem to connote cartoon-like sneaking here in a similar way to pizzicato strings.³⁰

The A-section is used at the beginning of the cue, when Agatha successfully infiltrates the hotel on behalf of Gustave and Zero, and at the end of the cue, when she successfully escapes the hotel with the painting. Thus the A-section is used when the heroes are being successful. Aptly, the A-section prominently features m5M, whose connotations of optimism and success were discussed in section 3.2.3.3.

The sequence that “A Troops Barracks” accompanies is rich in dramatic contrast, while simultaneously being one unified “set piece”. In the cue, Desplat skilfully balances unity – through the pervasive bass line and the various reoccurring sections based on it – and contrast – through the careful variation of TTPC content and orchestration.

Conclusion

Desplat’s score for *The Grand Budapest Hotel* provides an excellent example of how music can metaphorically reflect and reinforce a director’s visual and narrative style. His development of a musical sound-world for Zubrowka demonstrates how associations such as styles and topics can be manipulated creatively to represent a place that seems both believable and fantastical. Finally, its leitmotifs for characters demonstrate how music can support characterisation. Desplat’s on-going collaboration with Anderson may become one of the great director/composer partnerships of film music history, and this score deserves to be remembered for its uniquely and wonderfully integrated musical and narrative visions.

³⁰ See footnote 45 on page 174.

3.3 The close analyses: an afterword

This chapter has applied the methodologies of Chapter 1 and the corpus-wide findings of Chapter 2 to the close analysis of two outstanding scores in the corpus. Whereas Chapter 2 presented portraits of musical devices (modes, TTPCs, transformations, etc.) based on their uses across the multiple film scores, this chapter has presented portraits of two film scores, based on their use of multiple musical devices. Whereas Chapter 2 described how Desplat tends to exploit specific musical devices associatively and metaphorically across the corpus, this chapter has demonstrated how individual scores can be conceptualised and constructed.

To a greater extent than was possible in Chapter 2 – where the focus of each section was a specific musica device – this chapter has discussed broad issues pertaining to each film, its score, and its musical themes. For instance, my analysis of the score of *The Curious Case of Benjamin Button* touched on issues such as the relationship between jazz and nostalgia, the back-wards running clock as a metaphor for Benjamin's life, Benjamin's relationship to his home, Benjamin's characterisation, the theme of loss, and sensualised Russian exoticism. In my analysis of *The Grand Budapest Hotel*, I touched on issues such as Wes Anderson's style and its relation to Desplat's music, the musical representation of Zubrowka, characterisation (especially of Zero, Gustave, and Jopling), Desplat's approach to leitmotivic association in the score, and Desplat's techniques of musical development. In the discussion of each of these issues, I drew upon a range of methodologies from Chapter 1 and understandings from Chapter 2 as was relevant, showing how these methodologies and understandings could be applied in the context of an analysis of an individual score.

This chapter concludes my observations about Desplat's work. Readers are reminded that the findings of Chapter 2 are summarised in sections 2.3.16 and 2.5. My analyses of Desplat's work has I trust, demonstrated the usefulness of my methodology, whilst simultaneously revealing Desplat's highly sophisticated and artful use of harmony, association, and metaphor to support cinematic narratives. Longer, more detailed analyses than those provided in this chapter are beyond the scope of this study, however it is likely that the chapter will form the basis for further, more extensive scholarly work. In the next and final chapter, I turn to a discussion of my own film scores, offering a composer's point-of-view on many of the harmonic, semiotic, and metaphorical issues discussed in relation to Desplat's work.

Chapter 4 Theory in practice in my film scoring work

In this chapter, I draw on the same methodology to discuss how cinematic narratives are musically supported in selected cues from my portfolio of film scoring work. My compositional process combines conscious strategizing with a more intuitive approach that entrusts decisions to my subconscious to some extent. During the pre-compositional stage, after seeing the rough cut of the film and having the spotting session³¹ with the director, I consciously choose which style/topic flags or metaphors will be apt for the score as a whole, or at least for a key cue such as the opening.³² The act of composing itself tends to be more intuitive, trying musical ideas on the piano or in the DAW³³ until they *feel* right when placed against the picture. I find it is important to keep a strong element of intuition, because “over-thinking” a cue can lead to focussing on one element of musical expression while being blind to another. When responding to feedback, conscious strategizing is again required. For example, if the director finds the music to be too emotionally heavy, I might use *third-substitution* to replace some minor triads with major triads, or change the mode to one with fewer flat degrees and/or rare intervals. I may also transpose the music a little higher, or make the tempo a little faster. A strong understanding of associativity and metaphorical processes – although some of this understanding is unconscious – minimises trial and error when writing and revising cues. I certainly feel much better equipped in this respect than before I began my analyses of Desplat’s work, especially in regard to metaphor theory.

In deciding to analyse the work of one composer, I was aware of the risk of becoming influenced by him too strongly, at the expense of originality or broader influence. However, most of the issues I have explored in the context of Desplat’s work are applicable beyond the scope of his style. I have investigated topics, styles, modes, and TTPCs that are not unique to him, for instance. If I have taken Desplat’s approach to my own writing, it is in the sense of writing “what I like”,³⁴ which will inevitably result in a style that is, to some extent, my own. In some cases, there is overlap between what I like

³¹ In a spotting session, decisions are made about where music cues start and finish, and what their expressive purpose is. Similar instructions are sometimes also provided by email.

³² A temp score or reference track might suggest some ideas in this respect, but I am careful not to be over-reliant on this.

³³ DAW: Digital Audio Workstation, in my case Logic Pro.

³⁴ I am referring to a previously mentioned quote from Desplat’s interview in Goldwasser (2006).

and what Desplat does, of course. But plenty of my music is just as reflective of other influences, such as Thomas Newman, Danny Elfman, Clint Mansell, or Arvo Pärt.

My portfolio of film scores includes eight original scores for short films of various genres and one for a feature-length docu-drama. By coincidence rather than by design, there are some common themes uniting this body of work. All but one of the films focuses on a death – real or imagined – and the strong and often complex emotions that surround it. For instance, *Gina* and *Osmonde* – a micro-documentary and a drama, respectively – are both about women who are seeking euthanasia as a solution to chronic pain. The challenge for both was to carefully balance a melancholy tone with a sense that death will bring these characters relief. *Unit 6* is about a young woman who plans infanticide but thinks better of it in the end. As with *Gina* and *Osmonde*, its important closing music needed to balance melancholy with a sense of relief and hope. Another film in which music played a key role in articulating a melancholy yet hopeful ending was the drama *The World In Your Window*, directed by Zoe McIntosh. This focuses on a grief-stricken man who confines himself to a caravan following the death of his wife. His young son eventually helps him to find a path forward. Another composer, Rhian Sheehan, wrote two substantial cues in this score, and produced the remaining cues, written by myself.³⁵ Consequently, I have decided to omit a detailed discussion of this score from this chapter, instead focussing on scores whose compositional decisions were entirely my own.

The docu-drama *Doubt: The Scott Watson Case* investigates a suspected double homicide. One of its challenges was in the portrayal of the titular murder suspect. As he is a real person and his guilt or innocence cannot be known for sure, it would be wrong to characterize him either as a villain or as an innocent. Two other films relate to homicide: *Let Down Your Hair* and *PIGS*, which were directed by James Ashcroft for Toi Whakaari: New Zealand Drama School. Both are psychological thrillers that culminate in absurd and brutal murders. They both employ music to help steer the narrative through a variety of psychological states, towards their bloody apotheoses. There is insufficient space in this chapter to discuss both of these films in detail, therefore I only cover *PIGS*, whose

³⁵ A cue sheet is provided with the portfolio of compositions to clarify which composer is responsible for which cues.

score plays a particularly prominent role in supporting the narrative, since there is no dialogue.

Shmeat, an animated horror/comedy, insinuates that its eccentric protagonist is plotting murder. While this turns out to be a red herring, the ending is nevertheless absurd and savage, albeit with a more comedic slant than the two thrillers. *Wellingtonia*, a sequel to *Shmeat*, features the grim reaper, who brings death to the protagonist despite having formed an unexpectedly warm friendship with him. *Loner* is a black comedy about a lonely gun-lover who looks like he might be capable of a murder-spree. The opening creates irony by juxtaposing cheerful Christmas music with images of him looking miserable and shooting a target. All of the films with elements of black comedy – *Loner*, *PIGS*, *Shmeat*, and *Wellingtonia* – often involve abrupt changes in register. They are at times comedic, at times deeply uneasy, and often an interesting mixture of the two, which requires a deft control of musical associations.

The portfolio also includes some re-scorings of existing short films or scenes that have their original score muted. All clips are less than four minutes in duration. Three of these re-scorings were written as entries for film scoring competitions in which all entrants were given the same clip to score.³⁶ The fourth re-scoring – a scene from *Cast Away* (2000) – was a response to an informal challenge within an online community of film composers, which presented an opportunity for peer feedback and discussion. Because each of the four re-scorings differ in film genre from the remainder of the portfolio, they have been included in the portfolio to provide a broader sense of my versatility as film composer. Nevertheless, I do not attribute as much importance to these tasks as to my collaborations with filmmakers, as they are short, are not for public exhibition, and do not exemplify the skill of collaboratively engaging with a filmmaker about the expressive purposes of the score. The re-scorings therefore do warrant further discussion in this dissertation. In the sections that follow, I scrutinise some salient aspects of the musical expression in each individual film score.

³⁶ Candidates for the 2015 SABAM Award for Best Young International Composer scored a scene from *The Third Man* (1949). Candidates for the 2015 Martin Hamlisch Film Scoring Contest scored a two-minute animated children's film: *Flip*. Candidates for the 2014 TropScore contest, scored a complete three-minute film: *Capture*.

4.1 Unit 6

This eleven-minute short film is about Amber (18), who, in the words of writer/director Jane Sherning Warren, “sets out to kill her baby as a way of escaping her past, but is saved by the life she thought threatened her future.” The first cue (M1) accompanies a montage of Amber driving north from Auckland towards a basic beach-side motel, where she plans to give birth to her unwanted love-child in secret. The images of her drive are intercut with flashbacks that imply she was abused as a child and became a sex worker in her teens. The implication of the montage is that this troubled past is the cause of her current grim plan.

One function of the music is to provide continuity and unity to the montage by way of harmonic and textural consistency. The unity suggests that the music and flashbacks are both representative of Amber’s memories and emotions as she drives. The cue has elements of post-minimalism in its pulsating rhythmic textures and slow harmonic rhythm. It employs Leydon’s *totalitarian* minimalist trope (evoking “an involuntary state of unfreedom”) to suggest that Amber feels trapped in her situation. This sense of entrapment is reinforced by a tonic pedal, and the implication of triads containing $\flat\hat{6}$ ($\flat VI^6$ or iv_4^6), which magnetises the tonic and suggests a small tonal space container. The $\flat\hat{6}$ occurs as the last or penultimate pitch of a repeated, unmetered glockenspiel phrase (Figure 4.1).

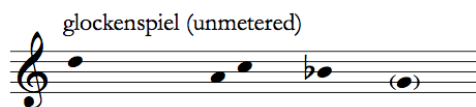


Figure 4.1: Motif played over D pedal in “M1”, *Unit 6* (0:00:20)

In terms of modality, the whole cue is globally in D Aeolian followed by D Phrygian, which is suggestive of Amber’s increasingly emotional state. The A-section (till the end of the title card) is in local D Aeolian but with an unsounded $\flat\hat{3}$. The closest thing to a tonic triad is a rough, processed texture of violin tones that contains only non-modal degrees $\{\hat{1}, \hat{2}, \hat{4}, \hat{5}\}$. This modally-neutral background layer allows the $\flat\hat{6}$ in the glockenspiel to carry more affect when it is sounded, because it alone signals minor mode. The fact that the tonic sonority contains acoustic and timbral dissonances reinforces the idea that the tonic is not a place of rest, but more of a trap. Each phrase is

suggestive of dia6-8-DIA4 and dia6-5-dia2, but in a pandiatonic rather than straightforwardly triadic way.

Rhythmically, the loose, unmetered glockenspiel phrase is suggestive of Amber's mental and physical exhaustion, while the metered rhythm of the pulsating pedal tone adds a sense of jaded determination, along the lines of Leydon's *motoric* minimalist trope ("indifferent mechanised process"). As in many Desplat scores, use of pitched percussion is suggestive of childhood. The glockenspiel, vibraphone, and gamelan relate to both the memories of Amber's childhood and the anticipation of her baby. But the combination of this with tension (by means of dissonance and rough timbre) emphasises Amber's unease in relation to her childhood and the prospect of mothering a child.

During the shots of 8-year-old Amber on a swing (0:00:53), I change to a prolonged section on B \flat Lydian (\flat VI of D Aeolian) with prominent melodic use of unresolved E-as- $\sharp 4/\flat$ VI. The young actor's intense frowns provide clear enough signification of her misery. The change to Lydian on \flat VI adds a counterpoint to this misery, which could perhaps be read as tender empathy and/or the yearning attempt to escape the psychological entrapment the tonic represents. Similarly, at 0:02:25 the section on E \flat Lydian (\flat II of D Phrygian) might be read metaphorically as an intensified, more far-reaching attempt to escape the entrapment of the tonic. The cue ends as Amber arrives at her destination with a \flat vii (negative for both its minor triadic mode and its inclusion of $\flat 2$) followed by $\hat{1}$. Although, due to Aeolian-centric expectations, I hear this as iv/iv \Rightarrow $\hat{5}$ /iv. This modulation implies that Amber feels she has achieved a level of escape by arriving at the motel. It also works in terms of the PATH metaphor, emphasising that travel to a new destination (literally and perhaps emotionally) has occurred. Moreover, by closing on what sounds like a dominant pedal, the music implies that the arrival is not closure, but the opening up of a new chapter. (This exploits the CLOSURE IN NARRATIVE IS CLOSURE IN MUSIC metaphor.)

Between the two cues, Amber gives birth overnight, alone in a cheap beach-side motel, with a storm raging outside. By dawn the storm has passed, and she wades into the ocean where she goes to drown her baby. But when she sees the baby staring back at her from under the water – at which point the cue M2 begins – something in her resists this, and she pulls the baby back out of the water, wading back to shore. The final image is of her driving again, this time with her son and a calm smile on her face.

My challenge was to gradually take the viewer from the low emotional ebb of the near-infanticide to the high point of seeing Amber smile at her son at the very end, signalling her acceptance of motherhood. I realised that the image was already very subtly using physical ascent as a metaphor for Amber's emotional ascent: she physically walks upwards out of the water to safety and the sun is rising to a beautiful day. I decided to partake in this metaphor musically, by way of the VERTICAL SPACE IS PITCH FREQUENCY metaphor and the PATH image schema. Figure 4.2 shows that I alternate two clean electric guitar motifs; one with an ascending major second and one adding an ascending perfect fourth. This could also be read as a metaphor for growth. A more gradual, almost imperceptible ascent is provided in the bass, which ascends by diatonic step for each three-bar phrase. The violins also start to rise out of their stasis from bar 4 (although bars 7-9 are a kink in the path), and they settle into a sequential pattern of ascent in bars 10-18, as we see Amber smile for the first time in the film.

Another uplift of sorts occurs in the local modes. In terms of tonal space, the chord roots follow a flat-wards trajectory on the *line of fifths* (except for bars 7-8, which is again a kink in the path, suggesting that Amber's journey will not be straightforward). This means that the number of flat degrees relative to each chord root gradually decreases from three to zero, gradually decreasing the negative affect. More specifically, the guitar phrase normally occupies affectively neutral non-modal scale degrees, but it acquires its first local major scale degree (A-as- $\hat{6}/\flat VII$) in bar 13, and only plays local major scale degrees in the last phrase. This gives a sense of the melody, while remaining constant as a set of pitch-classes, going through a process of transformation in terms of affect. The fact that the guitar phrase occupies a very small span on the line of fifths is what makes it so easily re-contextualised against various chords; it is a way of steering clear from having semitones and tritones in every phrase, which would be too much. Another gradual transformation that occurs is the build of dynamics from a soft and tentative beginning. This gives a sense of Amber becoming more assured.

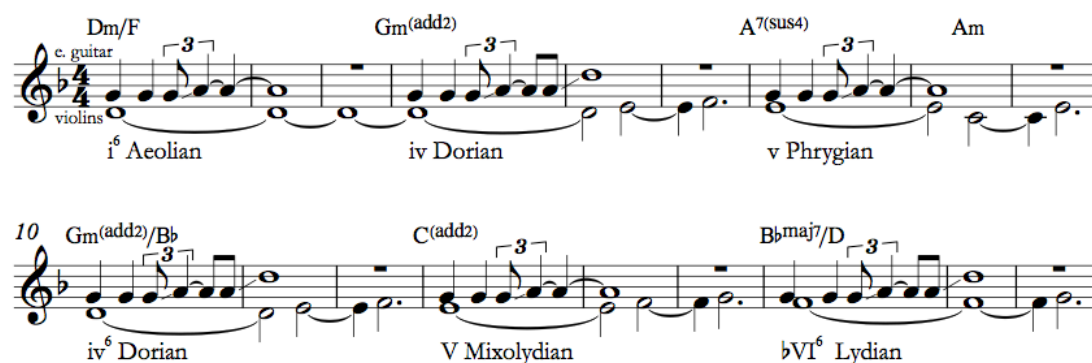


Figure 4.2: skeleton score excerpt from “M2”, Unit 6

In both cues, I used some instruments one might find in alternative rock, including bass guitar, electric guitars, drum kit (in the end credits only), bowed electric guitars, synth pads and the pitched percussion already discussed. The rationale for these style flags was for the music to relate to the kind of music Amber might listen to, so as to represent her emotions in a more believable way.

In the end credits, I also use a *putatara* (conch shell trumpet), both because it adds a local flavour and because it is associated with the god of the sea, *Tangaroa*, in Maori culture. The association between the sound of a conch shell trumpet and the wider region of Oceania may be understood even by those unfamiliar with the *putatara* and *Tangaroa*, because shell trumpets more generally are “particularly common throughout Oceania”, and exist “almost everywhere” in the world, especially in coastal regions (Herbert and Wallace 1997, 12). Moreover, the association between the sound of a shell trumpet and the sea will exist for anyone who imagines a seashell when they hear the sound. American Film composer Jeff Rona chose to use conch shell trumpets in his score for *White Squall* (1996) as a “call to the sea” (Rona 2000, 16), which is a further indication that the association is recognised internationally.

4.2 Loner

Loner is a deadpan comedy about Paul, a friendless and hapless young man in a small New Zealand town. After a policewoman discovers that he has been target shooting at night without a current gun licence, he is faced with the challenge of convincing somebody to sign the application form, verifying his suitability as a gun user. His car fails to start and he is forced to walk into town, leading to a montage in which his requests for a signature are repeatedly (and comically) rejected, because his scruffy appearance and glum demeanour makes him seem untrustworthy.

The cue accompanying his walk to town and the montage develop the same material. This consists of a loop of $I^5 \Rightarrow \flat III(4) \Rightarrow IV(4)$, with melodic material taken from a bimodal hybrid of the blues scale and Mixolydian mode: $\{\hat{1}, \flat\hat{3}, \natural\hat{3}, \hat{4}, \sharp\hat{4}/\flat\hat{5}, \natural\hat{5}, \hat{6}, \flat\hat{7}\}$. This exploits both modes for their rural connotations, and the use of blues style flags also reflects Paul's glum mood. I either omit the third, or mix minor or major thirds, and this modal ambiguity of the tonic chord helps to achieve a balance between the expression of Paul's glumness with the comedic tone of the discourse.

Timbral style flags for country music – to resonate with the rural environment – include jaws harp, fiddle, and acoustic guitar. As with *Unit 6*, my intention was also to incorporate some style flags for a style the protagonist might listen to. Paul's style, I decided, was rock, and flags of this include rock guitar (both acoustic and electric), bass guitar, rock organ, and a looping chord pattern. The prominent use of marimba as an ostinato instrument signals the black comedy film genre via stylistic allusion to Thomas Newman's score for *American Beauty* (1999). In alluding to such a widely imitated score as this, one runs the risk of merely regurgitating an overused cliché. Perhaps I would have done better to find a timbre with similar associations, but which had not become so extensively used.

Towards the end of the montage, as Paul's disappointment begins to show in his body language, the slant of the cinematic narrator shifts from finding humour in Paul's rejection, to expressing some sympathy. I achieve this by moving into a short passage of Aeolian/Dorian modal mixture: $i \Rightarrow v^6 \Rightarrow IV \Rightarrow i^5 \Rightarrow iv^6 \Rightarrow IV$. The addition of the two minor triads signal this change in mood towards the melancholy, especially iv^6 , which is borrowed from Aeolian in a largely Dorian context and is therefore unexpectedly minor in terms of dynamic expectations. The instability of the first inversion triads (following exclusive use of root position chords) readily functions as a metaphor for Paul's emotional instability at this point.

For the opening cue, director Wendell Cooke asked me to imply that the scene was occurring at Christmas time, which accentuates the tragicomedy of Paul sitting by himself with a gun, looking miserable. I therefore wrote a song in the style of a cheerful Frank Sinatra holiday song, with lyrics emphasising that Christmas is a time for being with loved ones, to ironically and anempathetically play against the lonely, morose images of Paul, and the title card declaring his status as "Loner". The music shifts between being

diegetic (playing on a cheap off-screen stereo) and being fuller in the mix, which highlights its status as non-diegetic comment. Flags for the *holiday song* topic include a Sinatra-like vocal performance, lush orchestral strings, glockenspiel, frolicking woodwinds, playful pizzicato, a jazzy piano solo, pervasive major seventh chords, iv^{add6} chords borrowed from minor, $ii^7 \Rightarrow V^7 \Rightarrow I^{M7}$ progressions, and modulations to the subdominant by $V^7/IV \Rightarrow IV^{M7}$. This becomes a *leitmotif song* in that it is reprised instrumentally in more contemporary style at the end of the film, by which time Paul has unexpectedly acquired a girlfriend. The intention of this was to highlight the fact that there is no longer an ironic contrast between the music (about being with loved ones) and Paul's situation. It also emphasises the echo of the opening scene, because Paul is shooting at targets from his deck in both scenes.

4.3 Osmonde

Osmonde is a film about Momo, an elderly Swiss woman who is living in severe pain and wishes to write a letter of application to *Exit*, an assisted suicide organisation. As she is illiterate, she persuades her son, Antoine, to start giving her writing lessons. But when he learns that applying to *Exit* is Momo's motivation, he has to come to terms with whether or not to help her. Ultimately, he supports her in her wishes out of love for her.

Director Elsa Bauverd, in her initial notes to me, wrote:

A melancholic tone seems appropriate. The whole film is generally Antoine's point of view and the music primarily expresses his feeling of imminent loss but that is why the music also needs to be evocative of what Momo means to him with her particular way of being and needs to convey a certain lightness and vitality.

My solution was to write music whose “lightness and vitality” was provided largely by harp arpeggios in semiquavers and by piano and guitar arpeggios in quavers (see Figure 4.3). With these lively ostinati, I decided that a minor tonic triad was needed to offset their positive affect and provide a sufficiently “melancholy tone”. For the main subject (Figure 4.3) I wrote a repeating chord progression that starts in A Dorian and travels around the circle of diatonic thirds, mostly by root motions that descend by perfect fourth, some sounding like plagal cadences. This chord cycle is represented on the top row of Figure 4.4. A feature of this progression is that, while it is clearly framed in A Dorian, it has a tendency to drift into being heard in G Ionian in the second half, as shown in Table 4.1. This gives the progression a balance of melancholy – the primary emotion, by virtue of the tonic triad being minor – and positive emotions such as the

love between Antoine and Momo, and Momo's sense of peace in anticipation of her own death.

Table 4.1 two functional interpretations of the chord cycle from the main theme from *Osmond*

	A min	C maj	G maj	D maj
A Dorian:	i	$\flat\text{III}^4_3$	$(\flat\text{VII})$	$(\text{IV}^4\text{---}^3)$
G Ionian:	(ii)	(IV^4_3)	I	$\text{V}^4\text{---}^3$

Figure 4.3 skeleton score of *Osmond*'s main subject (accordion, synth pad & pizzicato cello omitted)

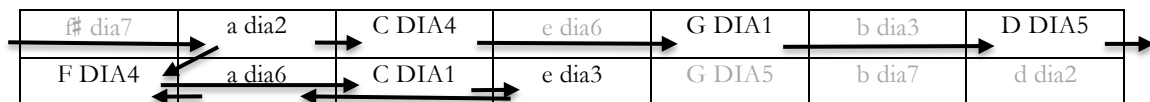


Figure 4.4: transformations in "M2", from *Osmond* (0:14:25). The progression starts at A Dorian (dia2), moves rightwards, returning to its starting point, does the same again, then moves to F Lydian to the second row and cycles around the four chords there.

Cue M2 (0:14:25) has a B-section (0:15:20), which is a chord cycle in A Aeolian, represented on the second row of Figure 4.4. The movement into Aeolian helps to emphasise the sad, reflective look on Momo's face as Antoine reads the letter. The size of the tonal space CONTAINER reduces, and within each two-bar phrase the progression emphasised is the minimal **L** motion. Compared to the score's main subject, this has a sense of ENTRAPMENT IS SMALL TONAL SPACE CONTAINER, emphasising Momo's feeling of being trapped in her poor state of health, or simply her withdrawal into introspection.

The main factors guiding my stylistic choices related to Momo's characterisation and the setting: a quaint village in Lavaux, by Lake Geneva. Both of these factors led me to a style that is congruent with these images of old-world Europe, but not in the sense of high-brow art music, which Momo would probably find pretentious, based on what is revealed of her character.³⁷ I therefore chose instruments that could be style flags for broadly European folk styles: accordion, dulcimer, harp, acoustic guitar, and piano. The harmonic language is also simple and diatonic, while the style of the dulcimer melody is ultra-simple.

In summary, the musical choices for *Osmonde* were guided by the need to find the right balance between Momo's personality traits, including "lightness and vitality" (achieved through lively *ostinati*), and the film's overall melancholy tone (achieved through Dorian and Aeolian modes). Folk-inspired instrumental choices were made, in sympathy with the film's village setting.

4.4 Gina

Gina is a four-minute micro-documentary about another very ill, suffering woman. Unlike the fictional Momo, Gina is a real person and wishes the New Zealand law to be changed in favour of euthanasia. She is blind, mute, and unable to move. Light and sound damage her body. In the film, she ponders death via text that appears on the screen, revealing that she is agnostic to the idea of an afterlife. The director, Wendell Cooke, set out to:

make a film that opened people's eyes to a movement in New Zealand that provides terminally ill and elderly people with information about end-of-life choice. We wanted to highlight the current gap in the law for people who may want to consider ending their lives because of illness, and the impact that this gap has on everyday people.

Initially I experimented with music that expressed what I inferred to be Gina's emotions, including depression. Director Wendell Cooke rejected these attempts, which included minor triads and included some dissonance. He helped me to realise that Gina's negative emotions were already strongly enough stated through words and images, and to reinforce this with music would be unnecessary and overstated. Such overstatement

³⁷ At one point, she makes the self-deprecating jokes that she does not know about literature, but is excellent at plucking a chicken.

might result in the audience feeling unduly manipulated, or worse, Gina herself feeling that her situation was being portrayed crassly. Because the protagonist is a real person, and the issue of euthanasia is so polarizing, there is a particularly great need for sensitivity.

The approved score aimed to neither portray nor contradict Gina's negative emotions. It aimed primarily to clarify the slant of the cinematic narrator, which was to thoughtfully, sympathetically ponder Gina's condition, in a spirit of kindness and gentleness, and with the hope of her achieving peace. I found that a good way to achieve this was to use very slow, softly played piano playing major primary triads. The simplicity of the harmony reduced the sense that the music was trying too hard to say something. At the same time, the harmonic simplicity combined with spacious meditation is reminiscent of the music of the "new simplicity", Arvo Pärt's piano works especially. Stylistic allusion to the "new simplicity" is appropriate because of the connotations between this music and profound reflection on life, death, and the hope of eternal peace.

The most salient moment of musical narrativity comes near the end of the film, when Gina's typed words answer the question "How would you prefer to die?" She writes, "My doctor would give me medicine that would send me to sleep and then die peacefully while I hold my sister's hand." At this point the motion in the music picks up, which causes the music to sound more optimistic. This underlines the sense that such a death is a thing of hope for Gina, not a defeat.

4.5 Shmeat

In a not so distant future, in a not so distant land,
Trouble had arisen that the world had not planned.

Thus begins the voice-over narration – read like a fairy tale – that guides the spectator through a strangely humorous six-minute animation about pseudo-cannibalism in a dystopian New Zealand. The country has run out of meat due to a plague, but Lecta, the local mad scientist, has a plan. She kidnaps locals, apparently to eat them, but instead takes samples of their blood and releases them. After a few weeks, she rallies the starving townspeople for a feast of meat. During this happy occasion, she reveals that it is *in vitro* meat (*shmeat*) created from the cells of the people she kidnapped. In a comedic twist, the townspeople embrace *shmeat* enthusiastically.

Like many animations, this one needed to be music-driven, so there is music throughout. The opening and feast passages are in waltz time, to connote nineteenth-century Europe and thereby enhance a sense of a fairy tale. There are no futuristic elements, because in this story civilisation has regressed, not progressed. There are only a few nods to the New Zealand setting, which is referenced strongly enough in the images: *koauau* (Maori flute), and *purerehua* (bullroarer) are used for this purpose. It is likely that only New Zealanders or those well versed in Maori culture will recognise these sounds as signifiers of New Zealand. Those unfamiliar with the associations, however, are still likely to understand the sounds on other levels. For instance, in this context, in which the triadic chromaticism (to be discussed below) guides the spectator towards interpretations of otherness, the Maori instruments are likely to be interpreted as additional signifiers of otherness due to their unfamiliarity, similarly to the shakuhachi in *Harry Potter VIII*, discussed in section 1.5.2.5.

Horror topic flags include a slow violin glissando creating microtonal dissonances in the opening four bars. Flutter-tongued trombones crescendo in semitonal dissonance at many of the film's more horrific moments. Pizzicato strings are a useful resource in this score, because they traverse a continuum between sounding playfully sneaky – as they do when Lecta first enters – and sinister, in the spirit of Grieg's *In the Hall of the Mountain King* – as they do at the beginning of the film.

In terms of harmony, my conscious thought while composing was focussed on the nature of the triadic progressions, with extra-harmonic tones added to create lines, or as decoration for their various “colours” – acoustic dissonances, rare intervals, and rare scale degrees. I was not thinking consciously too much about the scalar logic of the music. Nevertheless, a retrospective analysis of the scalar transformations has yielded some insights, and is graphed in Figure 4.6. Before discussing this graph directly, I will describe how the opening is conceived in terms of triads.

I decided to use triadic chromaticism as a topic flag for fantasy and to suggest the possibility of the uncanny and the sinister. I also wanted to emphasise relatively underused TTPCs to give the score a distinctive, original, and unusual sound. *Wechseln* seem appropriate because the slant of the cinematic narrator combines innocence and darkness, and *Wechseln* support this mixed affect through the inclusion of both major and minor triads. This rationale led me to the chromatic mediant *Wechseln* m9M/M3m and

M8m (*hexatonic pole*), which are both important in the score, and are both included in the opening.

There are two main harmonic ideas in the opening. The first is a chain of alternating m8M (**L**) and m9Ms: i m8M $\flat VI^6$ m9M vii m8M V^6 m9M $\flat vii$. This is played starting on G minor and later on E minor (bars 1-9 and 24-31 in Figure 4.5, respectively.) The minor triads are hierarchically important by virtue of being on the strong parts of the hypermeter. They give the progression a sense of having a straight PATH in pitch height space. The minor triads, chromaticism, and descent are together suggestive of a “descent” into dystopia in this narrative context. The intervening major triads counterbalance this with a sense of innocence, not just because of their mode, but because they are approached by the smoothest diatonic voice-leading (**L** as m8M) and the whole thing is “sung”³⁸ by an ethereal boys’ choir. The progression may be heard as an idiosyncratically near-tonal progression, in that i, $\flat VI$, and V belong in harmonic minor (hmin1), and vii \Rightarrow V could be heard as V with a $\sharp 4 \Rightarrow \hat{5}$ appoggiatura. However, the m9M, makes the progression sound much more uncanny than any progression in harmonic minor, even though these transformations are relegated to the gaps between phrases. (Progressions between phrases are shown as dotted lines in Figure 4.6: note that these tend to be larger leaps in tonal space in this passage.) My subversion of traditional harmony may be read as a metaphor for the subversion of traditional bedtime storytelling in the script and voice-over narration.

The second important harmonic idea in the opening is the M8m (*hexatonic pole*) oscillation, on $F\sharp \text{ maj} \Leftrightarrow D \text{ min}$ (bars 32-37 of Figure 4.5). Unlike in the earlier progression, here a transformation with a substantial CoS component is used intra-phrase, and is the focus of attention by virtue of oscillation. This uncanny progression accompanies the moment in which the identity of the setting is revealed as New Zealand, as the virtual camera zooms out to show New Zealand’s parliament buildings in severe disrepair. The moment of reveal is given increased surprise value and significance in that the new $F\sharp$ tonic is tonally remote from any previous material (as revealed in Figure 4.6) and is related to the G minor opening key by Gegenterzwechsel SLIDE.

³⁸ Due to budget restrictions the choir is only MIDI, but the strings, trombone, and Maori instruments were recorded live.

The image displays a musical score for the song "The Sound of Silence" by Simon & Garfunkel. The score is written for guitar, piano, and vocal parts. The guitar part is in the key of G major and 4/4 time. The piano part is in the key of G major and 4/4 time. The vocal part is in the key of G major and 4/4 time. The score includes various musical notations such as notes, rests, and chords. Chord annotations are provided for the guitar part, including Gm, E9, D, F#m, and others. The score is divided into measures, with measure numbers 12, 22, and 33 indicated. The vocal part includes lyrics in both English and Chinese. The piano part includes lyrics in both English and Chinese. The guitar part includes lyrics in both English and Chinese. The score is a transcription of the original recording, with some modifications to the guitar part to match the original recording.

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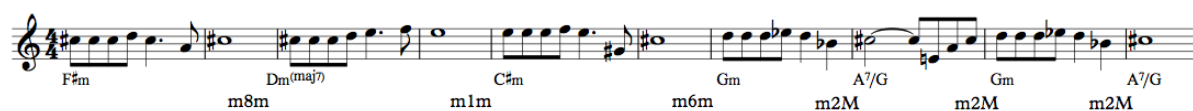


Figure 4.7: Lecta's theme, version 1

Later, when the audience is introduced to Lecta's laboratory, I introduce her theme (Figure 4.7.) The use of m8m, m6m, and m1m help to characterise Lecta as an eccentric antagonist. The m2M oscillation towards the end brings its connotations of mystery and fantasy, as it does in *The Golden Compass*. The m2M also functions to induce a sense of anticipation as Lecta ponders her evil plan, because it could be heard as a $iv \Leftrightarrow V_2^4$ oscillation, with the V_2^4 demanding resolution and thereby creating anticipation. Furthermore, the m2M's use of an unexpectedly major triad endows the anticipation with a sense of optimism in a dark context; it is Lecta's hope for what she might achieve by her plan.

The extra-triadic tones in the melody provide additional expressive colour. The minor-major-seventh chord in bar 3 is a topic flag for *Herrmann-influenced suspense*, as discussed in section 2.2. Other examples include $b\hat{6}/F\#$ min (bar 1), $b\hat{7}/D$ min (bar 3), $b\hat{6}/G$ min (bars 7 and 9), $b\hat{4}/C\#$ min (bar 5), and a long $\hat{9}/D$ min (bars 3-4). Some of these also provide additional common tones between the chords, adding continuity to what could otherwise be quite harmonically disjunct: C# bridges bars 2-3 and E bridges bars 4-5. This also achieves the re-colouring effect that Mazel' describes in relation to the SLIDE (see section 2.4.3.1), which adds to the sense of curiosity and the uncanny that characterise this score.

4.6 Wellingtopia

Wellingtopia is a sequel to *Shmeat*, also directed by Matasila Freshwater. It is in a similar genre to *Shmeat* – animated horror/comedy – although in an unexpected twist, it has a tragic ending. *Wellingtopia* was written and produced within forty-eight hours as an entry in the HP 48Hours competition. The story is set in a later and even more dystopian Wellington in which almost everybody has died of starvation and a corrupt dictator has lulled the survivors into submission.

I decided to experiment with making the hexatonic scale type (HEX) a unifying feature of the score. This is because I was aware that a number of the chromatic TTPCs associated with enigma and the other-worldly, including m8m (the Tarnhelm), outline the

hexatonic scale or one of its subsets. I wondered how these TTPCs might work if the extra-triadic tones also supported the articulation of the scale, creating CoTC transformations rather than the usual CoTCaS that these progressions imply.

The opening six bars of *Wellingtonia* (Figure 4.8) are presented as diegetic “muzak” played through loud speakers under a propaganda announcement from the dictator. I wanted the music to have a “wolf in sheep’s clothing” sense to it – an underlying antagonism masquerading as sweetness and light – so as to reinforce that this is the nature of the announcement. To do this, I almost exclusively used major triads arpeggiated gently on mid-register piano, which functions as a topic flag for insipid elevator music intended to soothe and cause no offense. The unsettling element is of course the unfamiliar hexatonic scale and the chromatic mediant progressions it hosts, which are detailed in Figure 4.8. But the fact that the music never leaves one scale adds an interesting paradox, because it sets up dynamic expectations that make these chromatic progressions seem expected, and this clashes with the schematic, Ionian-centric expectations. This arguably serves the expressive purpose of something right yet wrong, or trustworthy yet untrustworthy.



Figure 4.8: Opening of *Wellingtonia*

Following this introduction, the grim reaper visits the home of a lonely, starving boy, Esquire, offering him candy. To his surprise, Esquire is delighted to have a guest, cheerfully taking the candy in a comically sudden change of tone. I underscore the entrance of the grim reaper with darkly magical triadic chromaticism, featuring a prominent m8m in its most stereotypical usage. This unashamed use of cliché suits the tongue-in-cheek caricature of horror that is being portrayed on the screen. Other similarly caricatured signifiers of other-worldly otherness include a theremin and harp glissandi playing the hexatonic scale to which the m8m belongs.

In the next cue (0:01:27), the reaper and Esquire strike up a friendship, portrayed in a light-hearted montage. Ultimately, however, the grim reaper performs the task for which he came, which is to take away the boy’s life. This critical scene is scored with the passage in Figure 4.9, which uses the progression C min \Rightarrow B min \Rightarrow D# min \Rightarrow D maj

⇒ D min ⇒ B \flat min. The TTPCs of this sequence are shown below the bottom staff. Note that m8m occurs twice, and both times it is synchronised with crucial dramatic moments. In bar 5, the m8m¹ signals the moment of twist, when the reaper is revealed – hovering over Esquire – and the audience realises that he still intends to kill the boy. Then in bar 9 – the cadence to the final B \flat min chord – the m8m emphasises the moment when the reaper touches Esquire’s head to kill him. In light of the fact that m8m was also used at the frightening moment when the reaper first arrived at Esquire’s house, m8m functions throughout the film as a leitharmonie for the reaper-as-villain.

Figure 4.9: Closing passage of *Wellingtonia* (2:20)

The other TTPCs in this passage were also chosen for their associative and metaphorical tendencies. In bar 4 there is an m1m (C min ⇒ B min), which is in the most negatively valenced category of TTPCs (see Table 1.17), being a *flat-degree mxm*. This therefore foretells that something very bad is going to happen to Esquire, before the reaper is seen. So too does the sustained G-F \sharp dissonance (bars 1-3) and F \sharp -E \flat rare interval (bar 3).

After the reaper has been revealed to the sound of m8m, an m11M (Doppelterzwechsel SLIDE) is employed, aptly evoking its associations with such things as death, the supernatural, radical transformation, and paradox.² The paradox of this scene is that the reaper appears to have formed a genuine bond of friendship with Esquire, yet remains compelled to kill him. The radical transformation in is the transformation from life to death, and also the transformation of the reaper’s role in the eyes of the audience (from

¹ This could also be heard as m4m, however I deliberately encouraged the m8m hearing by making the bass of D \sharp min significantly lower than the bass of B min, which increases the sense that D \sharp is the more grounded of the two triads.

² See section 2.4.3.1.

friend to killer) and appearance (he now hovers and radiates darkness). In the last four chords – $D^\sharp \text{ min} \Rightarrow D \text{ maj} \Rightarrow D \text{ min} \Rightarrow B^\flat \text{ min}$ – every triadic transformation involves descending scalar voice-leading, creating a PATH metaphor that highlights the fact that the plot is in motion, and is moving unswervingly towards a particular goal – Esquire’s death – that differs radically from the starting point. Because flatter-than-expected scale degrees introduced with each of these transformations are flags for negative topics, the direction and goal of the PATH is aptly endowed with negative affect. The final gesture of the passage is the $G^\flat \Rightarrow F$ resolution, which is a $\hat{6} \Rightarrow \hat{5}$ suspension, evoking the mournful *pianto* topic. The resolution also sounds somewhat like a plagal cadence, which has associations of finality and spirituality due to its use in the “amen” at the end of hymns.

Throughout the passage, two harps play glissandi on Hexatonic scales that are supersets of the triads they are paired with. Both the harp glissandi and the Hexatonic scale itself have contribute further connotations of the supernatural to the passage. The scales also transform, enhancing the sense of transformation at the moment of twist (bar 5) and at the moment of the SLIDE transformation (bar 7). While a significant amount of intuition was used to compose this score, my conscious knowledge of TTPCs and scales acquired during my research meant that I was able to find semiotically suitable solutions, within a very tight timeframe, that enhanced the cinematic discourse.

4.7 Doubt: the Scott Watson Case

In the docudrama *Doubt: the Scott Watson Case*, director/producer Yvonne Mackay and presenter Dr Chris Gallavin take a critical look at one of New Zealand’s most controversial homicide cases. The 93-minute television programme combines documentary footage and acted dramatized sequences, and features around 40 minutes of original score. A summary of the story is as follows. In 1998, in the Marlborough Sounds, Olivia Hope (17) and her friend Ben Smart (21) disappeared. Guy Wallace delivered the pair to a large, two-masted ketch in the early hours after a New Years’ Eve party, along with a scruffy, suspicious *mystery man*, and this is the last reported sighting of the pair. The ketch that witnesses described was never found, and Scott Watson was investigated and convicted for the murders, despite a paucity of hard evidence and his one-masted boat and physical appearance fitting poorly with most witness descriptions.

In the documentary, Dr Gallavin debunks the prosecution's key evidence, casting doubt on Watson's guilt – while not arguing his innocence – and asserting that the trial and investigation were unfair. Dramatizations depict Watson's arrest, events leading up to the disappearance, police interrogations, and a present-day interview with Watson in prison, acted from a real-life transcript. Documentary footage includes court-room footage and *pieces to camera* from Dr Gallavin, Guy Wallace and others. Director Yvonne Mackay wanted the music to heighten the drama in the dramatized sequences, especially in the opening, which is led by music and images. She also wanted music to assist with keeping the audience engaged in the documentary sequences. The filmmakers warned that the *pieces to camera* by real people should be handled with care, so that music would not foster a slant that might cause offence.

4.7.1 Music and the characterisation of Scott Watson

I was tasked with the challenge of characterising Scott Watson appropriately with my music. In the interview (White 2015) that is partly re-enacted in the docudrama, Watson admitted:

I was an over-exuberant bloody boisterous teenager who got into trouble as a juvenile ... Just basically a little shit. I wasn't mugging anyone. I stole a couple of cars, got caught with some weed, some pot, got wasted, got drunk, couple of burglaries. And everything that did happen was basically because I'd been wasted – drunk, stoned. And then I got over it and got on with life. You grow up, you get a job.

The docudrama supports this self-characterisation, but goes further, showing that on the night Ben and Olivia disappeared (at age 27), Watson was still a miscreant when drunk. In one scene, he makes leering advances on a woman trying to sleep in her boat. The cue accompanying this (0:17:20) reinforces a point made in the performances: this is sleazy, repugnant behaviour that suggests he might be capable of worse. To convey a sense of unease, I use Phrygian ($i \Rightarrow \flat III \Rightarrow \flat II \Rightarrow i$) darkening into Phrygian $\flat 4$ (h \flat maj3), low pitch register, and rough timbres including bowed cowbell and distorted electric guitar with tremolo.



Figure 4.10: Watson's theme, from *Doubt: The Scott Watson Case*, as heard at 0:07:00

By contrast, in an earlier cue (“M3: Blade”) Watson is portrayed at his best, sober and sailing to the New Years’ Eve party and fishing on the way. This is intercut with people recalling that he worked hard to build the sloop *Blade* himself, and wanted to sail around the world in it. I used wooden and metallic percussive loops as an iconic sign suggestive of the sounds that may have been made while he built the boat. A Balinese seedpod shaker reinforces his interest in sailing to other parts of the world. Harp glissandi are exploited for their association with water. A 7/4 meter suggests that he is an idiosyncratic character. The melody that plays over this groove (Figure 4.10) includes three main style flags of rock: electric guitar, a steady groove, and emphasis of $\flat\hat{7}$ (it opens three of the four phrases). The reason for the reference to rock is the cultural associations between that style and young, white, male rebels.³ Other than the $\flat\hat{7}$ and one slightly foreboding $\flat\hat{6}$ in the last phrase, I avoid major and minor scale degrees, in order to avoid the audience inferring Watson’s guilt or innocence from the music. (I would prefer their judgements to be made based on the facts that come later in the documentary).

The final challenge relating to the portrayal of Watson came in the closing cue, “M28: Sailing/End Credits”. This follows a dramatization of the portion of the interview with Watson in which he reflects on what his life may have been like had he not been in prison: he would have had a family and gone sailing. This unrealised dream is visualised in the images that play as the credits roll: Blade sails through the Marlborough Sounds.

To emphasise the idea of sailing and this representing Watson’s utopian vision of his life, I reprise both the melody and accompanying groove of “M3: Blade”. But I overlay this with a gesture of sorrow: strings descend through what is mostly Aeolian, passing

³ Watson has explicitly mentioned rock in describing his rebellious streak. In an interview he said “I was just a little shit, a little juvenile delinquent if you want to call it that. We used to drink, go to the pub, hang out with your friends. Punk music. Yeah, okay, I was a little punk rocker, skinhead guy in Christchurch.” (White 2017).

through pan-diatonic dissonances reminiscent of Arvo Pärt's tintinnabulation style in *Cantus in Memorium Benjamin Britten*. The allusion to Pärt's style seemed appropriate because I admire the way he expresses strong emotions while – in my opinion – avoiding some of the less attractive aspects of romanticism, including emotional excess and clichés that have been hackneyed since the nineteenth century. Being a form of minimalism, his musical language is designed to avoid excess by remaining within tight constraints. Such restraint seemed fitting here, in a context where too much emotional excess might seem like a departure from a tone of factual impartiality.⁴

The cue opens with a modally neutral open fifth (i^5). The next chord (bar 4) is $bVI^{M7} \#11$, which is made bittersweet by mingling the major triadic mode with dissonant $\#11$ (E) lingering somewhat uncomfortably in the guitar melody. The chords in bars 6 and 8 are ambiguous in a similar way to the final chord in that they have extensions and are in first inversion. Perhaps the most overtly “bright” chord is the I^{7add4} bar 7 borrowed from Mixolydian $b\hat{6}$ (MMIN5) before returning to Aeolian. This is synchronised with the moment that Blade sails through the blinding glare of the sun, implying the metaphor BRIGHTNESS IS SHARPENED SCALE DEGREES.

Because the docudrama ends with no certainty as to what really happened, or whether Watson's will ever be released, I decided to end the cue without harmonic resolution. The final chord (bar 10 in Figure 4.11) is a minor subdominant in first inversion, with added sixth and ninth ($iv^{6add6/9}$). The added tones, inversion, and non-tonic function all contribute to the lack of closure. This uncertain chord is the “final word” of the docudrama.

⁴ I also use a version of Pärt's tintinnabulation style to achieve a serious but associatively neutral, objective quality in the title theme. This cue also employs topic flags of the *television news* topic as I perceive it: minor key, strong pulse, loud dynamics, electronic ostinati, and orchestral strings. See M1B (0:03:05), and reprises M16b (0:38:05), and M27c (1:29:03).

Figure 4.11: reduction of melody and orchestral strings in M28: “Sailing/End Credits”, from *Doubt: The Scott Watson Case*

4.7.2 Expressing mystery and unease

A number of cues during the focus on the investigation have a mysterious quality. I used an m4M (*hexatonic pole*) oscillation in “M25” (1:20:14) during a courtroom scene in which forensic evidence – DNA analysis of hairs – is being discussed. There is a suggestion that the evidence may have been tampered with or mishandled in such a way that incriminated Watson. In this context, the extreme chromaticism of m4M is suggestive of complex scientific process, the cryptic⁵ nature of murder mysteries, and foul play, which could equally be attributable to Watson or the forensic scientist. The delicate, high-pitched piano and vibraphone are metaphorical for the delicate work of analysing hairs. A harmonic progression I use in two cues in relation to mystery (Figure 4.12) uses an m11M Doppelterzwechsel, but with the major triad in first inversion and with a suspended second chord standing in for the minor tonic triad. The strategy here is to use the SLIDE for its paradoxical qualities, but to use it in a less familiar guise, as I am cautious of the m11M starting to become an overused cliché in contemporary film scores since the 1990s.

⁵ This is similar to the use of m4M in *The Imitation Game* to emphasise the cryptic.

By putting the major chord in first inversion, the major chord sounds even less stable than it would be in root position, making it even more suitable for expressing uncertainty. By substituting a minor chord for a suspended second chord, I am making the tonic sonority more neutral in affect by using non-modal degrees only. By not over-using the minor triad, when it is used later in the passage it can perhaps be more affecting. The other function of the suspended second chord is that it changes the voice-leading work. It makes the SLIDE less like a SLIDE in that it no longer has any pitch in common, while making the descending m11m *more* SLIDE-like: the root and fifth are displaced while the third of the minor triad is common to both chords. (These are labelled SLIDE-like m11m in Figure 4.12.) Thus the progression is an exploration of SLIDE-like progressions, capturing a similar sense of the uncanny but in a way that is relatively original. In terms of scalar transformation, the progression has a steep sharp-ward trajectory caused by the two descending m11m progressions. The last three bars are arguably heard in C double-sharp, not in D, which is quite a leap through CoS space from the E \flat Lydian of bar 2! The destination chords of these descending m11ms are initially heard in Phrygian $\flat 4$, (albeit not vertically explicit), and the implication of such flat degrees in the local mode is what makes the progression sound so dark. The whole progression is arguably both searching – by virtue of its far-reaching trajectory through tonal space – and cautious – by virtue of its voice-leading parsimony at the chordal level. The melody in the first three bars is a leitmotif for Olivia Hope that I develop in various cues where appropriate.

The musical score is for a piece titled "Tiger Blanket" from the album *Doubt: the Scott Watson Case*, starting at 1:16:47. It is written for piano, synth pad, and electric guitar. The piano part features a series of chords, while the electric guitar plays a descending melodic line. The synth pad provides a sustained harmonic background. The score is annotated with mode names and intervallic relationships between chords.

Bar	Mode	Intervallic Relationship
1	E Aeolian	
2	E \flat Lydian $\sharp 2$	m11M SLIDE
3	E Aeolian	m11M SLIDE
4	D \sharp Phrygian $\flat 4$	SLIDE-like m11m
5	D \sharp Aeolian	SLIDE-like m11m
6	D Phrygian $\flat 4$	
7	D Aeolian	m8M
8	B \flat Lydian	
9	D Aeolian	m8M

Figure 4.12 excerpt from “Tiger Blanket”, from *Doubt: the Scott Watson Case* (1:16:47)

4.8 PIGS

A live-action short film, *PIGS* is a riff on the story of the three little pigs, with young men in expensive-looking tweed suits playing the “pigs” and a scruffy figure in hoody and a wolf mask playing the “wolf”. It is like the original fable in that it concludes with the most successful pig killing the wolf. Its moral is subverted, however, in that the wolf-beating pig is portrayed as the real villain, and the wolf as a relatively innocent victim of xenophobia. The film features moments of black comedy: the somewhat grotesque and cartoonish deaths of the first two pigs, and a chaotic chase that results in the final conflict between the third pig and the wolf. Compared to *Shmeat* – the other fable-like black comedy I have scored – *PIGS* is significantly more “black” than “comedy”, especially regarding the ending. The main theme of the score is given in Figure 4.13.



Figure 4.13: main theme from *PIGS*

The theme represents the three pigs and their journey through the forest. Its most salient feature is the m8m (“Tarnhelm”) in bar 3. Rather than being synchronised with any specific antagonistic moments, the m8m hints that antagonism will occur in the story.

The main theme alludes to early romantic music of a dark and mysterious mood as a topic. James Ashcroft, the director, referred to Schubert, Mendelsohn, Grieg, and Saint-Saëns in our discussions about how the score should sound. While he did not explain his choices explicitly, I believe that the stylistic allusion to this musical era works on two of levels. First, the *Three Little Pigs* fable (and a whole genre of similar stories) originated in nineteenth-century Europe. Second, while the film has no explicit setting, the costumes of the tweed suits of pigs are suggestive of nineteenth-century Europe, so there is correlation between the art direction and musical style.

The use of harmonic minor is significant in that, as discussed in section 2.3.3, this mode has been used by Desplat in association with ostentation. Such an association is also apt in this context, since the superior social status of the “pigs” relative to the “wolf” is a crucial aspect of their characterisation. Lastly, the theme, as well as alluding to early romantic music, and the ostentation of the “pigs”, achieves a level of simplicity – almost naïveté – akin to a nursery rhyme, making it particularly apt for a film adapted from a children’s fable.



Figure 4.14: chromatic planing of minor triads for the chase scene in *PIGS*

Figure 4.14 shows one way in which the contour of the opening five notes of the theme is developed. This is what the tremolo strings play during a sequence where the wolf is chasing the third “pig”, who is running for his life. The chase has an absurd, almost cartoonish tone, which I emphasise by using chromatic planning, a device frequently used in cartoon chases. In bars 4 and 8, superimposition of two m1m-related triads is used to create dissonant clusters that increase the level of tension. In all other bars, all triads held for more than a quaver and played on a strong beat are members of the octatonic (1,2) collection. This scalar backbone adds coherence to the passage while at the same time allowing a sense that it is modulating up in minor thirds, which is a device that is frequently used in film scores for intensification and a sense of linear progression.

This concludes the exploration of my own film scoring work. To reiterate, the purpose of this chapter has been to demonstrate the strong relationship between the research and analysis work presented in thesis and the scores I have composed and submitted for examination along with it. I trust that the chapter has shown that the methodology of Chapter 1 is not only useful for analysis, but is extremely useful as part of a film composer’s creative process.

Conclusion and suggestions for further research

The analysis and composition of film music that I have engaged in during this doctoral research have informed one another in manifold ways. My creative and collaborative film scoring process informs my approach to analysis. Conversely, discoveries I have made through research and analysis have fed back into my compositional process, bolstering my awareness of associativity and metaphor, and equipping me with new musical resources and ways of understanding the relationships between filmic narratives and musical expression.

Alexandre Desplat is a versatile and adept musical dramatist. The twenty film scores I have studied have proven to be a fertile site for analysis into the inner workings of his expressive technique. The methodology of analysis employed has integrated aspects of narratology, semiotics, metaphor theory, and music theory, especially transformational theory. While combining these various strands is challenging, I believe it has been necessary and worthwhile. The discussion of narratology explored various vital questions, about *whether* music narrates, *how* it interacts with other aspects of the cinematic apparatus, *what* sorts of things it narrates about, and *which* narrative agent the musical narration is attributable to. The discussion of semiotics and metaphor theory was necessary to show ways in which music can conveying extra-musical meanings, thus being able to interact meaningfully with the narrative. One of these ways is association, which comes in in the form of quotations, allusions to a specific piece, stylistic allusions, topics, and leitmotif. The other way that music conveys extra-musical meanings is through metaphors, which are structured according to image schemata including LINEARITY, CONTAINER, PATH, and ATTRACTION. Music theory provided the essential means of analysing and describing the musical objects that carry associations and metaphors. These objects included tonal interval classes, scale degrees, chords, scale types, and modes. Transformational theory provided the means to discuss triadic and scalar transformations, which can also convey associations and metaphors.

The new concepts I have proposed within transformational theory have proved to be very useful. In particular, my emphasis on scalar aspects of transformations addressed a shortcoming of current approaches that focus on triads. The scalar aspects of triadic transformations are important because they play a role in the tonal distance of the transformation – which has metaphorical ramifications – and they play a role in the

associative content of the transformation, because modes carry associations. Thus, a useful innovation was to provide a nomenclature for tonal *scalar* progression classes (TSPCs), which provided a shorthand to ease discussions of scalar transformations.

Another useful innovation was to provide a model of tonal space – the organisation of CoS spaces according to the circle of diatonic thirds – that reflects voice-leading parsimony of both triadic and heptatonic scalar levels, in an integrated fashion. Such graphs of tonal space are useful in visualising the trajectories of the triads *and* scales in certain passages, which relates to PATH metaphors as well as showing how music moves between various modes with their various associations. The CoS spaces also provided a way of visualising transformations that clearly showed the degree to which a transformation altered the rarity of the scale's tonal interval class content. This is helpful because of the many significant associations of rare intervals. Such graphs are not a suitable replacement for triadic voice-leading spaces, but are certainly an interesting supplement. The model reveals aspects that triadic approaches ignore (relating to extra-triadic tones), but a purely triadic approach has the advantage of elegant simplicity.

One limitation of the CoS graphs is that – owing to their complexity and the amount of information they show – they can be difficult to decipher and difficult to make. Further improvements to mitigate this difficulty would be useful in future work. However, the graphs do not need to be applied to every passage under analysis. Their purpose is to aid the reader in the understanding of the ways in which music moves through tonal space. To some extent, once a reader comprehends the concepts that the graphs reveal, the graphs themselves may no longer be needed, as they have served their purpose of showing the reader a way of conceptualising scalar/triadic tonal space.

In the analysis of Desplat's work and my own, I drew on any of the above concepts that were relevant to the passage under analysis. My analyses took a number of forms. In Chapter 2, which presented findings of the corpus study, I focussed on specific musical features – TTPCs, chord types, modes, and forms of chromaticism – and made observations about their use across the whole corpus. I believe that this body of analyses reveal many useful insights about the way in which Desplat's music achieves its expressive functions in films.

The close analyses of *The Curious Case of Benjamin Button* and *The Grand Budapest Hotel* in Chapter 3 was valuable in that it demonstrated how the methodology might look when framed in a film-centric manner, focussing on one film at a time. My discussions of these two scores revealed what I believe to be some of the most salient points about their expressive function in the film. Chapter 3 may be regarded as an overture to more substantial work on these films that is beyond the scope of the present study.

Further studies of Desplat's work, perhaps with a more rigorous emphasis on his orchestration style, or his atonal writing – which is difficult to analyse without access to scores – would provide a useful compliment to my analyses. Studies of his film scores not mentioned in this study would of course be welcome also, as would closer analyses of those mentioned. Analyses of his many pre-2003 film and television scores might shed light on the origins of his style.

It has been fascinating to explore the ways in which Desplat exploits the associations and metaphorical tendencies of various modes. Further studies that explore the associative and metaphorical use of modes by other film composers would be interesting, especially if they could establish broad similarities of approach across multiple composers, or do more to trace the historical origins of topics and other associations. The area of topic theory as it applies to film music has been only scantily covered to date, so further investigations of topics would be a valuable asset to film music studies. Additional studies into the use of bimodality, modal mixture, linear chromaticism (including chromatic planing), and chord type would also be useful, and would fill a gap in film music studies. Further studies into metaphor theory, including explorations of metaphors that have not been explored by this study, would also be a valuable addition.

The final chapter of this study applied the methodology to analyse and discuss my own work as a composer for film and television. This showed the relationship between my practical work and my analytical thinking, and demonstrated that the methodology is useful in informing the *creation* of film scores as well as the analysis of them. It also showed that the methodology is not only applicable to Desplat. Indeed, it is applicable to any film music, and arguably to any tonal or post-tonal music, especially if the purpose of that music is to convey extra-musical meanings.

Music is a powerful and mysterious force of communication in filmic narratives. I have often been struck by how difficult it is to explain musical expression in words. So very much is always lost in translation and there is always more to be said than is possible within the scope of a doctoral thesis. The best way to apply and extend what I have learned during this study is perhaps not to write words, but to write music. Nevertheless, I hope the reader has found a wealth of insight and inspiration within these pages.

Appendix A: Cue breakdown for *The Curious Case of Benjamin Button*

Cue Title	Corresponding soundtrack title	Start time	Narrative context	Leitmotif(s)	Analysis by Roman numeral functions, TTPCs, and modes NB. Bracketed modes indicate local modes, (i.e. relative to a chord root)
1M1 Mr Gateau	Mr. Gateau	0:03:07	Flashback recalled by elderly Daisy: Mr Gateau, a clockmaker, has a son who dies in WWI. He makes clock that runs backwards for a railway station, in the hope it will bring back the fallen.	Main	E mixture: I (DIA1) M1M $\flat\text{II}_2^4$ (GYP2) M1M I (HMAJ1) M0m i (hmin1) M0m I (HMAJ1) M0m i (dia2) m0m E Aeolian: i m7m v/1 m10m iv_4^6 m0m iv m2m v/1 m2m iv_4^6 m0m iv m5m i m0M E mixture: I (MMIN5) m0M i (dia6) m0m/M I (MMIN5/dia6)
1M2 Mr Button	Mr. Button	0:09:18	After Benjamin's mother dies giving birth to him, and Benjamin's condition is revealed, his father almost throws the child into a river, but instead leaves him on the doorstep of Queenie's nursing home.	Mr Button	D Aeolian: i m5m D mixture: iv (dia2) i (cli1) D Aeolian: $\text{i}_{\text{add}2}$ m5m iv_4^6 m5m $\text{i}_{\text{add}2}$ m2M D mixture: $\text{II}^{\flat 9}$ (HMIN5) M11M $\flat\text{II}^{\text{M}7}$ (DIA4) m1M I_2^5 (dia6) i (mmin1/dia6) m5M IV_4^6 (nmin4/MMIN5) M10M $\flat\text{III}/1$ (SWT3/dia6) $\flat\text{IV}/1$ (MMIN3/DIA1) m4M i (nmin1/dia3) m5M IV_4^6 (nmin4/MMIN5) M10M $\flat\text{III}$ (SWT3/dia6) $\flat\text{IV}$ (MMIN3/DIA1) m4M i_4^6 (mmin1/dia6) m0m i (dia6)
2M1		0:16:44	Tizzy tells his wife Queenie they should not keep baby Benjamin, but she convinces him otherwise.	Benjamin	D Ionian: I M9m vi M9m I^6 M4m iii m7m vi M9m I M9m vi m8M $\text{IV}^{\text{M}7}$ M9m ii9 M9m $\text{IV}^{\text{M}7}$ M5M D Mixolydian: $\flat\text{VII}$ M10M D Ionian: I M9m vi M9m I M9m vi m8M IV M5M D Mixolydian: $\flat\text{VII}$ M10M I
2M2		0:18:03	Daisy narrates that Mr Gateau's clock kept going. Benjamin narrates about his childhood as a curious young boy looking like an old man, living in a nursing home. Queenie talks to Benjamin, who sleeps by	Benjamin	D Ionian: I M0M D mixture: $\text{I}^{\text{M}7}$ (DIA1) M0M I (HMAJ1/DIA1) M0M I (DIA1) M0M I (HMAJ1/DIA1) M0M I (DIA5/DIA1) M0M I (DIA1) M0M I (HMAJ1/DIA1) M0M I (DIA1) M0M I (HMAJ1/DIA1)

			her bed.		
2M3		0:20:03	Benjamin is taken out of Queenie's room by Tizzy some nights. He listens to the "house breathing", feels safe.	Benjamin	D Ionian: I M0M I ^{M7} M9m vi m8M IV ^{M7} M10M V M10M IV ^{M7} M10M V M7M I
2M4 Mr Oti	"Little Man" Oti	0:28:08	Mr Oti, a pygmy, takes Benjamin on a tram to town, tells about when he lived with monkeys in a zoo. By the Mississippi, he advises Benjamin that "different" people like them will often be alone, and reminisces a river near his home.	Mr Oti	E Mixolydian: I
2M5 Alone At Night		0:30:33	Benjamin (now a child who looks old) walks home from his outing with Mr Oti after being left and missing the tram. He is scolded by his stepmother, Queenie, for being late home but narrates that it was the best day of his life.	Harp ostinato	G [#] Aeolian: i m8M ^b VI ^{M7} M9m IV ⁵ M9m ^b VI ^{M7} M9m IV ⁵ m5m i
2M6 Benjamin Meets Daisy	Meeting Daisy	0:32:23	Benjamin meets Daisy on Thanksgiving 1930 and falls in love at first sight. Queenie announces at dinner that she is pregnant with her first biological child.	Daisy	D mixture: I ^{M7} (HMAJ1) M2m ii ⁶ (hmaj3) M2m I ^{M7} (HMAJ1) M7M V9 (DIA5) M7M I ^{M7} (HMAJ1) M3m ^b iii/1 (mmin1) m4M V9 (MMIN5) M7M I ^{M7} (HMAJ1) M5m iv ^{M7} (hmaj4) M0m IV ^{M7} (DIA4) M0m iv ^{M9} (hmaj4) M5m I ^{M9} (HMAJ1) M9m D Ionian: vi
	Children's Games	0:34:33	Benjamin and Daisy secretly meet under a table at night, and she asks him about his age. Daisy's grandmother scolds them, and Queenie comforts Benjamin. Benjamin's old roommate recalls being struck by lightning. Benjamin narrates that he never forgot her blue eyes, and Caroline comments to elderly Daisy that love at first sight is rare.	Daisy, Loss AB	D Ionian: I ^{M7} M2m ii ⁴ M2m I ^{M7} M2m ii ⁴ m11m D mixture: ^b ii ^{M7} d (hmaj4) M1m I (GYP1) M2m ii ⁴ (dia2) m11m ^b ii ^{M7} d (hmaj4) M1m I ^{M7} (GYP1) M10M ^b VII (DIA4) M10M D Ionian: I ^{M7} M2m ii ⁶ M2m I ^{M7} M10M D mixture: ^b VII (DIA4) M10M I ^{M7} (DIA1) [#] IV (HMIN5/dia3) M6M/m I ^{M7} (DIA4) M5M D Ionian: IV M5M I ^{M7} M9m vi m8m D harmonic major (HMAJ1): iv ⁶ M5m D mixture: I ⁶ (HMAJ1) M2M II ⁶ (DIA5) M9M D Ionian: IV ^{M7} M9m ii M2m I M10M D mixture: ^b VII (DIA4) M10M I ^{M7} (DIA1) M0m D Aeolian: i m7m v m1M ^b VI m1M v m1M ^b VI M9m iv m1M D Locrian:

					$\flat V$ m1M iv m1M $\flat V$ M9m $\flat iii$ M3m D harmonic major (HMAJ1): I M5M D Ionian: IV ^{add2} m8M vi ⁷ m8M IV ^{add2} M5M I M5M IV ^{add2} m8M vi ⁷ m8M IV ^{add2} M5M I M5M IV ^{add2} M5M I5c M0M I ^{M7} M10M D Mixolydian: $\flat VII$ M10M D Ionian: I ^{M7} M2m ii ⁶ M2m I ^{M7} M10M D mixture: $\flat VII$ I ^{M7} (DIA4) M10M I ^{M7} (DIA1) $\sharp IV$ (HMIN5/dia3) M6M/m I ^{M7} (DIA4) M0M
		0:38:58	Mr Oti says goodbye to Benjamin before leaving for good.	Mr Oti	E Mixolydian: I
4M1-2 Benjamin Leaves Home	A New Life	0:55:36	Benjamin finds his elderly friend dead, attends her funeral. In 1936, he packs his bags and leaves for sea. Daisy asks him to send her a postcard from everywhere, and Caroline in the present looks at them. The narrator introduces us to the tugboat crew as it goes to sea. Elderly Daisy narrates that she replied to his postcards, talking about her ballet progress.	Benjamin, Daisy	D Ionian: I M9m vi M9m I M9m vi m8M IV M9m ii M9m IV M8M D Phrygian dominant (HMIN): $\flat II$ ⁶ M1M I M0M D Ionian: I M9m vi M9m I M0M I ^{M7} M9m vi m8M IV M9m ii M9m IV M5M D mixture: $\flat VII$ (DIA4) M10M I (DIA1) M0M I ^{M7} (DIA1) M2m ii ⁴ (hmaj3) M2m D Ionian: I ^{M7} M2m ii ⁴ M2m I ^{M7} M2m D mixture: ii (hmaj3) m11m $\flat ii$ (mmin1) M1m I (HMIN5) III (nmin4/MMIN4) I (CHL1) I (MMIN4/DIA4) I (SWT4/MMIN4) VII/1 (HMIN5) VI/1 (hmin4/MMIN4) VII (HMIN5) VI (hmin4/MMIN4) i ⁵ (HMIN6) M0M I (DIA1.) I{314} (nmin1/HMAJ1) I2 (nmin1/HMAJ1) I ^{b7} (MMIN5)
4M3 Benjamin Meets Mrs Abbot		1:01:56	Benjamin is in Murmansk in winter, with his tugboat crew. He meets Mrs Abbot, an English spy's wife.	Murmansk ABA	G mixture: I (swt1/DIA1) M8M $\flat VI$ ⁶ (HMIN6) M8M I (nmin1/HMAJ1) I (DIA1) M8M $\flat VI$ (HMIN6) M8M I (GYP1) M4m G Ionian: iii m1M IV m8M vi m1M G Mixolydian: $\flat VII$ M9m v m1M G Aeolian: $\flat VI$ M9m iv M9m $\flat VI$ M9m iv M5m G Ionian: I M0M G mixture: I (DIA1) M8M $\flat VI$ ⁶ (HMIN6) M8M I (HMAJ1) M0M I (GYP1)
4M4 Evenings Benjamin &		1:05:43	Montage of chatting through the nights with Mrs Abbott in the hotel lobby. Benjamin narrates that the hotel is a	Murmansk BA	G Ionian: iii m1M IV m8M vi m1M G Mixolydian: $\flat VII$ M9m G mixture: v (dia2) m1M $\flat VI$ (DIA4) M8M I (DIA1) M8M $\flat VI$ ⁶ (HMIN6) m8M i (mmin1)

Mrs Abbott			magical, peaceful place at night.		m8M \flat VI ⁶ (HMIN6) m8M i (hmin1) m9m vi (dia6) m10m v9b (dia2) m10m iv9b (dia2) m5m G Aeolian: i ⁵
4M5 Swimming The Channel		1:09:47	Mrs Abbott talks about her disappointing failure to swim across the English Channel.	Murmansk C	E mixture: i (nmin4) m1m \flat ii ⁶ add6 (hmin4) m1m i (nmaj6) m1m \flat ii ⁶ add6 (hmin4) m1m i (nmaj6) m0m i (nmin4)
5M1 Murmansk Stroll	Love in Murmansk	1:11:16	Benjamin and Mrs Abbott stroll through snowy Murmansk at night. She proposes an affair, with conditions of secrecy and not saying “I love you”. They go into Benjamin’s room, kissing.	Murmansk MMIN (+)	G mixture: I (DIA1) M8M \flat VI ⁶ (HMIN6) M8M I (HMAJ1) M8M \flat VI ⁶ (HMIN6) M8M I (GYP1) M8M \flat VI (HMIN6) m11M vi (nmin4) m4M \flat II (DIA4) M1M I (DIA1) M8M \flat VI (DIA4) m11M vi (nmin4) m8m iv (hmaj4) M5m I (DIA1) M8M \flat VI (DIA4) M1M V (MMIN5) M7M I ⁶ (DIA1) M0M G Ionian: I M0M IM ⁷ M9m vi ⁶ m2M G Lydian #2 (HMIN6): VII ^{b9} M11M I M11M VII M11M I M11M VII M11M I M11M VII M11M I
5M2 Love Affair, Until One Night		1:13:27	Montage of Benjamin and Mrs Abbott’s affair over various nights. One night he does not find her in the lobby, and sits alone there, falling asleep. A radio broadcast announces that WWII has started.	Murmansk BA (+)	G Ionian: iii m1M IV m8M vi m1M G Mixolydian: \flat VII M9m v m1M G Aeolian: \flat VI M9m iv M9m \flat VI M9m iv G Mixolydian \flat 6 (MMIN5): I G Aeolian: \flat VI m1M v m1M \flat VI m1M v m1M \flat VI M8M G mixture: I (DIA1) M8M \flat VI ⁶ (HMIN6) M8M I (GYP1) M8M \flat VI ⁶ (NMIN6) M8M I (HMAJ1)
5M3 It Was Nice To Have Met You		1:16:28	Benjamin finds a note from Mrs Abbott saying, “It was nice to have met you”. Benjamin talks about his tugboat’s involvement in the war in salvage.	Murmansk A(+)	G mixture: I (DIA1) M8M \flat VI ⁶ (HMIN6) m8M i (hmin1) M0m I (DIA1) M9m E Aeolian: i m8M \flat VI ⁶ m8M i m8M \flat VI ⁶ M3M E mixture: \flat I ⁶ (HMIN6) M4m \flat iii6 (mmin1) m5M C mixture: I (MMIN4/DIA4) M11m B Phrygian: i m10m C [#] Phrygian: i m10m \flat vii m10m i
5M4 Submarine Attack	Submarine Attack	1:18:23	An enemy submarine has split a transport. There is a tense build to the tugboat exchanging fire with the submarine.		D mixture: i (dia6) m2M II ^{b9} (HMIN5) M2M I (oct1) M2M II ^{b9d} (HMIN5) M2M I (oct1) m0M i (hmin4) m3m B Aeolian: i ^{add2} m0m B Phrygian: : i m1M

					$\flat\text{II}_b^4$ $\text{m1M} : \text{X5 } i^{\text{add}4} \text{ m1M } \flat\text{II}_b^4 \text{ m1M } i \text{ m1M } \flat\text{II}_b^4$ $\text{m1M } i \text{ m1M } \flat\text{II}_b^4 \text{ m1M } i \text{ m0M } \text{B Lydian dominant (MMIN4): I}$
6M2 Coming Home		1:26:43	Benjamin, after coming home, reflects on it feeling the same, but “what’s changed is you”. He sees Daisy. She looks older and him younger; she does not recognise him until he says who he is.	Benjamin	D Ionian: $\text{I M9m vi M9m I M9m vi m8M IV m3M ii m3M IV M8M D mixture: } \flat\text{II (DIA4) M1M I}^{\text{M7}} \text{ (HMAJ1) M9m D Ionian: vi M9m I}^{\text{M7}} \text{ M9m vi m8M IV M9m ii m3m D mixture: iv (hmin1) m8M } \flat\text{II}^6 \text{ (DIA4) M3M D Ionian: } \flat\text{IV M4M I}^{\text{M7}} \text{ M9m vi}$
		1:38:01	Mr Button, after confessing he is Benjamin’s father, expresses remorse and talks about Benjamin’s mother. He also talks about watching sunset on Lake Pontchartrain as a boy. Benjamin looks at photos of his family. Benjamin sadly asks, “why didn’t you just tell me?” Mr Button says Benjamin will inherit everything he has, but Benjamin leaves for “home” (Queenie’s).	Loss ABA	D Aeolian: $i \text{ m5m iv}_4^6 \text{ m5m i m5m iv}_4^6 \text{ m5m i m5m iv}_4^6 \text{ m5m i m5m iv}_4^6 \text{ m10m v m1M } \flat\text{VI m1M v m1M } \flat\text{VI M9m iv m1M D Locrian: } \flat\text{V m1M iv m1M } \flat\text{V M9m } \flat\text{iii m1M D Ionian: } \flat\text{IV m1M } \flat\text{iii m10m bii6 m1m D Phrygian: i m1M } \flat\text{II}_b^4 \text{ m1M i m1M } \flat\text{II}_b^4 \text{ m1M i m0m D Aeolian: i m5m iv}_4^6 \text{ m5m i m5m iv}_4^6 \text{ m5m i}$
6M4 Sad Benjamin/Dri ve To Lake		1:41:12	Benjamin drives his dying father to see sunrise at the Lake Pontchartrain, as a peace gesture. Mr Button dies at sunrise, and Benjamin narrates, quoting Captain Mike’s dying words about the need to let go of bitterness. After Mr Button’s funeral	Harp ostinato, Mr Button	$\text{G}^\sharp \text{ Aeolian: } i^7 \text{ m8M } \flat\text{VI M9m iv M9m } \flat\text{VI M9m iv m5m } \text{G}^\sharp \text{ Dorian: } i^7 \text{ m8M } \text{G}^\sharp \text{ Aeolian: } \flat\text{VI}^{\text{M7}} \text{ M9m iv}^7 \text{ M9m } \flat\text{VI M10M } \flat\text{VII}^6 \text{ M10M } \flat\text{VI M9m iv}^{\text{add}6} \text{ m5m } i^7 \text{ m8M } \flat\text{VI}^{\text{add}2} \text{ M9m iv M9m } \flat\text{VI M9m iv5 m5m } i^7 \text{ m5m iv}_4^6 \text{ m5m i}$
7M1 Daisy’s Ballet Career	Daisy’s Ballet Career	1:50:50	Montage: elderly Daisy shows Caroline photos of her ballet, and talks of the height of her career. It is revealed that both Benjamin and Daisy used to say “goodnight” to each other, while apart and in other relationships. Benjamin is looking younger, rides a motorbike. At Queenie’s, he receives word that Daisy has had an accident in Paris, where he travels to see	Daisy	$\text{D}^\flat \text{ Ionian: V M2m B}^\flat \text{ Aeolian: } : i \text{ m5m iv}_4^6 \text{ m5m : } \text{X7 i m5m iv}_4^6 \text{ M9m } \flat\text{VI}^{\text{M7}} \text{ M5M B}^\flat \text{ Phrygian: } \flat\text{II}^{\text{M7}} \text{ M5M B}^\flat \text{ mixture: } \flat\text{VI (DIA1) M10M } \flat\text{V}_4^6 \text{ (DIA4) m6M B}^\flat \text{ Aeolian: i m5m iv}_4^6 \text{ m5m i m10M D}^\flat \text{ Ionian: V M7M I}_3^4 \text{ M9m vi9 m8m D}^\flat \text{ mixture: iv (hmaj4) m8M } \flat\text{II (HMIN6) M9m } \flat\text{vii (dia2) M10m I (DIA5/DIA1) M10M } \flat\text{VII}^{\text{M7}}/1 \text{ (NMAJ4/HMAJ1)}$

			her.		M10M I ^{M7} (DIA1) M10M ^b VII ^{M7} (DIA4) M10M I ^{M7} (DIA4) M10M ^b VII (DIA4) M10M I (DIA5) N/A V{321}/1 (MMIN6) N/A I (DIA5/dia2) M/m0m I{321} (mmin2)
7M2 Daisy's Accident	The Accident	1:52:53	Benjamin narrates the random occurrences that, via the butterfly effect, culminate in Daisy being hit by a car while leaving a ballet rehearsal in Paris.	Daisy	B ^b mixture: i (nmin4) m5m iv ⁶ ₄ (dia2) m5m i (dia6) m0M I (HMAJ1/MMIN5) M0M I (SWT4) M0M I (OCT1) M0m i (hmaj4) M0m I (MMIN4/DIA4) M11M VII/1 (OCT1) M6M IV ⁶ ₄ (OCT1) M3M ^b VI ⁶ ₈ (OCT1) M8M I (oct2) m0M i (hmin1/dia6) m2M II ^{#4} ₂ (HMAJ5/HMIN5) m2M i (swt1/mmin1) m2M II ^{#4} ₂ (HMAJ5/DIA5) M9M VII/1 (HMIN5) M6M IV ⁶ ₄ (NMIN2) M5M I ^{M7} (DIA1) M11M VII/1 (NMAJ1/HMAJ5) m2M vi ⁶ (hmaj4/hmin4) m7m iii ⁶ (nmin1/dia3) m11M B ^b Dorian: ^b III ⁶ _{add6} m3M B ^b mixture: i (dia2) m0m i (hmin4) m5m B ^b Aeolian: iv ⁶ ₄ m5m i ⁶ ₄ m0m i m8M ^b VI ⁶ m8M i m8M ^b VI ⁶ m8M B ^b Hungarian gypsy (nmin4): i m8M B ^b mixture: ^b VI ⁶ (NMIN2) N/A ^b I (SWT3/MMIN4) N/A iv (dia6) m5m B ^b Phrygian: i
7M3 Daisy's Accident – Part 2		1:55:31	The moment of the accident, intercut with Benjamin arriving at Daisy's hospital bed.		B ^b Aeolian: i m5m iv ⁶ ₄ m5m i m5m iv ⁶ ₄ ^{add6} m5m i m5m iv ⁶ ₄ m5m i
7M4 Stay Out Of My Life	Stay Out Of My Life	1:57:21	Daisy asks Benjamin to stay out of her life. Elderly Daisy expresses regret. It is revealed from Benjamin's diaries that he stayed in Paris to look out for her. Elderly Daisy struggles to breathe as she talks about teaching herself to walk again.		B ^b Aeolian: i m8M ^b VI m3M iv m3M ^b VI m8M i m8M ^b VI M10M ^b VII m10M i ⁵ m0m B ^b mixture: i (nmin4/dia6)
8M1 The Affair Sets Sail		2:01:43	1962: Benjamin and Daisy sleep together at Queenie's and then on Benjamin's yacht in the Florida Keys.	Loss	G mixture: I ^{M7} (DIA1) M8M ^b VI ⁶ (HMIN6) M8M I ^{M7} (DIA1) M8M ^b VI ⁶ (HMIN6) m3M G harmonic minor (hmin1): iv M5m G harmonic major (HMAJ1): I M5m iv ⁶ ₄ M5m I M5m iv ⁶ ₄ M5m I M5m iv ⁶ ₄ M5m I M5m iv ⁶ ₄ M5m I M7m G mixture: v (mmin2)

					m1M $\flat V I^{M7}$ (DIA4) m1M $\nu 7$ (dia6) m1M $\flat V I^{M7}$ (DIA4) M9m iv (dia2) m1M $\flat V$ (DIA4) m1M iv (dia2) m1M $\flat V$ (DIA4) m6M G Phrygian: i m10m $\flat VII/1$ m10m i m0m G Aeolian: i m5m iv_4^6 m5m i m5m iv m5m i
8M2 Nothing Lasts	Nothing Lasts	2:04:41	In bed, Benjamin and Daisy reflect on whether they will still love each other when Daisy is old, and Benjamin looks young. Benjamin laments that “nothing lasts”, but Daisy responds, “some things last”.	Loss	G Aeolian: i m8M $\flat VI^6$ m8M i m8M $\flat VI^6$ M0m G Lydian: $\flat vi^6$ m8m G Aeolian: i m5m iv_4^6 m5m i m5m iv_4^6 m3M $\flat VI^6$
8M3 Talk by the Lake		2:10:37	At Lake Pontchartrain, Benjamin and Daisy watch the sunrise. Daisy promises to turn away from self pity.	Daisy	D mixture: I^{M7} (DIA1) M10M $\flat VII$ (DIA4) M10M D Ionian: I^{M7} M5M IV6 M5M I^{M7} M10M D mixture: $\flat VII^{M7}$ (DIA4) M10M I (DIA1) M6M $\flat V$ (GYP2) M6M I^{M7} (DIA1) M9m vi (dia6) m8m iv^6 (hmaj4) M5m I_3^4 (HMAJ1) M2M II^6 (DIA5) m0M D Ionian: ii^6 m0m ii M2m I
8M4 I Want To Remember Us		2:12:38	Daisy, in her ballet studio, realises that they now appear the same age. Benjamin wants to remember them as they are now. Daisy says she is pregnant. In a tram, Benjamin sadly looks at a father and daughter, knowing his fatherhood will be affected by his condition.	Daisy	D Ionian: I^{M7} M5M IV^{M7} M9m ii9 M9m IV^{M7} M9m ii M2m I^{M7}
9M1-2 Staircase Fall/Caroline Is Born		2:16:07	Daisy has fallen down stairs and her waters have broken. She successfully gives birth to Caroline, while Benjamin paces nervously, awaiting paramedics.	Loss	E Aeolian: i m8M $\flat VI^6$ m8M i m5m iv_4^6 m5m E mixture: i (dia3/dia6) m5m E Aeolian: iv_4^{6add6} m5m i m5m iv_4^{6add6} m5m E mixture: i (dia3/dia6) m5m E Aeolian: iv_4^6 m5m i m8M $\flat VI^6$ m8M i
9M5 Benjamin Is Back		2:19:02	In a playground with his young family, Benjamin says he will have to leave because of his condition. Daisy is hurt. Caroline has her first birthday. Benjamin narrates that he sold everything, giving the funds to Caroline. He leaves his family.	Benjamin	B Ionian: I M2m B mixture: ii_2^4 (dia2) m11M $\flat II_2^4$ (DIA4) M1M I (HMAJ1) M2m ii_2^4 (dia2) m11m $\flat ii^{M7}$ d (hmaj4) m1m B Phrygian: i^7 m1M $\flat II_2^4$ m1M i^7 m1M $\flat II_2^4$ M1M B Romanian (hmin4): $II_2^{\sharp 4}$ M2M B Ionian: I M0M I^{M7} M5M IV^{M7} M5M I^{M7} M9m

					vi5 M9m I M0M IM ⁷ M9m vi5
9M4 Postcards For Caroline	Postcards	2:22:08	Caroline reads the birthday postcards from Benjamin to her, all expressing “I wish I could have” been her father. We see a montage of Benjamin’s nomadic travels. He offers advice to Caroline to “be who you want to be”, “it’s never too late”. Elderly Daisy tells about a day Benjamin appeared at her Ballet studio, looking like a young teenager. Caroline, now a teenager is introduced to Benjamin by aging Daisy.	Main	E harmonic major (HMAJ1): I M5m iv ^{add6} M5m I M0m E mixture: i (hmin1) m10m ^b vii (dia2) M10m I (HMIN5) M9m vi (dia6) m11M ^b VI (DIA4) m11M vi (dia6) m11M ^b VI (DIA4) M9m iv (dia2) m8M ^b II ⁶ (DIA4) M0m ^b ii (hmaj4) M1m I (GYP1) M5m iv ^{add6} ₄ (hmaj4) M5m I (HMAJ1) M0m i (hmin1) m10m ^b vii (dia2) M10m I (GYP1) M0m i ⁹ (dia2) m8M E Aeolian: ^b VI ⁶ m8M i m0m i ⁹ m8M ^b VI ⁶ ₅ m8M i ⁹ m5m iv7c m5m E mixture: i ⁹ (dia2) m8M ^b VI ⁶ (DIA4) m8M i (dia6) m0m i ⁶ ₄ (mmin2) M0m E Ionian: I M5M IV ⁶ ₄ M5M I M0m E melodic minor asc. (mmin1): i ^{add6} M0m E Ionian: I M5M IV ⁶ ₄ M5M I
9M6 An Awkward Reunion		2:26:55	Daisy, talking to teenage Benjamin, asks what he will do; he has no plans. She drives off with her family.	Daisy	E mixture: i ⁵ (HMAJ5) M0M IM ⁷ (DIA1) M7m v (dia2) M7m IM ⁷ (DIA4) N/A V (hmaj2) N/A IM ⁷ (DIA4) M7m v (mmin1) M7m I6 (DIA4) M5M IV ^{M9} (DIA4) M5M IM ⁷ (DIA4) M0m i ⁶ ₄ ^{M7} (hmaj4) M0m IM ⁷ (DIA4) M2m ii ^{add4} (dia2) M2m IM ⁷ (DIA4) M7m v (mmin1) M7m E Lydian: I M7M V ⁵ M7M i ⁵
9M7 Lost Love, Last Letter		2:31:10	Daisy receives a phone call that we later learn is about Benjamin, now looking like a child and dementing. She is driven to Queenie’s nursing home and looks around, the yard nostalgically.	Loss	G Aeolian: i m5m iv ⁶ ₄ m5m i m5m iv ⁶ ₄ m5m i m5m iv ⁶ ₄ m5m i m5m iv ⁶ ₄ m5m i
10M2 Benjamin Gets Younger		2:33:33	Montage of Benjamin growing younger, as a boy with advancing dementia at Queenie’s nursing home. Daisy visits to care for him.		G Aeolian: i m8M ^b VI ⁶ m8M i m8M ^b VI ⁶ M0m G Lydian augmented #2 (hmaj6): ^b vi m8m G Aeolian: i m8M ^b VI ⁶ m8M i
10M3 Final Regression	Dying Away	2:35:15	Daisy moves into Queenie’s when Benjamin looks 5. She reads him “Old man kangaroo”. He loses his walking and talking, becoming a toddler. In 2002, Mr	Benjamin	D mixture: i ^{M7} (mmin1) m9m vi (nmin4) m9m i ^{M7} (mmin1) m9m vi (nmin4) m4m iv (dia6) m8M ^b II ⁶ (DIA4) M11m i (dia6) m0m i ^{M7} (hmin1) m9m vi (nmin4) m0m vi (dia3/dia6) m9m i (mmin1) m9m vi2

			Gateau's clock in the train station is replaced. In 2003, Benjamin, as an infant, dies in Daisy's arms. Caroline says she wishes she had known him. Hurricane Katrina advances. A hummingbird appears outside the window (echoing Captain Mike's death scene) as Daisy dies.		(dia6) m8m iv ⁷ (hmin4) m5m i (hmin1) m11m vii (gyp3) m1m D Phrygian: bvii2 m5m iv m5m i m11m D mixture: vii (gyp3) m1m ^b vii (dia2) m10m i (dia3) m11m vii (gyp3) m1m ^b vii (dia2) m10m i (dia3) m11m vii (gyp3) m1m ^b vii (dia2) m10m D Phrygian: i
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Appendix B: Cue breakdown for *The Grand Budapest Hotel*

Cue title, if known	Corresponding soundtrack title	Start time	Narrative context	Leitmotif(s)	Analysis by Roman numeral functions, TTPCs, and modes NB. Bracketed modes indicate local modes, (i.e. relative to a chord root)
1M3 Mr. Moustafa Part 1		0:02:52	The Author narrates in VO that he spent August 1968 in the titular hotel. The camera pans onto the hotel as it looked in its prime, before cutting to its 1968 appearance.	Zero	C mixture: I (DIA1) M0M I (HMAJ1)
1M4 Mr. Moustafa Part 2		0:03:29	Montage as the Author narrates in VO about the hotel's lonely occupants, especially Mr. Zero Moustafa, wealthy owner of the hotel. The sequence ends as the Author and Zero meet in the baths.	Zero, Agatha	C mixture: I (HMAJ1/DIA1) M7m v (mmin1) m10m iv (mmin1) M5m I (MMIN5/DIA5) M7m v (mmin1) m10m iv (mmin1) M5m I (MMIN5/DIA5) M7M C Ionian: V ⁷ m5M ii ⁷ m5M V ⁷ M7M C mixture: I (HMAJ1/DIA1) M7m v (mmin1) m10m iv (mmin1) M5m C Mixolydian b6 (MMIN5): I M7M C Ionian: V ⁷ m5M ii ⁷ m5M V ⁷ M7M C mixture: I (HMAJ1/DIA1)
		0:08:07	The author and Zero sit at a restaurant table as Zero is about to tell his story.	Zero	
1M5 A Prayer For Madame D		0:09:11	1932: M. Gustave, concierge of the hotel gives various orders to his staff. He has lunch with the elderly and wealthy Madame D, who fears she is dying. He soothes her by reciting poetry in an elevator, before she departs, saying she loves him.	Gustave	B ^b harmonic minor (hmin1): i m5m iv m5m i m7M V m7M i m5m iv m5m i m7M V ⁷ m7M i m7M V m7M i m5m B ^b mixture: iv (hmaj4/hmin4) m5m B ^b harmonic minor (hmin1): i m7M V m7M i
1M8 A New Lobby Boy	The New Lobby Boy	0:11:14	Gustave meets Zero, a young lobby boy, interviewing him as they walk through the hotel. Despite having “zero” credentials, Zero impresses with his respect for the hotel.	Gustave	B ^b harmonic minor (hmin1): i m5m B ^b mixture: iv (hmaj4/hmin4) m5m B ^b harmonic minor (hmin1): i m7M V m7M i m7M V m7M i m5m B ^b mixture: iv (hmaj4/hmin4) m5m B ^b harmonic minor (hmin1): i m7M V m7M i m5m B ^b mixture: iv (hmaj4/hmin4) m5m i (hmin1) m7M V (GYP1/HMIN5) m7M i (gyp4) m5m iv (hmaj4/hmin4) m5m i (hmin1) m7M V

					(GYP1/HMIN5) m7M i (hmin1)
1M11 The Trans-Alpine Yodel		0:17:20	Zero delivers the newspaper to Gustave. War is imminent and Madame D had died.	Gustave (chords only)	B ^b mixture: i (gyp4) m5m iv (hmin4) m5m i (hmaj4/mmin1) m7M B ^b melodic minor asc. (mmin1): V
2M1 Daylight Express to Lutz	Daylight Express to Lutz	0:18:05	Gustave and Zero travel by train to Lutz where Madame D lived; he reflects on her death and on her skill “in the sack”, but hopes he may inherit something. Soldiers stop the train, to ask for papers.	Adventure	B ^b melodic minor asc. (mmin1): :i m7M V m7M i m5M IV m5M i m7M V m7M : X9 i m0M B ^b Ionian: I M5M IV M5M I M7M V M7M I
	Schloss Lutz Overture	0:22:12	Gustave and Zero travel by taxi at night to Madame D’s mansion, and Gustave talks to her at her open casket, lovingly. They pass through a kitchen where they see a terrified butler, Serge.	Gustave	B ^b harmonic minor (hmin1): i m5m iv m5m i m7M V ⁷ m7M i m5m iv m5m i m7M V ⁷ m7M i m5m B ^b mixture: iv (hmaj4/hmin4) m5m B ^b harmonic minor (hmin1): i m7M V m7M i m5m iv m5m i m7M V
2M7 Last Will and Testament Parts 1 & 2	Last Will and Testament	0:24:33	Gustave and Zero enter an elegant, crowded room where Kovacs, an attorney will read Madame D’s will to the interested parties. The bulk of the estate is to go to her son Dmitri. Kovacs tells of a codicil amending the will to bequeath Gustave the extremely valuable painting “Boy With Apple”. Dmitri rejects this, punches Gustave, and is backed by the fists of his right-hand man, Jopling.	Adventure, Gustave (ostinato only) Jopling	B ^b melodic minor asc. (mmin1): i m7M V m7M i m5M IV M10M V ⁷ m7M i m7M V m7M i m5M IV M10M V ⁷ m7M i m0m i ⁴ m0m B ^b chromatic Lydian inverse (cli1): i m5M B ^b melodic minor asc. (mmin1): IV M10M V m7M i m5M IV M10M V m7M i M0M
2M10 Up the Stairs and Down the Hall	Up The Stairs/Down The Hall	0:28:41	Gustave and Zero sneak through the mansion to arrive at the painting Boy With Apple.		
2M11 Boy With Apple		0:29:28	Gustave, encouraged by Zero, takes the painting off the wall and sneaks out. Before leaving, Serge assists by wrapping the painting in paper, and adding an envelope marked “confidential”.	Gustave	B ^b harmonic minor (hmin1): i m5m iv m5m i m7M V m7M i m5m B ^b mixture: iv (hmaj4/hmin4) m5m B ^b harmonic minor (hmin1): i m7M V m7M i
2M13 Night Train to Nebelsbad	Night Train to Nebelsbad	0:30:52	Gustave and Zero return by train. Gustave decides to sell the painting before it is stolen back. They make a pact; Zero will assist Gustave in selling the painting to the	Adventure	B ^b melodic minor asc. (mmin1): :i m7M V m7M i m5M IV m5M i m7M V m7M : X5 i m7M V m10M B ^b Ionian: vi m8M IV m5M B ^b melodic minor asc. (mmin1): :i m7M V m7M : X5 :i m7M V

			black market, in exchange for a portion of the painting's sale price. He also says Gustave will be his heir.		m7M i m5M IV m5M i m7M V m7M : X3 i
2M14 The Lutz Police Militia	The Lutz Police Militia	0:33:27	The police arrest Gustave at the hotel, for murdering Madame D.	Adventure	B ^b melodic minor asc. (mmin1): i m7M V m7M i m4m B ^b mixture: III (dia3) m4m i (mmin1) m7M V (MMIN5) m7M i (hmaj4) m0M I (DIA4)
2M15 Check Point 19 Criminal Internment Camp	Checkpoint 19 Criminal Internment Camp Overture	0:34:23	Exterior shots of the prison where Gustave is incarcerated.	Adventure	B ^b melodic minor asc. (mmin1): i m7M V m7M i m4M B ^b Ionian augmented (HMIN3): III m4M B ^b melodic minor asc. (mmin1): i m7M V m7M i
3M2 J.G. Jopling, Private Inquiry Agent	J.G. Jopling, Private Inquiry Agent	0:37:19	Opens at the end of a scene in which Zero is visiting Gustave in prison. Jopling intimidatingly searches for Serge at his sister's home, and rides through town on his motorcycle.	Jopling	B ^b mixture: V (C5) m7M i (cli1/gyp4) m0m i (nmin4)
3M3 A Letter from M. Gustave		0:39:00	Gustave in prison, writes to hotel staff, exploring them to look after the place, with threats.	Gustave (chords only)	B ^b harmonic minor (hmin1): i m5m iv m5m i m5m iv m5m i m7M V
	A Dash of Salt (Ludwig's Theme)	0:42:22	Gustave plots an escape with fellow prisoners.	Ludwig	C mixture: I ₂ (N/A) m0m
		0:47:10	Dmitri pressure's Kovacs to prevent the Painting going to Gustave, but he refuses. Jopling throws his cat out the window. The prisoners dig an escape route.	Jopling, Ludwig	B ^b Dorian b2 #4: i
3M7 Traces and Shadows?	The Cold-Blooded Murder Of Deputy Vilmos Kovacs	0:49:54	Kovacs travels to an art museum, pursued on motorcycle by Jopling, who kills him in the museum.	Jopling	B ^b Dorian: i m7m B ^b mixture: V (dia6) m7m i (oct1) m3M bIII (OCT1) N/A bII{42} (MMIN3) N/A i (oct1)
4M01 Escape Concerto Part 1	Escape concerto	0:53:30	Gustave and other prisoners escape out a window, down a ladder at night.	Ludwig, Jopling-related ostinato	A Dorian: i ⁶ m3m C Dorian b2 #4: i m3m A Dorian: i
4M01 Escape Concerto Part 2		0:56:39	After some guards are killed after seeing the escapees, Gustave emerges from a drain to meet Zero.	Ludwig	C mixture: I (N/A)

The War (Prelude)	No safe house	0:57:23	Gustave is disappointed to learn that Zero has not arranged a safe house, disguises, or perfume.		F Aeolian: iv m5m i m5m iv m9M F mixture: V/V (NMIN5) M0M V/V (HMIN5) M7M V (HMAJ1) M10m iv (hmin4) m5m i (hmin1) m10M bVII7 (DIA5) M3M F harmonic minor (hmin1): V M10m iv m5m i m10M F mixture: bVII7 (DIA5) M3M V (HMIN5)
4M2 The War (Zero's Theme)		0:58:45	After being berated and racially slurred, Zero reveals his backstory in “the war”; the reason he left his home country as a refugee. Gustave apologises, and they embrace as “brothers”.	Zero, Agatha, Society of the crossed keys	C mixture: I (HMAJ1/DIA1) M7M C harmonic major (HMAJ1): V M0M V9 M7M I M9m C Ionian: vi ⁷ M9m : I M9m vi ⁷ M9m : X4 I M0m C melodic minor asc. (mmin1): i m5m C harmonic minor (hmin1): iv m5m i m5m iv m9M C mixture: II ⁶ (HMAJ5) M7M V (HMAJ1/hmin1) M10m C Aeolian: iv m5m i m10M ^b VII M4M C mixture: II ⁶ (HMIN5) M7M V (HMAJ1/hmin1) M10m C Aeolian: iv m5m i m5m iv ^{add6} M10m C mixture: V (DIA1) M7M I (MMIN4)
4M4 The Society Of The Crossed Keys	The Society Of The Crossed Keys	1:01:44	Gustave, from a telephone booth, calls upon the services of The Society of the Crossed Keys (title of part 4), for hotel concierges, via a chain of phone calls between members.	Zero, Society of the crossed keys	F Ionian: : I M9m vi M9m : X4 I M9m vi ⁶ M9m I M9m vi ⁶ M2m F mixture: V (HMAJ1/DIA1) M5M F Ionian: i ⁵ M7M V56c M7M i ⁵ M9m vi M9m I M9m vi M9m I M9m vi M9m I M9m F mixture: vi (hmin1) M9m I (DIA1) M9m vi (hmin1) M9m I (DIA1) M9m vi (hmin1) M9m F Ionian: I
	M. Ivan	1:04:36	M. Ivan, of the Society, drives Gustave and Zero to a train, saying they must travel to Gabelmeister’s Peak to talk with Serge, the butler.	Society of the crossed keys	F Ionian: i ⁵ M9m vi ⁵ M9m i ⁵ m0M F mixture: i (mmin1) N/A vi ⁷ (dia6/MMIN6) N/A I{3312} (hmaj4) N/A vi (hmaj2/dia2) N/A i (hmaj4) N/A vi ⁷ (hmaj2/dia2) N/A I{3312} (hmaj4) N/A vi (hmaj2/dia2) N/A i (dia2) m9m vi (dia3) m9m i (dia2) m9m vi (dia3) M9m F Ionian: : I M9m vi M9m : X4 I
	Lot 117	1:06:32	Dmitri learns that Gustave has stolen “Boy With Apple”.		B ^b mixture: i (gyp4) m0M I (CHRO) m0M i (gyp4) m2M
4M6 Third Class Carriage		1:07:18	Gustave and Zero are on a night train, in third class. Gustave asks to officiate at Zero’s wedding to Agatha, and says he admires her purity.	Zero, Agatha (chords only)	C mixture: I (HMAJ1/DIA1) M7M
					C Ionian: V ⁷ M2M IV M9m ii ⁶ M2m I M9m vi ⁷ M9m I M9m vi ⁷ M9m I M9m vi ⁷ M9m I M9m vi ⁷ m0M

4M7 Agatha's Garret		1:08:15	Agatha is packing all her things in her room. She hears a thumping on the roof, and looks outside, but sees nothing.		A mixture: I (CHRO)
5M1 Gabelmeister's Peak Station		1:08:47	At the police station, a telegraph is read out that was written to Serge by his sister, who has been found decapitated. It tells him to escape to Gabelmeister's Peak. The head is pulled out of a basket. At Gabelmeister's Peak, Jopling fuels his motorcycle. Gustave and Zero arrive but evade the police, who are waiting for them at the train station.	Jopling	B ^b mixture: i (oct1) m7m v5 (dia6) m7m B ^b Dorian: i
	Canto at Gabelmeister's Peak	1:11:16	Gustave and Zero catch a gondola up to the monastery at Gabelmeister's Peak. Following a chain of instructions given by various monks, they dress as monks and sing mass, then go to the confessional booth where they meet Serge. He says Madame D had a second will to be used if she was murdered, but is strangled before he can say more. Jopling, the murderer, escapes out of the chapel on skis, pursued by Gustave and Zero. Gustave is hanging from the edge of a cliff, but before Jopling can push him off, Zero pushes Jopling off. The cue ends with Police sighting the pair.	Adventure	B ^b melodic minor asc. (mmin1): : i m7M V m7M i m5M IV m5M i m7M V m7M : X11 i ⁶ m7M V5c m7M i ⁶ m5M IV ⁵ ₂ m5M i ⁶ m7M V5c m7M i m7M V ⁵ m7M i m4M B ^b Ionian augmented (HMIN3): III ⁶ m4M B ^b melodic minor asc. (mmin1): i m7M V ⁶ m7M i m7M V ⁶ m7M i m4M B ^b Ionian augmented (HMIN3): III ⁶ m4M B ^b melodic minor asc. (mmin1): i m7M V ⁶ m7M i ⁵ m4M B ^b Ionian augmented (HMIN3): III ^{b9} m7M G melodic minor asc. (mmin1): i ^{add6} m9m B ^b melodic minor asc. (mmin1): : i m7M V m7M i m5M IV m5M i m7M V m7M : X6 B ^b Lydian b3 (hmaj4): i m7M V m7M i m7M B ^b mixture: V ⁴ ₂ (MMIN5/DIA5) m7M B ^b melodic minor asc. (mmin1): i m7M V ⁷ m7M i m7M V ⁷ m7M i m5m B ^b harmonic minor (hmin1): i ^{vadd6} m5m i m5m i ^{vadd6} m5m B ^b melodic minor asc. (mmin1): i ^{add6} m0m : i m7M V m7M i m5M IV m5M i m7M V m7M : X2 i
5M4 A Troops Barracks	A Troops Barracks	1:17:37	War has broken out and the hotel has become a troops barracks. Agatha pretends to deliver pastries to the hotel.	Adventure	C mixture: i (MMIN6) C Dorian: m5M i m5M IV m5M i m5m C mixture: i ^{v6} (dia2) m5m i (dia6) m5M IV (DIA5) m5M i (dia2) m6M bV (HMIN6) m6M

			<p>The new Concierge manages sleeping quarters logistics for the military staying in the hotel.</p> <p>Agatha climbs the stairs and gets Boy With Apple from the safe.</p> <p>Gustave and Zero are disguised as pastry deliverymen. Gustave recites poetry to mourn what the hotel has become.</p> <p>Dmitri arrives.</p> <p>Agatha emerges with the painting.</p> <p>The concierge welcomes Dmitri.</p> <p>Dmitri pursues Agatha up the stairs.</p> <p>Gustave and Zero sneak through the hotel with piles of pastry boxes, looking conspicuous.</p> <p>Dmitri, on an elevator with Agatha, rips open the wrapping on the painting.</p> <p>Dmitri pursues Agatha, at a walk, down the corridor.</p> <p>Dmitri starts running. Police run upstairs after Gustave.</p> <p>Dmitri confronts Gustave about the painting.</p> <p>There is an exchange of fire started by Dmitri shooting at Gustave. Police declare, “everybody is under arrest”.</p> <p>Agatha escapes out a window with the painting.</p> <p>Zero jumps after her, heroically. They both fall into the pastry delivery truck and embrace.</p>	<p>i (mmin2) m5M IV (DIA5) m5M i (dia2) m5m iv⁶ (dia2) m5m i (dia6) m5M IV (DIA5) m5M i (dia2) m6M ^bV{313} (HMIN6) m6M</p> <p>i5 (mmin2) m6M ^bV⁵ (HMIN6) m6M i (mmin2) m4m iii (nmaj3) m4m i (swt1) m9M/m VI (MMIN5/dia6) m9M/m i (mmin1) N/A ^bV{151} (DIA4*) N/A i (dia3) N/A ^bV (DIA4*) m6m i (dia3) m0M I (HMIN5) m0M</p> <p>C Phrygian: i m10m ^bVII{321} m10m i m10m ^bVII{321} m10m</p> <p>C Aeolian: i m5m iv m5m i m8m</p> <p>C Lydian augmented #2 (hmaj6): ^bvi m8m</p> <p>C Aeolian: i m5m iv m5m i m6m</p> <p>C Locrian ^bb3 ^bb7 (gyp7): #iv M4m</p> <p>C mixture: II⁶ (GYP1) m2M i (hmin4) m5m iv (dia2) m5m i (dia6) m8m ^bvi (hmaj4) m8m</p> <p>C Aeolian: i m5m iv m5m i m2M</p> <p>C Romanian (hmin4): II⁶ m2M C mixture: i (hmin4) m5m iv (dia2) m8m ^bii (hmaj4) M1m I (HMIN5) M1m</p> <p>D^b Lydian ^b3 (hmaj4): i m7M V⁶ m7M i^{M7} b m7M V⁶ m7M i m11M D^b mixture: VII (HMIN5) m11M i (hmaj4) m1m C mixture: i (hmaj3) m5M IV (MMIN5) m5M i (mmin2) m1M ^bII⁶ (DIA4) m1M i (dia3) m5M IV (MMIN5) m5M</p> <p>i⁵ (mmin2) m5m</p> <p>iv (dia6) m5m i (dia3) m8m ^bvi (mmin1) m8m C</p> <p>Phrygian: i m5m iv m5m i N/A C mixture: ^bV+ (MMIN3) N/A</p> <p>i (dia6) m0m i⁵ (dia6) m5M IV (DIA5) m5M i (dia2) m1M ^bII⁶ (DIA4) m1M i⁵ (dia3) m5M IV (MMIN5) m5M i (mmin2) m10M ^bVII⁺⁶ (HMIN3) M10M</p> <p>I⁵ (MMIN4) M5M IV (DIA1) M5M I (DIA5) M1M ^bII⁶</p>
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					<p>(HMIN6) M1M i⁵ (HMIN5) M5M IV (HMAJ1) M5M i⁵ (HMAJ5) M10M bVII⁶ (MMIN3) M10M I (MMIN4) M5M IV (DIA1) M5M I (DIA5) M8M bVI (MMIN3) N/A I⁺ (dia6) m0m C Phrygian: I{51} m0m i m0m I{51} m0m i m0m I{51} m0m i m0M C Phrygian dominant (HMIN5): I m0M C Phrygian: i m0m I m0m i⁵ m0m</p> <p>C mixture: i (dia6) m6m #iv (gyp3) m6m i (hmin4) m4m iii⁶ (dia2) m4m i (hmaj4) m6m #iv5 (nmin1) M6m i⁵ (DIA4) M6m #iv5 (dia3) M6m I (DIA4) M6M bV (GYP2) M6M I56 (HMAJ5) M1M bII⁵ (HMIN6) m1M i (dia3) m6M bV⁵ (DIA4*) m6M i (dia3) m6M bV⁵ (DIA4*) m6M i (dia3) m6M bV⁵ (DIA4*) m6M i (dia3) m0M I{133}c (HMIN5) m0M i (dia3) m6M bV⁶ (DIA4*) m6M i (dia3) m0M I⁶ (HMIN5) m0M i (dia3) m6m #iv⁶ (gyp3) m6m i (oct1) m0m i (oct1) m6M bV⁵ (HMIN6*) m6M i (mmin2) m6M bV⁵ (DIA4*) m6M C Phrygian: i⁵ m5m iv⁵ m5m i⁵ m8M bVI⁷ m8M i⁵ m5m iv⁵ m5m i⁵ N/A C mixture: bV{15} (DIA4*) N/A C Phrygian: i m5m iv5 m5m i m8M bVI m8M i m5m iv5 m5m i m6M C mixture: bV (DIA4) m6M i (dia3) m8m bvi⁶ (mmin1) m8m i (dia3) m2M II⁶ (HMIN5) m2M i (hmin4) m8m bvi⁶ (hmaj4) M5m bIII⁶ (HMAJ1) M11M II⁶ (HMIN5) m2M i (hmin4) m8m bvi⁶ (hmaj4) m8m i (dia6) m2M II⁶ (HMIN5) m2M i (nmin4) m9M VI (hmin2) m9M i (hmin4) N/A bV{51} (HMAJ6) N/A i (hmin4) m5M IV⁵ (DIA5) m5M i (dia2) m8M bVI (NMIN2) m8M i (nmin4) m5m IV59 (dia2) m5m i (nmin4) m6M bV⁵ (DIA4*) m6M i (dia3) m9M VI (HMIN5) m9M i (dia2) m6M bV⁵ (HMIN6*) m6M i (mmin2) m6M bV⁵ (HMIN6*) m6M i (mmin2) m7M V</p>
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					(SWT5) m7M i (swt1) m9M VI (MMIN5) m9M i (mmin1) m6M $\flat V^6$ (HMIN6*) m6M i (mmin2) m5m iv (dia3) i m7m (No music) i (dia6) m5M IV (DIA5) m5M i (dia2) m7m iv ⁶ (dia2) m5m i (dia6) m5M IV (DIA5) m5M i (dia2) m6M $\flat V$ (HMIN6) m6M C Phrygian natural 6 (mmin2): i m5M IV m5M i m5m C Phrygian: iv ⁶ m5m i m5M C Phrygian natural 6 (mmin2): IV m5M i m5M IV m5M i m5M IV m5M i m8M C Phrygian: $\flat VI$ m8M I m0m i m7M C harmonic minor (hmin1): V m7M i m5M C melodic minor asc. (mmin1): IV m5M i m7M V m7M i
5M7 Cleared of All Charges		1:23:22	Agatha reveals that the second will is attached to the painting. This results in Gustave inheriting Madame D's entire estate. There is a montage of the court case.	Zero, Agatha (subtle)	E Aeolian: I m8M C mixture: I (DIA1) M0M I (HMAJ1/DIA1) M7m v (mmin1) m10m iv (mmin1) m10m $\flat iii$ (mmin1) m11m ii (nmin1/dia3) M7m V (MMIN5) M7M
					C mixture: I (HMAJ1/DIA1) M7M
5M8 The Ceremony	The ceremony	1:24:31	Agatha and Zero marry on a lookout in the mountains, with Gustave as celebrant. Zero's VO narration reveals during this that Gustave and Agatha both died young. Travelling on a train, Gustave reveals that he was a lobby boy once. The cue ends when the train is stopped by soldiers, who, it is implied, kill Gustave.	Agatha, Society of the Crossed Keys (subtle)	C Ionian: V^7 soldiers, who, it is implied, kill Gustave, stop the train I
5M9 Mr. Moustafa Part 3		1:27:31	In 1968, the Author has finished hearing Zero's story over dinner. It is revealed that Zero had spent his entire inheritance from Gustave to buy the hotel back from the government. Zero confesses that he bought the hotel to remember Agatha, before leaving the author for his room.	Zero, Agatha	C mixture: I (HMAJ1/DIA1) M7m v (mmin1) m10m iv (mmin1) M5m I (MMIN5/DIA5) M7m v (mmin1) m10m iv (mmin1) M5m C Mixolydian $\flat 6$ (MMIN5): I M7M C Ionian: V^7 M7m ii ⁶ M7m V9 M7M C mixture: I (HMAJ1/DIA1)

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