Understanding Contextual Agents and Their Impact on Recent Hollywood Film Music Practice

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Abstract

Hollywood film composers work within a complex process of film production, with limited control over the final outcome. Certain contextual agents have shaped the developing craft and caused recent Hollywood film music (since 1980) to depart from the symphonic neo-Romantic style that has traditionally and commonly been associated with Hollywood film scores. Developments in storytelling, changing demographics among filmmakers and composers, evolving business models, and the influence of television have altered the content and style of Hollywood films and film music. Furthermore, technological advances in film, soundtrack, and music production have contributed to changes in prevalent composer practice. Film music is always mediated by the films it accompanies and contemporary Hollywood films that speak a progressive language tend not to use conventional music of the classical Hollywood tradition. Film music must bow to commercial pressures that are often at odds with originality. An analysis of the workload distribution among composers in the 50 top-grossing Hollywood films each year between 1980-2009 reveals an uneven distribution skewed towards a select few individuals. These composers exert considerable influence on their field. Further findings summarized in this thesis also show a statistically significant increase in non-melodic minimalist writing as well as strong correlations between non-orchestral instrumentation and non-traditional musical styles over the past three decades. This thesis assesses recent Hollywood film music practice and the opportunities and challenges screen composers face. Acknowledging the role and influence of so-called contextual agents in film music composition means to consider film scores in the spheres of conceptualisation and compositional practice. The key research question addressed in this thesis is: 'What is the context in which Hollywood film composers actually work and how does this affect their creative practice and the musical outcome?'

Acknowledgements

Table of Contents

Foreword

This thesis was first inspired in 2008 when I was commissioned to arrange sheet music for the book 'Big Screen Themes - Music From The Movies For Solo Piano' (Wheeler, 2009). The format requires easy piano arrangements up to ABRSM grade 5, normally with the melody in the right hand and accompaniment in the left hand. Transcribing and arranging from audio recordings, I soon realised how poorly many of the selected pieces translated to the piano. Cues such as 'Salvation' (from *Terminator Salvation*, 2009), 'Death And Transfiguration' (from *Hancock*, 2008) or 'That New Car Smell' (*Star Trek*, 2009) hardly contained a melodic line.[1] A less than distinctive six-note motif serves as a theme in 'Salvation'. 'Death And Transfiguration' contains no memorable tunes. And whilst 'That New Car Smell' does contain two recognisable melodic fragments and also the film's main theme, these melodic elements are not the primary building blocks for the cue. Instead, all three examples comprise minimalist patterns, long held drones, non-functional chords, frequently shifting key centres, but also intricate instrumental colours, evolving timbres, complex rhythmic structures and electronic and non-Western instruments. Clearly, these recent cues differ in style and medium from the kind of music one might traditionally associate with 'Big Screen Themes': No memorable tunes, no Romantic orchestral gestures, but instead an eclectic array of idioms, electronic pulses, low-profile drones and daunting percussion rumblings. Recent screen music, it seems, has forgone many of its traditional characteristics, including musical aspects screen composers might traditionally have deemed most essential to a well-crafted film score. Why has composed Hollywood film music departed from the Romantic symphonic tradition commonly associated with Hollywood scores? What has prompted these shifts in film composers' musical language?

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[1] The three arrangements are reproduced in Appendix I.

Introduction

The key research question addressed in this thesis is 'What is the context in which Hollywood film composers actually work and how does this affect their creative practice and the musical outcome?' In addressing this question, I concentrated on composed underscores as opposed to the use of popular songs in films or the use of pre-existing music (such as Johann Strauss's 'Blue Danube Waltz' in *2001: A Space Odyssey*, 1968). To narrow my sample, I decided to focus on scores composed for commercially successful Hollywood films from 1980-2009. I use the term 'Hollywood' here not in the strict geographic sense but to refer to a collective of commercially driven U.S.-American studios and distributors with common modes of production and post-production, shared aesthetic and narrative conventions, business and marketing models and an exclusive professional network. David Bordwell et al. have written extensively about a unified Hollywood canon that, in terms of style and technique, was established firmly by the 1960s.[2] Following the breakdown of the Studio system (see also Chapter 2), a period of relative experimentation followed that had firmly settled by the beginning of the 1980s. I chose to focus on the time period 1980-2009 firstly because the film music of this time period has received relatively less scholarly attention as yet (see below). Secondly, composed film music of this recent era is exemplary of perceived shifts in composers' musical language and a marked departure from the Romantic symphonic tradition commonly associated with Hollywood scores. Thirdly, the chosen time period holds personal meaning to me as a child of the 1980s.

Past Hollywood post-production practices are well understood and the general history of classical Hollywood film music is comprehensively documented.[3] However, there is a lack of specific material on recent compositional practices therein. Conditions in the so-called Golden Era Hollywood studio system were favourable to lush neo-Romantic scores, with large budgets, generous facilities, and full-time salaried studio orchestras.[4] Hollywood's linear assembly-line approach to filmmaking and the use of analogue editing equipment reliably led to a fixed edit. As a result, Golden Era film composers enjoyed the luxury of a so-called locked picture that provided them with the certainty of fixed timings when planning their scores. Fred Karlin and Rayburn Wright (2004) offer

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[2] See also Bordwell (2002), Thompson (1999) and Bordwell et al. (1985).
[3] See, for example, Cooke (2008), Burlingame (2000), Darby & Du Bois (1990).
[4] See, for example, Davis (1999), Lack (1997), Prendergast (1977).

a comprehensive introduction to key film scoring techniques that rely on a fixed picture edit. The job title 'musical director' was commonly found in Golden Era films and is suggestive of the composer's relatively higher level of authority. Peter Franklin (2011, p. 17) suggests that a higher level of autonomy of music in classical Hollywood film was brought about by the music department's apparent freedom to act independently.

Since a perceived shift in the musical language of Hollywood film scores initially drew me to investigate the root causes of that shift, it seems useful to briefly address the preferred scoring idiom of the past. It is widely agreed that 'a key element in the classical Hollywood film score was its romantic idiom' (Kalinak, 1992, p. 63). 'The medium of the classical Hollywood film scores was largely symphonic; its idiom romantic; and its formal unity typically derived from the principle of the leitmotif' (ibid., p. 79).[5] Timothy Scheurer (2008) provides a historically framed morphology of film music by genre. He discusses composers' neo-Romantic response to Golden Age cinema as a stylistic choice suited to films of that era. In tandem with the emergence of the Hollywood studio system, film music was indirectly shaped by socio-cultural and historical circumstances. A range of composer biographies, either in the form of whole books or book sections, offers valuable insights into the vitae of early Hollywood film music pioneers and their working methods, including Richard Dyer (2010) on Nino Rota, Miklós Rózsa in his autobiography (1984), Elizabeth Andorfer (2011) on Franz Waxman and Kate Daubney (2000) on Max Steiner. Many of Hollywood's first-generation film composers were classically trained and had to varying degrees gained prior recognition for their non-screen compositions. Mostly European emigrants, they imprinted on film music their musical language grounded on traditional musical upbringing and stylistic sensibilities.[6] Jessica Duchen (1996, p. 197) uses the term 'melodists' to summarily describe these composers' style as 'lush, romantic, melodic'. Her biography of Korngold describes scoring practices in early Hollywood. An Austro-Hungarian immigrant, Korngold's prodigious accomplishments in opera (*Die tote Stadt*) and concert music predated his illustrious career in film music. His strong sense for programmatic music and extensive use of leitmotifs perhaps predisposed him to succeed in Golden Era Hollywood.

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[5] The term 'classical' here refers not to a particular style of music but to the music that accompanied 'classical Hollywood films', generally accepted to cover Hollywood films made between 1929-1960.
[6] There may of course have been some auto-didacts and amateurs. And not all early sound film scores were of a Romantic idiom.

Theorists have explored how characteristics of the Romantic idiom resounded with and contributed to classical Hollywood film.[7] Addressing 'narrative film music' in classical Hollywood film, Claudia Gorbman (1987, p. 4) notes that 'the core musical lexicon has tended to remain conservatively rooted in Romantic tonality, since its purpose is quick and efficient signification to a mass audience'. Caryl Flinn (1992, p. 21) agrees, adding that 'Romanticism in film music [is] evidence of Hollywood's conservative ideology'. Helping to perpetuate an ahistorical, highly affective 'promise of lost utopian coherence', the neo-Romantic musical language in classical Hollywood films offers 'the glimpse of a better, more unified world' (ibid. p. 91). The grandeur of such film music signals anteriority, 'the by-gone' (ibid., p. 109). That musical excess might unsettle film's aesthetic balance is implied, and Flinn (ibid., p. 34) has indicated the affective redundancy of film + (neo-Romantic) music. Romantic idiosyncrasies such as an indulgence in chromatic harmony and an emphasis on melody served the purposes of early film scoring. Royal S. Brown (1994) investigates the narrative and emotive capabilities of melodic scores and notes their capacity to engage the audience. He explains that 'dramatic, substantially developed melodies in solidly tonal harmonic contexts have set the mood and provided abundant motivic material for romances' (ibid., p. 96). Kalinak (2010, p. 65) states that 'Romanticism privileges melody […] and the privileging of melody in the score meshed nicely with the privileging of narrative in classical Hollywood style.'

In film music, melodies can function as a structuring device, both for the score but also for the film it accompanies. By association and through repetition these melodies can attain meaning and significance for narrative purposes. Gorbman (1987, p. 13) raises the important question of the structural and conceptual compatibility of film and music, asking whether 'the rhetoric of filmic discourse (representational, "naturalistic", rhythmically irregular) [is] incommensurate with the rhetoric of musical discourse (nonrepresentational, "lyrical", rhythmically regular)'. To the extent that film as a medium deals in a representational, pictorial language, it is perhaps at the opposite end of the meaning-making spectrum from music, whose sign system is in itself non-representational, in Susanne Langer's (1942, p. 241) words 'a significant form without conventional significance'. In the context of narrative film, music's capacity to express and/or denote meaning and emotion is channelled, the film providing a context within

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[7] See for example Kalinak (2010), Kaufman & Kaufman (2003), Davis (1999), Duchen (1996).

which musical signs can have referential significance. Langer (ibid., p. 240) states that 'music at its highest, though clearly a symbolic form, is an unconsummated symbol'. Brown (1994, p. 27) responds that an '"unconsummated symbol" […] can also be considered to have unconsummated *affect*, and as such it is ripe as an art form for the consummation provided by the representational nature of the moving picture and/or of the specific, narrative situation'. He then posits (ibid., p.93) that film music 'consummates itself in the visual and, more often, narrative material of the movie it accompanies' and that 'filmic images carry [...] the modern film score from the state of unconsummated symbols into the state of consummated symbols' (ibid., p. 95).

Crucially, these observations are made without reference to the actual syntax and idiom of the music. In principle, the ability of film music to attain referential meaning – become consummated – in relation to the film it accompanies is independent of the nature of that music, be it orchestral or electronic, neo-Romantic or a blend of contemporary idioms. The early pioneers of filmmaking noticed that music has a profound impact on the viewing experience. Eisenstein (1969) experimented with the synchronisation of music and image at both the technical and experiential level. Through so-called commutation exercises, Michel Chion (1994) has demonstrated that any piece of music will seem to signify something in relation to the images it accompanies. In terms of meaning-making, nothing suggests – and no-one has cogently argued – that film music should be of any particular idiom. The prevailing neo-Romantic style of classical Hollywood film music was not born out of necessity. It was effective as a narrative and emotive device mainly because audiences were conditioned by systematic and structural repetition across films of the same canon. In this context, composers could draw on musical topics whose functions were pre-established. Some have suggested that so-called codes of signification still exist today that are readily decoded by conditioned audiences.[8] The thought intuitively rings true, for the use of stock gestures and musical quotes was commonplace in early film music practice. Compilations such as Guiseppe Becce's *Kinothek* (1919-29), John Stepan Zamecnik's *Sam Fox Moving Picture Music* (1913-14), Ernö Rapée's *Motion Picture Moods for Pianists and Organists* (1924) were widely used by pit pianists and orchestras. In Michael Kamen's score for *Die Hard* (1988), Robyn Stilwell (1997, p. 562) observes the use of 'stock suspense signifiers such as low, indeterminate rumblings, string tremolos and

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[8] Halfyard (2004, p. 35), Kassabian (2001, p. 23).

figurations, percussive outbursts and screeching brass interjections', but there is no comprehensive catalogue of coded musical expressions for recent film music.

The second generation of Hollywood composers remained largely classically trained, for example Elmer Bernstein, Maurice Jarre, Ennio Morricone and Jerry Goldsmith. Steven Smith (2002) has described Bernard Herrmann in the most fascinating and at times unflattering detail. Henry Mancini has been identified as a catalyst – both in musical and business terms – in mainstreaming jazz and songs in film music,[9] writing among many others the song 'Moon River' for *Breakfast at Tiffany's* (1961) and the popular *Pink Panther* (1963) theme. Along with Elmer Bernstein, Mancini was one of those composers who instigated a stylistic change in Hollywood film music practice – away from neo-Romantic symphonic scoring to more contemporary popular idioms – in whose wake individuals from a far wider range of backgrounds found their way into film scoring. According to Helen Mitchell (2010, p. 182), 'Hollywood sought to emulate the commercial success of Mancini's music for [the popular television series] *Peter Gunn*, and in so doing promoted the cause, not only of jazz, but of other types of popular music on screen.' Some of the new-generation composers composing in these newly sought-after styles lacked the level of traditional training and experience of the earlier pioneers. Conductor and music supervisor André Previn describes his career in Hollywood film music, which in his day had already turned into a diverse field (1993).

Since the end of the studio era, considerable changes have swept through Hollywood practice. Tradition aside, nothing suggests that recent and contemporary Hollywood film music can or should continue to follow Golden Age tradition or adhere to conventions established in classical Hollywood film. Recent and contemporary film music has not been of any particular idiom or performed in a particular medium. Mitchell (2010, p. 188) describes two key reasons for 'the usurpation of the symphonic film score: commercial interest and youth targeting'. These are commercially motivated changes that are also the result of a shifting cultural context and choices made by filmmakers.[10] The rise of the compilation score was 'a commercially self-aware alternative to the neo-Romantic orchestral score of Hollywood's Golden Age' (ibid., p.

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[9] Discussed in Caps (2012).

[10] Throughout this thesis, the term 'filmmaker' will refer collectively to directors, producers and studio executives. Where directors, producers or executives are referred to specifically, they will be named as such. A useful glossary of terms can be found at http://www.filmsite.org/filmterms.html [Accessed 10 March 2014].

187). Julie Hubbert (2003, p. 181) notes that collaborative aspects, creative control, and patronage have affected recent scores. 'The sound of the film score was changing because a shift in the creative control of the music was taking place.' Filmmakers increasingly took an active interest in musical decisions. Mitchell (2010, p. 190) notes that the use of pop music served a 'new aesthetic of realism' imposed by directors.[11]

Russell Lack (1997) covers recent developments, including the advent of digital sound and editing technologies and the blurring boundaries of music and sound effects. He also discusses the rise of synthesizers and other electronic instruments and suggests that scepticism among scholars and practitioners against electronic film scores may have been the result of poor music being written, rather than the instruments themselves, as some have suggested. Kathryn Kalinak (1992, p. 187) appears generally skeptical of synthesizers and defensive of the orchestral medium. Composer and educator Bruce Broughton nuances his skeptical view of synthesizers by pointing out specific limitations to their emotive capabilities (quoted in Schelle, 2000 p. 101) and less than inventive composers improvising rather than composing with synthesizers (quoted in Lack, 1997, p. 346).

The use of popular songs in Hollywood film has been thoroughly covered and is not a recent phenomenon.[12] Harris (2009) offers a detailed overview of 1960s developments, including novel ways of using popular music in film both as a commercially viable commodity but also as a co-generator of affect as a carrier of extra-filmic connotations. Smith (1998) offers perhaps the most in-depth treatment of the use of popular music in Hollywood film. The use of pop songs in *Forrest Gump* (1993) is the focus of Lapedis (1999). Smith (2001) reiterates observations made in his 1998 book about the commodification of pop songs and the commercial success of soundtrack album sales, which perhaps peaked around the mid-1990s. The detrimental impact of song compilations on film composers' workload has been covered by Burlingame (2000, p. 22).

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[11] Cooke provides an overview of the history of film music. Space does not permit to go into every detail of developments in film music before 1980, which would include a discussion of a period of predominantly jazz-influenced scores. See Mervyn Cooke (2008).
[12] Compare Rick Altman (2001) who points out that early cinema was accompanied by popular songs as much as classical repertoire.

The influence of popular music on composed underscore may have pushed scores towards an idiom better suited to contemporary mainstream Hollywood films. Brown detects an evolution of Hollywood composers' compositional style in response to the compiled pop songs that surrounded them. He refers to 'specially composed pop scores' (1994, p. 65). In *Top Gun* (1986), the boundaries between pop songs and composed score blur. Composer Harold Faltermeyer co-wrote the songs 'Dangerzone', 'Mighty Wings' and 'Playing with the Boys' with Kenny Loggins and Giorgio Moroder. The latter co-wrote and produced 'Take My Breath Away', performed by the group Berlin. Where the four songs are used in the film, the vocal track is often omitted. The instrumentation of synthesizers, drum computers and electronic guitars is blended with through-composed passages of Faltermeyer's score. This approach allows Faltermeyer to segue seamlessly from the opening synth pads during the prologue to 'Dangerzone', which accompanies the first flight sequence. Scoring *Robin Hood: Prince of Thieves* (1991), Michael Kamen used a similar strategy but opted for a more traditional symphonic medium: He co-wrote the theme song 'Everything I Do (I Do it for You)' with singer Bryan Adams and wove the song's melody into the orchestral score. When in the latter third of the film Maid Marian Dubois (Mary Elizabeth Mastrantonio) leaves Robin Hood's (Kevin Costner's) camp, an oboe gently picks up the theme song's main tune and the orchestra provides the same harmonisation as is heard later during the closing credits when Adams sings the song. Ramin Djawadi's score for *Iron Man* (2008) co-exists with pre-existing AC/DC songs and is performed by rock band and orchestra. The cue 'The Merchant of Death' that accompanies Tony Stark's (Robert Downing Jr.'s) arrival at a private airfield has obvious surface similarities in terms of instrumentation (distorted electric guitars, electric bass, heavy metal drums) to the song 'Back in Black' that accompanies the opening of the film.

There is conclusive evidence, presented in Chapter 1, that a considerable percentage of recent composed Hollywood film scores have approximated the harmonic language, tone and instrumentation of popular songs. Some practitioners regret what they consider a deterioration of their craft. Composer Gabriel Yared laments that 'old masters had a command over harmony, counterpoint, fugue, which would now sound old-fashioned. Nowadays, everything is similar themes, drones, pedals, I don't find real music.'[13] Danny Elfman (quoted in Donnelly, 2001, p. 151) adds that 'contemporary

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[13] Gabriel Yared in a 'BAFTA Masterclass: Composing for Film' at the BFI Southbank on 26 June 2013.

film scoring doesn't enhance the action; all it does is provide pretty wallpaper. Old-fashioned film scores were much more dynamic.' It is interesting to note Elfman's choice of terminology. Composers as far back as Stravinsky (quoted in Dahl, 2010, p. 277 and cited in Winters, 2012) have compared composed film music with 'wallpaper'. Orchestrator Patrick Russ does the same when he comments:

> The term 'musical wallpaper', as used in movies and video games, […] is a tongue-in-cheek term which describes static audio music in a movie or video game that adds nothing to the context and has no significant development. I first heard the term in the 1970s to describe some rather bad Minimalist music that went on repeating ad nauseam, quite literally until the listeners were getting a collective headache. Composer Elmer Bernstein best summed up the listening experience: 'At first I was intrigued; then it just made me angry.' But there is a distinction between Minimalist composition and wallpaper. Minimalism can be brilliant, for example in Philip Glass' 1982 film score *Koyaanisqatsi: Life Out of Balance*. The term musical wallpaper can be applied to static music in any setting, and implies a lack of creative thought on the part of the composer.

> In current use, 'musical wallpaper' often describes the overall effect of repeating sound loops in video games and film scores. Music is present, but it is music with no particular direction or purpose. Often the loop doesn't end, it just stops. In fact, the identical music loops occur in multiple places without variation or consideration of the visual elements. 'Soundscape' is the wrong description for this music, because most soundscapes are crafted to have a purpose in the visual drama. Ostinati or repeating passages are also not applicable comparisons, because an ostinato passage will develop dramatically as part of the music score. Composer Patrick Doyle has been known for his highly effective use of ostinati since his first film score *Henry V* (1983) through *Rise of the Planet of the Apes* (2011). His body of work makes an excellent study of how to use a musical tool like ostinato outstandingly well.

> Does musical wallpaper 'matter'? Do people enjoy it, or does the unvaried repetition annoy them to the point that the experience of watching the movie or video would be enhanced if the musical wallpaper wasn't there? Certain elements of 'wallpaper' could be incorporated into more satisfying composition, but then we are back to good writing!

> (Edited from an email received from Patrick Russ on 15 December 2011)

Djawadi draws parallels between developments in popular music in general and ensuing trends in film music more specifically:

> If you look at hip hop and the way pop songs have progressed compared to pop songs in the 80s: they're much more simplified. – And so the same has happened in film scoring. I think a lot of times I get asked to simplify the theme, or 'there's too many notes', or 'there's too much harmony'. So a lot of it really gets down to simplifying the music.[14]

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[14] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

Djawadi implies that demands from filmmakers have changed in line with developments in popular music towards increased simplicity.

When Brown (1994, p. 112) notes that in film music there is 'no space to develop a traditional melody', he refers to an old problem. Adorno and Eisler (1947, p. 8) observed as early as 1947 that 'all music in the motion picture is under the sign of utility, rather than lyric expressiveness.'. But David Morgan (2000, p. 12) confirms that, more recently, melodies are altogether disappearing from film music:

> The melodic form of film music is something which seems obvious – put in a melody that will captivate an audience and draw it into the drama – but some film music today seems to be more interested in creating sound textures or rhythms rather than melody in order to foster an emotional response, such as tension, fear, or discomfort. In many instances this is perfectly warranted and effective within the film, but when heard outside of the film the music suffers from being repetitive, undeveloped, or boring. Many music cues, particularly those which are very short, have a reason to exist within the narrative (i.e. to bridge one scene with another) but do nothing more musically than recall earlier, full-blown renditions of the main thematic material.

The late David Raksin (in Morgan, 2000, p. 12) remarked 'melody has practically disappeared from the world [of film music]; every so often you get a guy who knows how to write one, but most guys are afraid because, as Oscar Wilde once said, to be understood is to be found out. And the biggest way to risk that is to write a melody.' Elmer Bernstein (interviewed in Thomas, 1997, pp. 258–259) concurred that 'we are living though an anti-feeling period. It's a cool age, people don't want to be that emotionally involved, to be touched. Today a love scene scored with a beautiful melody for strings is likely to be scoffed at. […] It seems unfortunate that in some pictures today interpretive music is not even called for. Films are more tracked than scored. Music is an adjunct rather than a part of the texture of the picture.' If Bernstein's assessment is correct and film music is now considered a mere adjunct to film, this helps explain why well-conceived extended melodies have disappeared. In the context of increasingly self-aware Hollywood filmmaking,[15] filmmakers and studio executives may be responsible for the disappearance of extended melodies in film music. Melodies are noticeable and recognisable and, from a filmmakers' point-of-view, potentially distract from the film at hand. Kalinak (1992, p. 5) notes that the presence of melody

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[15] See also Chapter 3 on storytelling.

'prioritizes our listening, subordinating some elements to others and giving us a focal points in the musical texture.' Asked why he rarely employs 'big tunes', composer Thomas Newman (in Schelle, 2000, p. 269) responds that 'sometimes you want to be heard, sometimes less so', implying that the use noticeable melodies draws attention to the music. Langer (1942, p. 26) quotes D'Udine as noting 'all melody is a series of attitudes'. Noticeable melodies in film music may be perceived as overly expressive or emotive. Composer Mark Snow recalls that in preparation for the *X-Files*, creator Chris Carter gave him clear instructions: 'He said he hated melody, but he loved [anything] atmospheric and minimal.'[16]

Composers still regularly speak of the importance of a 'good tune',[17] by which in the context of film music I understand a well-developed melodic theme. The late Elmer Bernstein (interviewed in Thomas, 1997, p. 254) warned that 'you have to be careful how you use melody in film scoring; the melody must be an absolute extension of what is taking place in the screen.' Bernstein's themes for *To Kill a Mockingbird* (1962) or *The Magnificent Seven* (1960) come to mind, extended melodies that capture the essence of the respective film, are memorable and still cherished decades hence. Michael Kamen (in Morgan, 2000, p. 17) advised 'if you have a melody, you drive it home' and Patrick Doyle (ibid., p. 43) boasts 'I seem to have a flair for melody.' But if we compare even just the beginnings of the melodious John Williams themes from *Jurassic Park* (1993, Figure 1) or early *Star Wars* (1977, Figure 2) with, for example, Klaus Badelt's theme for *Pirates of the Caribbean – The Curse of the Black Pearl* (2003, Figure 3), I would argue that the latter resembles a rock guitar riff more than a 'good tune'. Williams's themes are balanced, structurally sound, have a clear aim and trajectory and are idiomatic for the respective performance medium. Badelt's theme relies almost solely on low-profile stepwise motion and insistently drops back to the tonic and first scale degree in the melody, resulting in reiterative stagnation.

continues...

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[16] Quoted in Burlingame (1996, p. 130).
[17] For example, Jeff Rona during a talk at Soundtrack_Cologne 8.0 on 6 November 2011.

Figure 1: Excerpt of the theme from *Jurassic Park* (A-section)
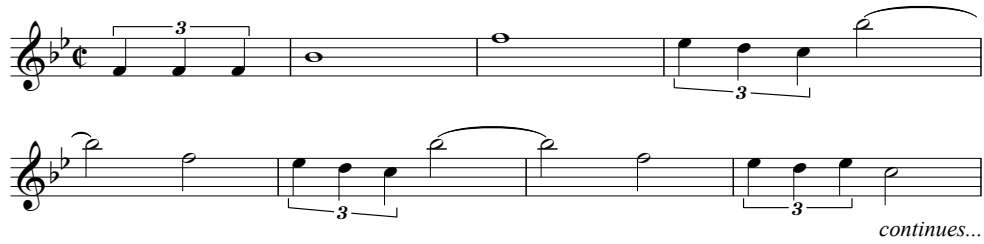
Figure 2: Excerpt of the theme from *Star Wars Episode IV* (A-section)

continues...

Figure 3: Excerpt of the theme from *Pirates of the Caribbean –*
***The Curse of the Black Pearl* (A-section)**

continues...

'Good tunes' are not an essential building block of many recent Hollywood film scores. Forgoing extended melodies, James Newton Howard's score for *Signs* (2002) is economically constructed. It is built from a single three-note motif (Figure 4) and it is the antithesis of a melodic score.

Figure 4: Three-note motif from *Signs*.

In a recent talk, composer Hans Zimmer and ambient music designer Mel Wesson addressed themes in *Batman Begins* (2005).[18] Taking non-melodic film music to an extreme, the leitmotif for Batman is an un-pitched, non-musical sound effect akin to flapping wings, called batflaps by the team. It is the antithesis of a tuneful theme. It is first heard at the very beginning of the film, long before Bruce Wayne (Christian Bale) becomes Batman. Zimmer and Wesson explained that they felt they had to devise a subtle theme for Batman that could serve an important function: To act as a leitmotif early on to help the audience invest in a Batman film that does not feature the main character for the first hour of the film.

The role and function of recent composed Hollywood film music is not the main focus of this thesis but will necessarily be touched upon where film music is considered in the context of storytelling (Chapter 3) or where aesthetic and musico-dramatic choices are being made in the course of the collaborative creative process (Chapter 4). In both cases, the role and function ascribed to music is considered from a creative, producerly angle as opposed to the recipient's viewpoint. The role and function of music in classical Hollywood film has been conclusively described by Gorbman (1987) and Kalinak (1992). Brown (1994) offers an insightful exploration of film music's functions as a co-generator of narrative affect and aesthetic counterbalance to the representational nature of the cinema. He considers film music and structure, development, formulae, film music and emotion. He touches upon more recent musical and technical developments but focuses his attention on the older scores of Bernard Herrmann and *The Sea Hawk* (1940). Brown acknowledges the composer's work in a collaborative environment. Annette Davison (2004) summarizes the notional concept of post-classical cinema and film music, explaining that Hollywood practice assimilated aspects of European art filmmaking. This includes non-linear, non-teleological plots focused around counter-culture anti-heroes. Davison also addresses post-classical film sound, a crucial influencing factor of recent Hollywood film music.

Scholarly texts dealing with recent Hollywood film scores in general and the underlying compositional practice in particular have been emerging only slowly. A lack of access to materials such as scores, sketches, film footage and creative personnel may have

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[18] A joint masterclass in the Amaryllis Fleming Concert Hall, Royal College of Music, London on 4 October 2013.

hampered academic study thus far. Studios tend to be protective of their materials, citing copyright and other commercial considerations. As part of my research, I myself have found that certain materials are surprisingly hard to obtain. For example, when I approached the American Society of Composers, Authors and Publishers (ASCAP) for copies of so-called cue sheets (cue-by-cue lists of music entries in certain films), these were withheld for reasons of confidentiality. According to ASCAP, they cannot reveal who has (or has not) composed individual cues on a film where a number of composers may or may not be credited officially. Aside from limited access, the emerging, transient and prolific nature of Hollywood filmmaking may make it difficult for scholars to assess any phenomenon or trend with certainty. A disconnect between the academic world and the Hollywood film industry may be part of the problem also. Warren Buckland (1998, p. 166) posits that snobbery, too, may be a factor, suggesting that 'because popularity is commonly equated with escapism and triviality, blockbusters have either been shunned or dismissed by most academic film scholars as calculated exercises in profit-making'.

A series of book chapters, for example in Janet Halfyard (2012), address recent mainstream Hollywood films and their scores, focusing on specific aspects of the scores in the context of the films they accompany rather than creative or practical aspects of music composition. Alexander Binns (2012) describes how Danny Elfman's music helps present fantasy in *Edward Scissorhands* (1990) and how fantasy is demarcated as a genre. Jamie Webster (2012) examines the use of traditional musical codes for the dramatic delineation of magic and the evolving musical language in the first five *Harry Potter* films (2001-2007). Halfyard & Victoria Hancock (2012) examine the position of women in (Hollywood) fantasy action adventures, perceived changes in the construction of females over the course of a generation (*Indiana Jones*, 1981 and *The Mummy Returns*, 2001) and how music contributes to such changes.

In the relatively young field of film music studies, even the name of the discipline itself is as yet unsettled.[19] A wide range of analytical tools have been applied, borrowing from pure musicology, Schenkerian analysis, aesthetics, music psychology, linguistics, semiotics etc. While these approaches can undoubtedly serve their respective purpose, they may be less suited to assess the influence of contextual agents on screen music composition. Kevin Donnelly warns 'the film music scholar needs to be vigilant against

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[19] See also William Rosar (2010).

inherent biases in analytical tools that were developed to study absolute (instrumental) music' (2001, p. 19). Gregg Redner (2011, p. 19) cautions that 'today, a large percentage of film music research still relies upon the traditional tools and empirical techniques of musicology, and because these techniques are inappropriate for genres such as popular music and film music, the resulting analyses fail'. Gorbman (2004, p. 15) suggests that 'when musicologists turned to film music as a genre worthy of study, they were obliged to treat it as high art in order to maintain credibility in their institutional milieu, just as twenty years before film studies latched on to *auteurism*, considering the director as autonomous artist, as a crucial step in establishing film studies itself as a worthy pursuit in the academy'. Scott Murphy (2012) provides a good example of a recent book chapter that analyses a film score solely by close-reading of the music.

In the analysis of film scores, the creative context is taken into account only rarely. The growing Scarecrow Press series of film score guides is a notable exception. Some of these books deal with films that fall outside the scope of this thesis (they are too old or from outside the realm of mainstream Hollywood). From email exchanges with Kate Daubney, the series editor, I know that the publisher is keen to expand their catalogue to include more recent and mainstream film: Halfyard (2004) puts Danny Elfman's work on *Batman* (1989) in the context of his musical background. She does not comment on the overly produced, unbalanced sound of the orchestral score, nor does she link this with Elfman's compositional method, which she only discusses in vague terms. Miguel Mera (2007) and Heather Laing (2007) offer in-depth discussions of *The Ice Storm* (1997) and *The English Patient* (1996). I will return to the former in Chapter 4. Ian Sapiro (2013) had unprecedented access to composer Ilan Eshkeri in writing his monograph on *Stardust* (2007). Observations on the relationship between the composer and director Matthew Vaughn, music producer Steve McLaughlin, contractor and conductor Andy Brown, orchestrator Robert Elhai and copyist Vic Fraser offer a remarkably comprehensive overview of the collaborative creative process. Access to primary materials allowed Sapiro to illustrate the genesis of this particular score in rare detail. Evidently, greater access to materials enables scholars to explore a specific score more holistically. Whilst much can be gained from understanding the collaborative constellation of specialists on a specific film, this thesis aims to capture wider, more general factors and contextual agents, including of course collaborative aspects of film music creation.

If our primary concern is with practice and its context, too abstract an analysis and theorising without regard for practical realities can lead to a skewed and unhelpful view of film music composition. To try to learn about underlying reasons for and conditions of recent Hollywood film music practice requires an investigation of factors preceding and underlying the product that results. Both on conceptual and technical levels, Hollywood film music is never an unmitigated expression of the composer's creative vision. As composer Jeff Rona points out, 'everything you've every heard in film or television has been written by a composer under stress, by a composer with a deadline, and with a director who said to him "I don't like that."'[20]

Books that aim to give practical instructions and advice to aspiring film composers tend to be less than academic. There is a range of more recent introductions to and manuals of emerging processes, approaches and day-to-day challenges – particularly in the area of music technology – that might be useful to aspiring film composers.[21] By their very nature, these texts serve as useful, if uncritical snapshots of practical conventions at the time of their respective writing but tend to accept rather than critically challenge underlying working conditions and pressures. In an age when 'practice-led research' is a new buzzword and 'industry-facing' higher education courses compete for students, it would seem desirable to find a middle ground whereby the academic study of film music composition – an evolving craft – and the expertise of craftspeople in the field can strive to mutually inform one another.

Scholars of film appear to have embraced Hollywood film as a craft and cultural product that despite its commercial orientation can nevertheless produce texts worth studying. Film studies welcome a close link between theory and practice and the notion of practice-led research comes naturally to film scholars. The majority of filmmakers are trained at film schools where they seek a theoretical understanding of film, paired with tuition that emphasises a practical approach. Having definitively established the conventions of classical Hollywood cinema, Bordwell and Kristin Thompson (1985) have comprehensively illustrated and analysed modes of production, stylistic choices, narrative techniques and technical aspect in recent and contemporary Hollywood

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[20] In a talk at SoundTrack_Cologne 8.0 on 6 November 2011.
[21] See, for example, Kompanek (2004), Karlin & Wright (2004), Schneider (1997), Manvell & Huntley (1975).

cinema.[22] Although music is not generally covered in these texts, they offer valuable in-roads to appreciating film music in the context of recent Hollywood filmmaking practice.

Alongside my literature review, I assessed a large number of films from the sample to observe music therein. Five films will serve as key examples for this thesis: *Top Gun* (1986, score by Harold Faltermeyer), *Terminator 2: Judgment Day* (1991, score by Brad Fiedel), *American Beauty* (1999, score by Thomas Newman), *The Dark Knight* (2008, score by Hans Zimmer and James Newton Howard) and *TRON: Legacy* (2010, score by Daft Punk). These five films were selected because they each present a range of features that are exemplary of wider trends and phenomena in filmmaking and film scoring at their respective time of production. The point of selecting five key examples is to highlight pertinent creative, aesthetic and practical aspects and attributes of the resulting film music in these films, not to offer an exhaustive study of each respective film score. As the growing Scarecrow Press series of film score guides shows, the analysis of just one film score can easily fill an entire volume. The five films span the 30-year time period covered by this thesis and cover a range of genres. The five scores have in common a musical language removed from Hollywood's neo-Romantic tradition. All five scores feature synthesized and electronic sounds. *American Beauty, The Dark Knight* and *TRON: Legacy* draw on traditional instrumental forces to varying degrees. The score for *Top Gun* is performed by a rock band augmented with drum machines and synthesizers. The music in *Terminator 2: Judgment Day* is fully synthesized.

Top Gun is a blockbuster with strongly developed traits of so-called high concept,[23] drawing on clear-cut characters, a streamlined plot and an emphasis on style. Of particular interest in this thesis are film style, character development, aesthetic choices, the balance music and sound effects and the extensive use of synthesizers. Whereas diegetic and non-diegetic pop songs play a prominent role in *Top Gun,* hardly any pop music is used *Terminator 2: Judgment Day*. Of a total running time of 01:52:48, 01:45:10 are underscored with Brad Fiedel's original score. The fully synthesised score serves to create a dystopian vision of mankind's struggle against post-apocalyptic cyborg anarchy. Aspects of storytelling are considered, as are the film's blockbuster appeal, character

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[22] See, for example, Bordwell (2006), Bordwell (2002), Thompson (1999). See also Maltby (2003), Elsaesser (2001), Buckland (1998).

[23] A concept addressed in Chapter 2.

development, computer-generated imagery (CGI), the use of music technology and the sonic competition between sound design and music. Newman's atmospheric minimalist score for *American Beauty* foregoes extended melodies in favour of intricately layered textures and timbres. The score has proven influential, as evidenced by its extra-filmic commercial success and a marked consequent shift in prevalent scoring practices, including Newman's own work in television.[24] Hans Zimmer's and James Newton Howard's score for *The Dark Knight* pushes the boundaries of what constitutes a thematic underscore and offers much scope for observations on timbre, music production, characterisation and the relationship between music and sound design. Other contextual agents to be addressed are storytelling, music and sound design, collaborative aspects and music technology. The minimalist synthesizer score by pop duo Daft Punk for *TRON: Legacy* is a key component in this cyberspace action adventure, engaging devoted and new fans alike. Aspects of music technology (use of synthesizers), music and film production value, creation of viewer identification, and popular culture warrant consideration.

To complement my research, I undertook in-person or phone interviews with Hollywood composers Klaus Badelt, John Frizzell, Ilan Ekshkeri, Ramin Djawadi and Hollywood orchestrator Jeff Atmajian.[25] Conversations with composers Hans Zimmer, Mel Wesson, Christopher Young, Rolfe Kent, George Fenton and Richard Bellis, orchestrator Patrick Russ, music editor and educator Dan Carlin, conductor Richard Kaufman, composer assistants Nathan Stornetta (works for Hans Zimmer), Daniel Elms (Alex Heffes) and Samuel Pegg (George Fenton) were insightful and will be referred to throughout. Some published composer interviews also hold valuable information (Mera, 2009; Mera, 2007; DesJardins, 2006; Morgan, 2000; Schelle, 2000; Davis, 1999a).

In order to determine whether certain characteristics notionally observed in above examples can be confirmed in a wider sample, I devised a research project (see Chapter 1) that would capture, quantify and statistically evaluate trends and phenomena in recent Hollywood film music. Upon positive findings, I then set out to investigate what factors may have contributed to these shifts in the output of Hollywood composers. It seemed

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[24] Notably *Six Feet Under*, see also Chapter 3.
[25] Full transcripts provided in Appendix II.

obvious to me, from a practitioner's point of view, that external, perhaps non-musical factors were at least in part responsible.

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                        ┌──────────────┐
                        │  Trends in   │
                        │   (film)     │
                        │    music     │
                        │ composition  │
                        └──────────────┘
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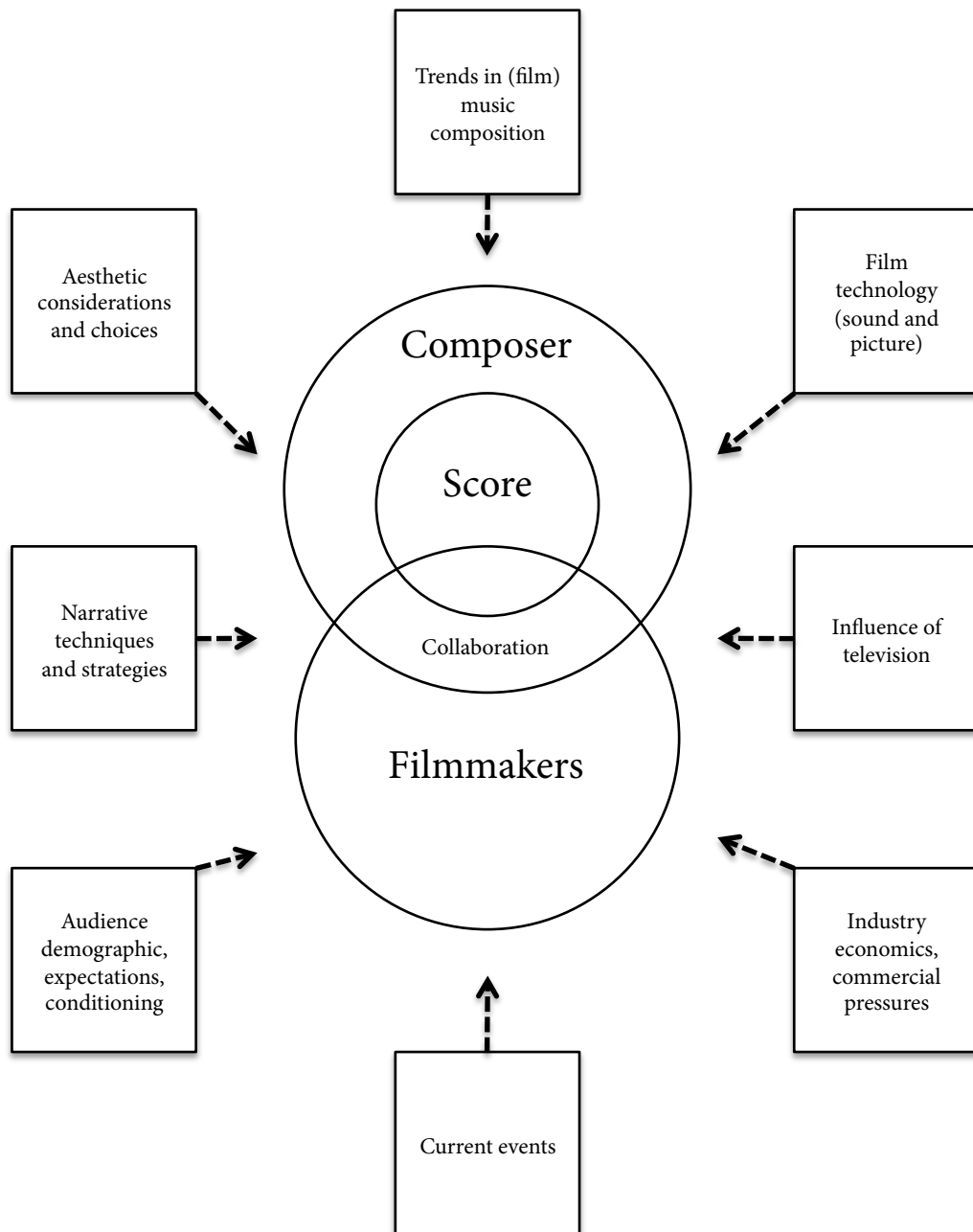
Figure 5: Contextual Agents in Recent Hollywood Film Music Practice

I am interested in grasping and articulating underlying phenomena and trends in recent and current Hollywood film music and the context in which these have emerged. The aim of this thesis is to address phenomena and trends in the film music of recent Hollywood cinema that are the result of common practice; to capture the context in

which screen composers in recent and contemporary Hollywood actually work and the demands on screen composers working today; to evaluate prevalent practices and to make conscious implicit knowledge practitioners use in exercising their craft. The objective of this thesis is to index and summarize observable changes in Hollywood film composers' practice and musical output since 1980 [empirical]; to suggest, illustrate, analyse, and critique conditions in recent Hollywood film music, phenomena and trends therein [critical]; and to highlight and explore so-called contextual agents by reference to literature, films, television programmes, and soundtrack recordings [theoretical model]. Scheurer (2008) was perhaps the first to put forward the concept of contextual agents in film music, but he did not elaborate on the role and implications of such agents. Through the course of my research, I expanded and refined Scheurer's model in order to conclusively describe and correlate contextual agents that have shaped recent Hollywood film music (see Figure 5).

This thesis seeks to contextualise the state of recent and contemporary scores and to explore what screen composers actually (have to) do, or think they (have to) do. In a multi-agent context and its inherent working conditions composers are not solely in control of their music. There remains a gap between research and practice in the area of Hollywood film music that might be bridged by an enhanced critical understanding of the context in which Hollywood film composers actually work. As an active screen composer and teacher of screen music composition I know there is great demand among aspiring practitioners for relevant insights into the state of the craft. As a former consultant to aspiring filmmakers I know there is considerable interest among them, too, for relevant and accessible research findings to make conscious and raise awareness of the craft of recent film music that is evolving alongside developments in modes of film production, commercial pressures, and narrative techniques in filmic storytelling.

Laypersons tend to raise film composers on the pedestal of *auteurs,* who are solely in control of the music they produce. On the contrary, the genesis of every film score comprises a creative process that involves drafts, demos and revisions and is affected by the influence and contribution of many individuals other than the composer. I will show that individual composers, established and emerging, have responded to contextual agents in different ways: Traditionalists such as Gabriel Yared have resisted change and

consequently were marginalised.[26] Compliant and adaptive composers such as Patrick Doyle and James Newton Howard have altered their musical language and working methods to secure lasting careers.[27] A few innovators have neither resisted nor reacted but pioneered new technologies, techniques and strategies to succeed in a shifting marketplace. Hans Zimmer is a fascinating example, discussed in more detail below, and he was preceded by visionaries such as Giorgio Moroder and Vangelis. As a result of the range of different approaches film composers have taken, the body of recent Hollywood film music is stylistically and aesthetically more diverse than ever.

Any stylistic, structural, or functional changes in recent Hollywood film music are the result of multiple, often compounding influences. In five chapters, the thesis deals analytically with the craft of Hollywood film music composition and its contextual agents, strictly within the limits of recent mainstream Hollywood films since 1980. In order to appreciate emerging trends and phenomena in screen music composition it is necessary to appreciate past practice and tradition. However, this thesis does not intend to present a global history of film music nor a global study of all film music written since 1980. This thesis is not a purely aesthetic study of film music, nor a comprehensive study of changing functions of film music. A critical reflection on cultural values and sensibilities is not the main trajectory of this thesis but will be drawn upon as a subset where appropriate. This thesis also deals with the general precept of and criticisms against the use and nature of music in recent Hollywood films, as evidenced by interviews with practitioners that have further informed my research.

Chapter 1 documents a study into quantifiable aspects of recent Hollywood film music, which was undertaken to help define the field and to collect and analyse a range of numeric data on recent film scores. The chapter summarizes statistically significant evidence that supports observations in subsequent chapters. Chapter 2 focuses on the commercial nature of Hollywood filmmaking. Common business models, the importance of profitability and the uneasy dealings between executives and the creators

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[26] By his own admission, Yared feels he could be much more commercially successful if he were to forgo his principles. Gabriel Yared in a 'BAFTA Masterclass: Composing for Film' at the BFI Southbank on 26 June 2013.

[27] Doyle commented on his commercially palatable minimalist approach to *Thor* (2011) during a concert in his honour on 4 November 2012 in the Großer Sendesaal, Funkhaus Wallrafplatz, Cologne, Germany. Composer Mel Wesson described James Newton Howard's very traditional musical background during a talk at the Royal College of Music on 13 November 2013. James Newton Howard describes his evolving, highly technical approach to film scoring in Reynolds and Brill (2010).

of film music are explored with an emphasis on extra-musical restrictions and demands placed on composers. The chapter weighs the concepts of originality and innovation in Hollywood against the industry's conservative attitude. The perceived effect of test screenings on films and film music is discussed. The chapter highlights the impact of underlying business practices on creative personnel, including the importance of networking in a predominantly freelance domain. This is complemented by a summary of a study into workload distribution among composers in the fifty top-grossing Hollywood films of each year between 1980-2009, which outlines possible implications for creative practice and personnel choices. Chapter 3 outlines changes in Hollywood storytelling, which are shown to have had an effect on the nature of narrative film music. These changes include formulaic screenplay writing, the disintegration of genre conventions, experiments in deferred teleology and changes in Hollywood mythopoesis. The chapter also considers new camera technologies and editing techniques to illustrate how composers' engagement with on-screen visuals has been affected by emerging digital workflows, increased editing speeds and resulting aesthetics and narrative strategies. A section on the so-called televisionalisation of cinema and so-called cinematic television makes a link between television content consumption, cross-media synergies and audience conditioning. Conventions and trends in one medium influence the reception of another as well as the creative practices that produce it.

Chapter 4 covers collaborative aspects of film music creation and evaluates potential challenges in a collaborative creative process, including filmmakers' fear of music, the use and usefulness of so-called temp tracks and the importance of communication. Advances in sound re-production technology have led to increased sonic competition between dialogue, sound design and music. The shifting purpose of scoring sessions is outlined and power struggles at the dubbing session illustrated. The chapter posits that more diversified demographics among Hollywood composers are partly responsible for the resulting film music. Drawing on a range of first-hand accounts and my personal experience, Chapter 5 deals with developments in music technology and their impact on film music composition and production such as the use of synthesizers, the use of samplers and synthesizers and composers' instrument and interface reliance. Most readers at whom this thesis is addressed will be familiar with technical terminology from the areas of film production and music technology and these will be explained or defined only where it is deemed absolutely necessary.

Chapter 1 – Quantifiable aspects of recent Hollywood film music: defining the field

In March 2011, I launched a research project that sought to determine and quantify selected attributes in the film music of recent Hollywood films. Using numeric data gathered as part of the project, I aimed to identify and illustrate emerging phenomena, trends and correlations through statistical analysis. To my knowledge, no previous study has endeavoured to obtain quantifiable data from observations made on Hollywood film music. Ten films per year were randomly chosen from among the fifty top-grossing Hollywood films in each year (1980-2010) according to the Internet Movie Database (IMDb) and Box Office Mojo and compiled in Table 1 (Appendix III.1). 'Top-grossing' here refers to box office takings at U.S. cinemas, excluding revenue from foreign territories, home video rentals, online streaming or broadcast licensing. From the overall body of films in the sample, a random selection was made in order to bring the sample size down to a feasible yet statistically viable level. The top-grossing film of each year was automatically included in the analysis. Specialist advice was sought to ensure that the selection process would not jeopardise the statistical validity of findings, for example by skewing the sample. I decided not to sort films by genre, as the aim of the overall thesis is to capture trends and phenomena in recent commercially successful Hollywood films regardless of genre. Additionally, trying to identify film genres from amongst a generically unsettled field might have introduced subjective bias. It was also decided not to focus on selected years across the thirty-year time period, in deep or column sampling, as this would have meant ignoring a considerable number of films from years not sampled. Again, expert advice was sought to ensure that the sampling methodology was sound and ensured a statistically viable approach.

Volunteers comprising a pool of specialist screen composers were asked to choose a film from the list posted as a Google Doc online and to fill in a questionnaire upon viewing that film (Appendix III.2). This questionnaire was devised to gather quantitative data on a range of musical aspects and attributes for each film and film score therein. Questions 1-6 asked basic information to identify each film. The name of the composer was later used for a study of workload distribution. The names of composer and director were used for a quantitative assessment of composer-director partnerships.

Question 5 ('Film Genre') was not analysed further for this thesis.[1] Questions 7-16 sought binomial responses as to the presence or absence of certain musical idioms, styles and media. The aim was to establish in quantitative terms the nature of film music in the sample (the instrumental forces used, musical language employed) and then be able to compare the results on a timeline (developments across a range of years) and Hollywood scoring practices in the past. Questions 17-19 more specifically asked for the use of certain film scoring devices commonly associated with traditional Hollywood film scores and whose perceived decline was to be proven or disproven. Questions 20-21 further quantified points 8 and 18 respectively. Questions 22-29 required an evaluation on a sliding scale as to the prominence of certain musical attributes. These data were to be used to assess correlations between certain musical idioms and media and resulting musical attributes (see below). Question 30 gave participant an opportunity to add any further comment.

The study aimed to obtain at least two questionnaires for each film (i.e. two volunteers per film), where possible, in order to ensure consistency in the assessment of the films by the volunteers. Once all the questionnaires were completed, a qualitative assessment and cross-check was carried out to assess the range of responses to the same film. It was concluded that the range of results was within tight limits and thus consistency was achieved across the assessments. In cases where more than one volunteer assessed a single film, one questionnaire was used in the analysis and the other(s) removed at random, leaving one single questionnaire per film. A guidance document was provided to ensure participants were able to confidently and accurately complete each questionnaire (Appendix III.3). Additional guidance was available on request. I decided at the start of this study that I would need to rely on volunteers. I was aware of a potential loss of accuracy in the data gathered, due to the subjective nature of the observations on which the numerical data points are based. However, I felt the risk of overly subjective readings could be minimised by use of a clear and detailed guidance document. The benefit of a spread workload outweighed residual risk. The meaning of values on a 1-to-5 scale was explained in detail in the guidance document but a potentially subjective judgement on the part of the respective participant was required nevertheless. For example, what constitutes a 'prominent melody' depends on participants' subjective perception. Although there are limitations to the data returned,

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[1] See Chapter 3 on unsettled genre conventions.

this data appears not to bear any surprising findings that would indicate flawed readings or gross errors. The evident links between different variables (for example between acoustic and electronic instrumentation as set against musical idiom as neoromantic / classical to pop / contemporary in Figure 4 below) indicate that, on the whole, the participants' responses are reliable.

I felt that a reasonably high level of knowledge of music and film terminology was required to be able to accurately fill in the questionnaire. A good understanding of film music and aspects of common musical language, specialist terminology and technology was also required. Those invited to participate in this study were students on the Masters Programmes in Composition for Screen (MComp / MMus) at the Royal College of Music, London, and Bachelor of Music students in the Film Scoring major at the Berklee College of Music, Boston. A small number of participants were members of the Composition for Screen faculty and the non-screen Composition Masters.

161 questionnaires were received between 3 March 2011 and 18 December 2011 when the project was drawn to a close. Of the 161 questionnaires received 137 were evaluated for analysis, after random omission of duplicate questionnaires. In order to reduce the level of bias and skew towards certain years, the data was divided into 5-year time intervals from 1980 through 2010 (the last time interval being 2005 – 2010, 6 years). The following section first presents selected percentage results relating to the presence or absence, formal, structural aspects, medium and idiom of music in the films sampled. The presentation of selected results then moves on to graphic overviews of correlations between certain factors. Finally, a table shows R squared values of correlations between all semi-quantitative variables in the analysis.

Selected Results and Preliminary Discussion

Table 2 shows that the vast majority of film scores included in this research project feature some kind of non-diegetic music, composed or compiled. *Richard Pryor: Live on the Sunset Strip* (1982) is an exception, but this is a filmed stand-up performance with a successful cinema run. *Cloverfield* (2008) is the only film not featuring any non-diegetic music. *No Country for Old Men* (2007) does feature sparse, hardly audible synthesizer tones, which even upon focused viewing are so difficult to spot that one is left with the

impression of a general absence of music in this film.[2] (Chapter 3 considers the need for composed music in the context of evolving narrative strategies in recent Hollywood films.)

Table 2 – Percentage of films featuring non-diegetic music

Year	No	Yes	Total
1980-1984	4.55%	95.45%	100.00%
1985-1989	0.00%	100.00%	100.00%
1990-1994	0.00%	100.00%	100.00%
1995-1999	0.00%	100.00%	100.00%
2000-2004	0.00%	100.00%	100.00%
2005-2010	2.44%	97.56%	100.00%
Combined Total:	1.46%	98.54%	100.00%

Table 3 shows that overall 55% of all films 1980-2010 featured a main title or overture but 45% did not. However, in the earlier years (1980-1984), there was an even split of 50% each. More recently (1995-1999), fewer films did not have a main title theme. A number of comedies and children's movies sampled in this particular segment that feature a musical main title or overture are partly responsible for the apparent spike in main titles' popularity (*A Bug's Life* (1998)*, Toy Story* (1995)*, Austin Powers: Man of International Mystery* (1997)). Children's movies in particular may until very recently have tended to use music in more old-fashioned ways, which includes the use of a main title or overture. Composer Ramin Djawadi confirms the notion that animated features, which are generally targeted at younger audiences, allow composers to employ a more traditional musical language and scoring strategies: 'Animation is still an area where I feel you can go wild with orchestration and lush orchestra – that's still one [area] where it's almost over-the-top if you put it in another movie.'[3] In the period 2005-2010, the balance was reversed whereby only 21.95% of films contained a main title or overture but 78.05% did not. The dramatic drop in the number of films featuring a main title or overture can be attributed to the nature of the films produced in this 5-year band. A number of dark action films and thrillers eschew main titles including *Spider-Man 3* (2007), and *Disturbia* (2007) as do some very recent animated films and children's

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[2] See Chapter 4 for a discussion of the collaborative partnership between composer Carter Burwell and the Coen brothers.

[3] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

movies of this time period including *Bedtime Stories* (2008)*, Toy Story 3* (2010)*, Happy Feet* (2006), and *Ice Age: Dawn of the Dinosaurs* (2009), a notable shift in scoring styles. Most recently, this trend would appear to continue (though outside the sample), as evidenced by a large number of films including *Oblivion* (2013), *Iron Man 3* (2013), *Elysium* (2013) and *Prometheus* (2012). Possible reasons for the disappearance of main titles or overtures will be considered in Chapter 3.

Table 3 – Percentage of films containing a main title theme or overture

Year	No	Yes	Total
1980-1984	50.00%	50.00%	100.00%
1985-1989	46.67%	53.33%	100.00%
1990-1994	47.83%	52.17%	100.00%
1995-1999	26.32%	73.68%	100.00%
2000-2004	52.94%	47.06%	100.00%
2005-2010	78.05%	21.95%	100.00%
Combined Total:	54.74%	45.26%	100.00%

Table 4 shows that, in the films sampled, overall more than 80% of film music tends to be predominantly orchestral. The numbers suggest a less pronounced majority of ca. two thirds orchestral in the 1980s. The synthesizer scores such as *Escape From New York* (1981) and *Blade Runner* (1982) in the sample may help account for these results. In the latter twenty years of the 30-year sample, four out of five films had a predominantly orchestral score, the 5-year band 1995-1999 more than nine out of ten. This clearly indicates that the orchestra remains Hollywood film composers' preferred medium. (Chapter 5 will address the use of synthesizers in Hollywood film music.)

Table 4 – Percentage of scores whose medium is predominantly orchestral

Year	No	Yes	Total
1980-1984	36.36%	63.64%	100.00%
1985-1989	33.33%	66.67%	100.00%
1990-1994	13.04%	86.96%	100.00%
1995-1999	5.26%	94.74%	100.00%
2000-2004	11.76%	88.24%	100.00%
2005-2010	19.51%	80.49%	100.00%
Combined Total	19.71%	80.29%	100.00%

Table 5 shows that overall more than half the scores in the sample feature synthesized elements, although the data does not indicate how extensively these are used in the respective scores. Taking into account Table 4 also, it is noteworthy that whilst the orchestra has prevailed as the dominant scoring medium, synthesized elements are firmly grounded in the toolset of film scoring. Table 5 suggests that there has been a resurgence in synthesiser-based scores in recent years, following a slight drop in the 1990s.

Table 5 – Proportion of scores featuring synthesised elements

Year	No	Yes	Total
1980-1984	45.45%	54.55%	100.00%
1985-1989	46.67%	53.33%	100.00%
1990-1994	56.52%	43.48%	100.00%
1995-1999	57.89%	42.11%	100.00%
2000-2004	58.82%	41.18%	100.00%
2005-2010	39.02%	60.98%	100.00%
Combined Total	48.91%	51.09%	100.00%

According to Table 6, among the films sampled those containing non-diegetic pop songs even in the 1980s were overall in the minority. This would suggest that the commercially driven use of popular music in films is not as widespread as may have previously been suggested by, for example, Smith (1998) and Reay (2004). The influence of popular music, including songs used in films, will be considered in Chapters 2 and 5.

Table 6 – Proportion of films containing non-diegetic pop songs

Year	No	Yes	Total
1980-1984	63.64%	36.36%	100.00%
1985-1989	53.33%	46.67%	100.00%
1990-1994	56.52%	43.48%	100.00%
1995-1999	47.37%	52.63%	100.00%
2000-2004	41.18%	58.82%	100.00%
2005-2010	56.10%	43.90%	100.00%
Combined Total	54.01%	45.99%	100.00%

Table 7 indicates that a clear majority of film scores contains recurring themes and motives – which need not be melodic in nature – and that the proportional split of motivic/thematic vs. non-motivic/non-thematic scores has consistently been higher than 70/30 in favour of motivic/thematic writing. This suggests that composers continue to rely on recurring musical building blocks to craft and structure their scores, which in turn may facilitate speedy and musically coherent writing but which may also be motivated by musico-narrative considerations.

Table 7 – Percentage of film scores featuring recurring motifs or themes

Year	No	Yes	Total
1980-1984	27.27%	72.73%	100.00%
1985-1989	20.00%	80.00%	100.00%
1990-1994	13.04%	86.96%	100.00%
1995-1999	21.05%	78.95%	100.00%
2000-2004	11.76%	88.24%	100.00%
2005-2010	29.27%	70.73%	100.00%
Combined Total	21.90%	78.10%	100.00%

Table 8 shows the proportion of films whose composed underscore is performed by a rock band or small combo, i.e. a non-orchestral idiom. These figures do not preclude the presence of orchestral elements in the same respective film score.

Table 8 – Proportion of films with a composed underscore performed by rock band / small combo

Year	No	Yes	Total
1980-1984	40.91%	59.09%	100.00%
1985-1989	60.00%	40.00%	100.00%
1990-1994	78.26%	21.74%	100.00%
1995-1999	63.16%	36.84%	100.00%
2000-2004	64.71%	35.29%	100.00%
2005-2010	48.78%	51.22%	100.00%
Combined Total	57.66%	42.34%	100.00%

Table 9 reveals a link between a non-orchestral medium and the presence of prominent melodies. Two thirds of the film scores performed by a band or small combo do not

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feature prominent melodies. Therefore, the use of small and contemporary ensembles is likely to negatively impact on the prominence of melodic writing.

Table 9 – Percentage of films with a non-diegetic underscore performed by rock band / small combo that also feature prominent melodies

Year	No	Yes	Total
1980-1984	59.09%	40.91%	100.00%
1985-1989	53.33%	46.67%	100.00%
1990-1994	86.96%	13.04%	100.00%
1995-1999	68.42%	31.58%	100.00%
2000-2004	70.59%	29.41%	100.00%
2005-2010	56.10%	43.90%	100.00%
Combined Total	64.96%	35.04%	100.00%

Conversely, Table 10 confirms that scores performed in an orchestral medium are more likely to contain prominent melodies. This positive correlation between an orchestral performance medium and the presence of prominent melodies is a valuable guide towards an understanding of the changed and changing musical language of Hollywood film music.

Table 10 – Percentage of films whose score is performed in an orchestral medium that also feature prominent melodies

Year	No	Yes	Total
1980-1984	18.18%	81.82%	100.00%
1985-1989	40.00%	60.00%	100.00%
1990-1994	21.74%	78.26%	100.00%
1995-1999	10.53%	89.47%	100.00%
2000-2004	5.88%	94.12%	100.00%
2005-2010	36.59%	63.41%	100.00%
Combined Total	24.09%	75.91%	100.00%

The following graphs illustrate relevant trends and correlations between two or more musical factors or attributes raised in the questionnaire. Figure 1 illustrates the percentages of predominantly orchestral scores in the sample, as well as those featuring synth-based elements, performed by a band / small combo and featuring prominent melodies. The aforementioned relationship between an orchestral medium and

prominent melodies is clearly visible, whereby the lines for percentage of orchestral medium and prominent melodies trace a similar path. The percentage of synth-based scores and scores performed by a band or small ensemble are also similar in shape. Further clear correlations include opposing trends of orchestral scores vs. synth-based scores as well as prominent melodies and synth-based scores. This affirms observations made in later chapters.
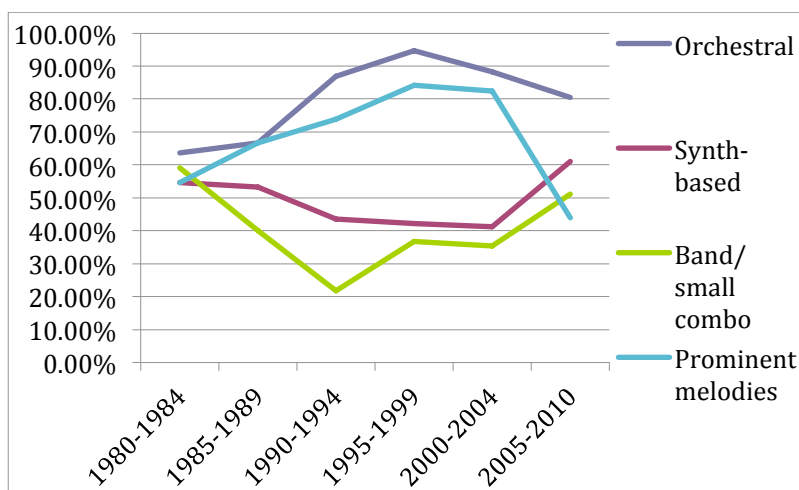
Figure 1 – Percentage of orchestral scores, synth-based score elements, band / small combo and prominent melodies

Figure 2 indicates parallels between films' use of a main title theme / overture and recurring motives or themes, with the exception of the 5-year 1995-1999 where the two factors to not appear to correlate. As a stylistic choice, the use or non-use of a main title theme, appears to coincide with creative choices over the use or non-use of recurring thematic materials.
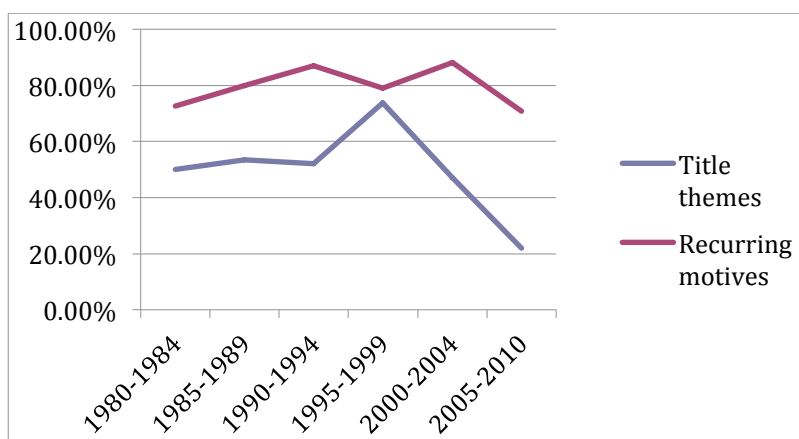
Figure 2 – Percentage of score featuring a main title / overture and percentage recurring motives, in 5-year bands 1980-2010

Figure 3 indicates that there may be a link between the percentage of films featuring prominent melodies and those featuring recurring motives. In time periods when the percentage of scores with prominent melodies increases, the percentage of scores with recurring motives or themes increases similarly. The more dominant the melodies and recurring motives, the more elaborate the musical language. The lower the percentage of scores with dominant melodies and the lower the percentage of scores featuring recurring motives, the more minimalist the musical language. Scores' more pronounced minimalist nature in most recent years has coincided with a steep drop in the proportion of scores using prominent melodies and recurring themes, which confirms the notion of a more widespread prevalence of low-profile, pattern-based film scores observed throughout the thesis.
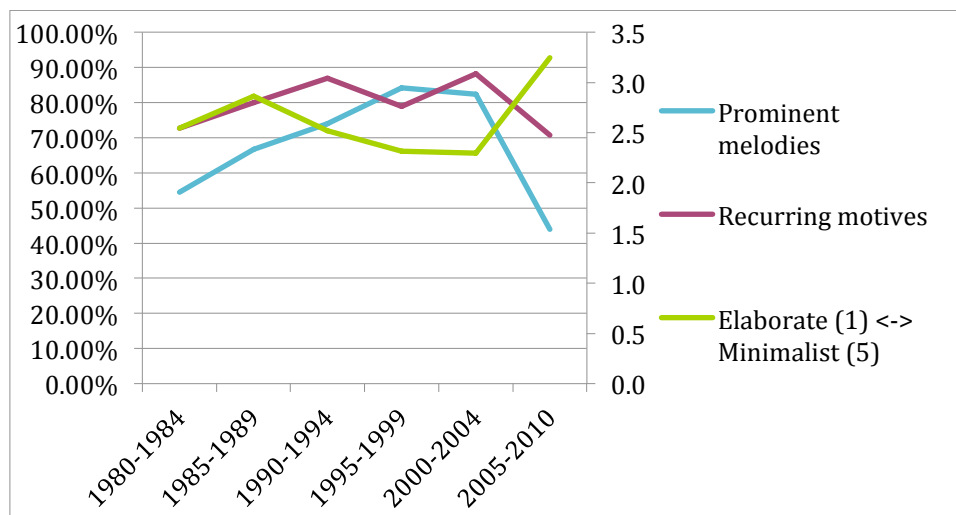
Figure 3 – Percentage of prominent melodies and recurring motives as against musical idiom as elaborate (1) to minimalist (5), in 5-year bands 1980-2010

Figure 4 confirms that the less elaborate and melodic a film score the more minimalist and pattern-based it is. The graph also shows that a rise in the percentage of scores featuring synth-based elements coincides with a more minimalist, pattern-based music language. Conversely, there is a clear correlation between the percentage of scores of predominantly orchestral nature and elaborate musical languages, whereby a decline of orchestral music coincides with a decline in musical elaborateness.
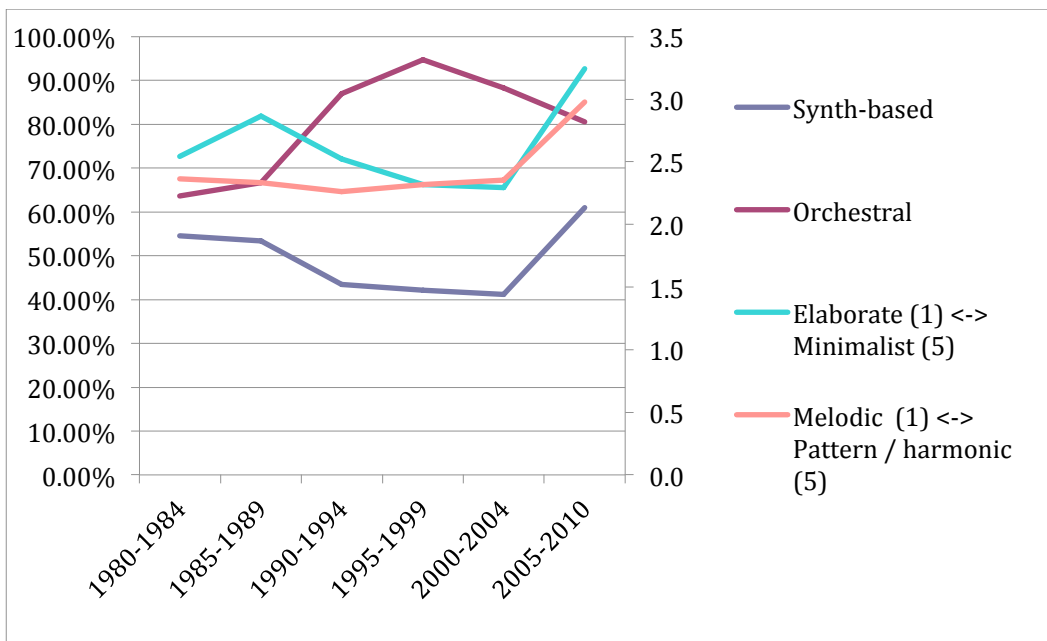
Figure 4 – Percentages of scores that feature synthesized elements, score that are predominantly performed in an orchestral medium set against those scores' elaborate (1) to minimalist (5) nature and melodic (1) to largely pattern-based, chordal (5) nature, in 5-year bands 1980-2010.

Figure 5 indicates a link between film music's instrumentation and idiom. The more acoustic the instrumentation, the more traditional the idiom. The more electronic the instrumentation, the more contemporary the idiom. The result accommodates the notion that an updated set of instruments featuring in film music will also encourage a more contemporary musical language. There are, of course, exceptions such as Michael Kamen's scores for *Prince of Thieves* (1991) whose instrumentation is fully orchestral (acoustic) but whose musical idiom is a hybrid of popular music (melodic fragments of the Bryan Adams theme song) and more traditional influences.
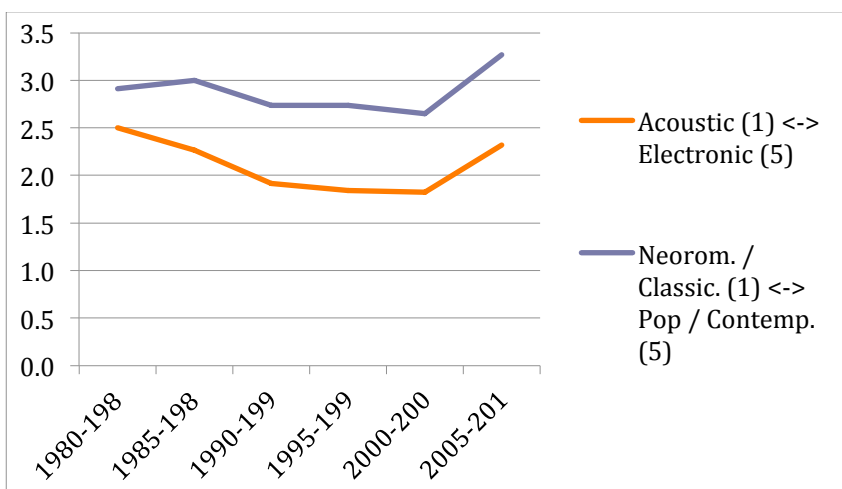
Figure 5 – Instrumentation as acoustic (1) to electronic (5) set against musical idiom as neoromantic / classical (1) to pop / contemporary (5), in 5-year bands 1980-2010.

The statistical significance of the correlation of selected parameters is tabulated in Table 11. Statistically significant correlations have been highlighted in bold red figures. Some of these significant correlations are of particular interest: The more a score relies on live instruments – as opposed to sample-based or electronic instruments – the higher the number of distinct recurring themes. The more the recording ensemble comprises traditional instruments, the higher the number of distinct recurring themes. A neo-Romantic idiom correlates significantly to a higher number of distinct recurring themes. The more elaborate a score's musical language, the higher the number of distinct recurring themes. A more melodic underscore also correlates to a higher number of distinct recurring themes. Reversely, a pattern-based score whose musical language is less elaborate and in a popular idiom will likely feature fewer distinct recurring themes. As time progresses (year released), pattern-based scores increase significantly, and the more pattern-based a score the more it relies on electronic instruments. Sample-based instrumentation also significantly correlates to a contemporary ensemble (non-orchestral) and contemporary style / idiom, as well as a more minimalist and pattern-based musical language. Film music in a contemporary idiom tends to be performed on electronic instruments, as does minimalist music. Finally, there is a statistically significant correlation between the perceived consonance of a score and an increased number of non-diegetic pop songs used, which seems to support the notion that, in terms of style and musical language, film scores have grown nearer to the popular songs that frequently surround them.

The findings of this study support the existence of aforementioned phenomena and trends in recent Hollywood film music, towards a less melodically driven idiom, in favour of a more minimalist musical language whose medium remains largely symphonic but also features synthetic elements. The following chapters address driving factors behind these developments, starting with a look at commercial considerations in the next chapter.

Table 11 – R squared values of correlations between all semi-quantitative variables in the analysis. Positive numbers indicate a positive directional correlation whereas negative numbers indicate a negative directional correlative. Numbers in red and bold are statistically significant at the 95% level.	Year released	No. pop songs	No. distinct recurring themes	Instrumentation: Acoustic (1) <-> Electronic (5)	Instrumentation: live (1) <-> sample-based (5)	Ensemble: Traditional (1) <-> Contemporary (5)	Style: Neorom. / Classic. (1) <-> Pop / Contemp. (5)	Tonal language: elaborate (1) <-> minimalist (5)	Tonal language: tonal (1) <-> atonal (5)	Consonant (1) <-> dissonant (5)
Year released										
No. pop songs	0.02									
No. distinct recurring themes	0.13	-0.03								
Instrumentation: Acoustic (1) <-> Electronic (5)	-0.03	0.02	-0.2							
Instrumentation: live (1) <-> sample-based (5)	0.03	0.05	**-0.18**	**0.86**						
Ensemble: Traditional (1) <-> Contemporary (5)	0.04	0.15	**-0.29**	**0.71**	**0.62**					
Style: Neorom. / Classic. (1) <-> Pop / Contemp. (5)	0.1	**0.18**	**-0.29**	**0.66**	**0.53**	**0.84**				
Tonal language: elaborate (1) <-> minimalist (5)	0.16	0.01	**-0.28**	**0.6**	**0.47**	**0.74**	**0.76**			
Tonal language: tonal (1) <-> atonal (5)	-0.1	-0.13	-0.05	-0.04	-0.04	-0.14	-0.1	0.04		
Consonant (1) <-> dissonant (5)	-0.03	**-0.28**	-0.05	0.01	0.04	-0.21	-0.12	0	**0.66**	
Melodic underscore (1) <-> Pattern / harmonic (5)	**0.28**	-0.06	**-0.34**	**0.56**	**0.51**	**0.66**	**0.66**	**0.81**	-0.01	0.02

Chapter 2 – Commercial aspects of Hollywood filmmaking

> The [Hollywood] system is in a narrow sense a business that seeks to maximize profits; cultures and individuals are incorporated in market strategies; demographics carry more weight than individual opinions; the system is more carefully attuned to the mainstream than unconventional cinematic forms – and this is all in part a business interest. But Hollywood is also a site at which creative impulses are manifested in commodity form for mainstream consumption.[1]

Hollywood films have always been commercially oriented and profit-driven, contrary to post-WWII European cinema, which enjoyed public subsidy. Since the breakdown of the studio system in the 1960s, Hollywood has developed ever more sophisticated and streamlined production and distribution methods. The historical trajectory of these developments has been evaluated conclusively.[2] Fiscal pressures and limitations can hinder the creative process of film music composition at every stage and prevent scoring solutions that cannot be justified financially. The nature of recent Hollywood film music has been shaped, skewed and possibly hampered by commercial considerations. Contemporary Hollywood film composers work in a business environment that strikes an uneasy balance between creativity and profitability and the Hollywood business model is often at odds with experimentation and originality. This affects every aspect of the creative process, including music. It seems necessary to summarize here some of Hollywood's most pertinent business practices in order to illustrate the commercial framework within which Hollywood film composers operate. A number of concrete examples will help illustrate the tangible effects commercial considerations have had on recent film scores.

Studios widely publicise their film budgets, as these in themselves can turn into a box office draw. *Titanic* (1997) was thus hailed as the most expensive film ever,[3] a questionable accolade other films have seized since. Promoting *Skyfall* (2012), producer Barbara Broccoli pointed out the film's large budget, repeating 'it's all on the screen. All the money's on the screen.'[4] In pursuit of higher revenue, there is room for lavish excess

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1 Isaacs (2008, p. 68).

2 See, among others, Epstein (2010), Jess-Cooke (2009), Isaacs (2008), Epstein (2006), King (2003), Cook (1996), Wyatt (1994), Pye & Myles (1984) and Faulkner (1983).

3 Compare Sandler & Studlar (1999, pp. 29–45) for a discussion of the promotion of and mass media response to *Titanic* (1997).

4 Quoted for example on http://collider.com/daniel-craig-barbara-broccoli-skyfall-interview/162975/ and http://hmssweblog.wordpress.com/2012/01/31/all-the-moneys-going-to-go-on-the-screen/ [Accessed 30 July 2012].

in Hollywood film production. Actors are paid vast sums to commit to a film and sometimes even given a share of net box office takings.[5] A film's success, then, is often measured by box office takings. The media obligingly report weekly figures and herald a film's strong opening weekend performance. Such free advertising is rewarded when the studios grant the media access to its stars during extensive promotional interview tours. Critic Mark Kermode (2011, p. 112) remarks on money's ability to make more money: 'Look at the list of the most expensive movies of the past 20 years and see how infrequently they have failed to turn a profit, regardless of quality.' He lists *Spider-Man 3* (2007), *X-Men: The Last Stand* (2006) and *Avatar* (2009), the latter costing a reported $237m but grossing an estimated $2.8bn.

To further bolster a film's performance, Hollywood runs an awards season that culminates in the Academy Awards. Although voting practices and criteria are virtually unknown to the wider public – and eligibility to vote restricted to a select few members of the respective awarding body – Hollywood has nevertheless managed to make these awards seem like the ultimate seal of approval: A win (or mere nomination) creates the 'illusion of the appreciation of "good" content' (Epstein, 2010, p. 164).[6] Arguably, studio executives do not care how 'good' a film is, so long as it generates profits. Kermode (2011, p. 69) touches upon the concept of quality, which he feels is often undermined in this commercial context. To studio executives, a concept as elusive as quality is naturally of lesser importance than audience appeal that can be measured and quantified through test screenings and score cards.

Hollywood studio executives divide a film's target audience into four quadrants – men over 25, men under 25, women over 25, women under 25 – and aim the majority of films at the easily lured quadrant of men under 25. The most desirable release is a film that appeals to all four quadrants. Aiming to attract as wide an audience as possible, elements studios look for include 'suspense, laughter, violence, hope, heart, nudity, sex, happy endings – [but] mainly happy endings' (Epstein, 2006, p. 130). The German idiom *Eierlegende Wollmilchsau* – an agricultural term that refers to a desirable but impossible-to-achieve animal that lays eggs, gives milk, grows wool and has tasty meat – adequately describes the ideal product studio executives seek. *Avatar* is a recent four-

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[5] However, Epstein describes how through efficient accounting films never have net profits.
http://thehollywoodeconomist.blogspot.co.uk/2010_07_01_archive.html [Accessed 30 July 2012].
[6] Epstein also describes test screenings and target audience quadrants in some detail.

quadrant movie, at the time of writing by far the highest-grossing film of all time.[7] Those Hollywood films that are given wide distribution have been successfully tried, tested, and adjusted to cater to a wider range of viewers. Nicole LaPorte (2011, p. 91) delivers a potent by-line when she remarks that there is 'that thing that everyone in Hollywood tried, paid, and worked so desperately to have: taste'. Every aspect of filmmaking must reinforce a film's appeal and no single element, including composed film music, must get in the way. During his time as CEO of The Walt Disney Company, Michael Eisner gave a motivational speech in which he summarized his view on artistry versus commercial viability:

> We have no obligation to make art. We have no obligation to make history. We have no obligation to make a statement. But to make money, it is often important to make history, to make art, or to make some significant statement… In order to make money, we must always make entertaining movies, and if we make entertaining movies, at times we will reliably make history, art, a statement, or all three. We may even win awards… (1999, p. 100)

Bordwell (2006, p. 22) notes that by 'the 1960s the Hollywood studio tradition was acknowledged as such, and it presented an awesome challenge to any beginner. Not only had everything apparently been done, but it had been done superbly.' Filmmakers arriving in Hollywood since the 1960s had to strike a 'judicious balance of continuity and innovation' (ibid., p. 27). Conservative Hollywood invites innovation and experimentation only so long as it does not challenge established value systems and promises strong box office returns.[8] Discussing Gabriel Yared's score for *The English Patient* (1996), Laing (2007, p. 49) observes that director Anthony Minghella chose 'independent risk-taking over Hollywood studio conservativism'. The film turned out to be a box office success (and as a result falls within the sample for this thesis), but it was created outside the commercially pressured studio realm. Gabriel Yared speaks fondly of his collaborative partnership with Minghella and appreciates the relative creative freedom and generous time scales he enjoyed when working with this particular director.[9]

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[7] Source: http://boxofficemojo.com/alltime/world/ [Accessed 2 August 2012].

[8] Hollywood is often labeled conservative in terms of its modes of production but also its political outlook. See for example Wyatt (1994) on artistically conservative blockbusters, Sharrett (2001, p. 326) on neo-conservatism in *The Matrix* (1999), similarly Bartlett & Byers (2003, p. 30). See McGowan (2009) on what he perceives to be a Republican agenda in *The Dark Knight* (2008). On music's reaffirmation of conservatism in *The Hunt for Red October* (1990) see Kassabian (2001, p. 95).

[9] Gabriel Yared in a 'BAFTA Masterclass: Composing for Film' at the BFI Southbank on 26 June 2013.

Tod Lippy (2000, p. 8) notes that there is little room for creative navigation in the Hollywood sphere, even for films that may seem to be independent of studio pressures, such as *The Ice Storm* (1997). All independent U.S. feature-length films are made in an 'economic sphere of activity that by necessity is going to be dominated by Hollywood. Dominated not only economically, but also ideologically. I look at what we do and no matter how aesthetically daring, and bold, and provocative and new and original, we're really committed to doing work with a very narrow bandwidth of aesthetic and political activity.' (ibid., p. 8). In his monograph on *The Ice Storm*, Mera (2007) refers to independent films that operate alongside mainstream Hollywood studio films as 'Indiewood', i.e. independent studios as a second or third tier of less influential, less well funded studios. Mera (ibid., p. 47), too, concedes that the 'independent films' these studios produce trace the general aesthetic of mainstream Hollywood, rather than providing an alternative to it.

Ethical codes and moral values in Hollywood films are largely self-imposed to appeal to a domestic and international mass audience. The highly restrictive Production Code in the 1960s was superseded by a rating scheme that is nearly as limiting, if for different reasons. These days, films are made, cut, and re-cut to achieve a particular rating.[10] In pursuit of commercial success, no Hollywood film can be too violent, too morally challenging, but also not too philosophically taxing or open-ended. Testing grounds for more daring material lie in the realms of independent and foreign films, whereas Hollywood films are too big an investment to be overly experimental. A film as potentially confusing as Chris Nolan's *Inception* (2010) will have gained studio backing only because of Nolan's previous box office successes and as long as it featured named stars (DiCaprio, Cotillard, Hardy) and plenty of spectacular action scenes that appeal to a mainstream audience. Films that veer too far from the mainstream risk box office failure with all its damaging repercussions.

If and when innovative content and formats do emerge, they are often inspired by sources outside the Hollywood realm. Mark Harris (2009, p. 75) notes a dramatic shift in 1964/65 in the tastes of American moviegoers under the influence of the French *nouvelle vague*, noting that 'historically, the only event more disruptive to the industry's

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[10] For example, *The Hunger Games* (2012), http://www.hollywoodreporter.com/news/british-censor-demands-cuts-hunger-games-299009 [Accessed 31 July 2012].

ecosystem than an unexpected flop is an unexpected smash [hit resulting in] imitation, frenzied speculation, and panic'. Similarly, Harris (ibid., p. 77) describes the arrival of the British *James Bond* franchise as a 'major disruptive force'. Tarantino's postmodern films rely on homage, quotation, and pastiche. Japanese manga inspired *The Matrix* (1999). And Hollywood readily buys in proven talent from abroad. A number of successful and ground-breaking Hollywood directors were born outside the U.S., including Guillermo del Toro (Mexican), Ang Lee (Taiwanese), and Paul Verhoeven (Dutch).[11]

When it comes to music, Hollywood executives may view the film score as a necessary adjunct to the film, a costly part of the post-production process. To the extent that executives are involved in the film scoring process, their input is likely to be informed first and foremost by commercial concerns. Whereas executives can feel assured that money spent on spectacular stunts and expensive visual effects is 'all on the screen' (see above), the payoff in music may be less tangible. In Robert Faulkner's words (1983, p. 70), in the realm of Hollywood filmmaking, a 'chronic feature of freelance work is the indifference or ignorance of the client about the music in the project'. Composer George Fenton explains that filmmaking is a craft that relies on contributions from many specialists but that when it comes to judging film music, every specialist 'doubles in music'.[12] Music must reinforce whatever creative vision or commercial strategy is being pursued. Some executives may feel that a large-scale score adds to a film's surface appeal. Anecdotes abound whereby studio executives were impressed and flattered when they came to attend their film's orchestral scoring session. For good reasons, big scoring stages offer lavish seating areas behind the mixing desk. Perhaps the sight of a symphony orchestra carries a larger-than-life air of sophistication, and even musically ignorant executives may feel that an orchestral score helps elevate their film to a higher artistic plane. The same executives, however, may have no understanding of the heritage of orchestral music nor the technical requirements recording to picture involves. This becomes particularly problematic if and when they feel the score is not serving the film as effectively as it might. And if on a technical level endless re-cutting of the film, made possible by digital editing,[13] helps create a more sellable film then music must keep up and match those edits. Composers who are involved in a project early on tend to fare

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[11] The topic of a Reuters article http://www.reuters.com/article/2008/02/29/us-directors-idUSN2963898720080229 [Accessed 31 July 2012].
[12] During a visit to the Royal College of Music on 15 May 2012.
[13] See also Chapter 3.

markedly better in avoiding last-minute alterations to their scores later on. Those composers whose technical setup allows for maximum flexibility until late in the post-production process may also be in a better position to accommodate changes.[14] Most executives will be oblivious to the fact that late changes can mean compromising a score's musical structural integrity.[15] By the time film music is composed and recorded, executives are primarily concerned with marketing their asset. In private, composers often complain about poor working conditions and a prevailing lack of appreciation of film music in the industry. But they have never made a concerted effort to change these conditions: No-one wants to be seen to be difficult or unreasonably demanding in a field that offers virtually no job security.

Directors may have a markedly different outlook on the film score than studio executives. Remarkably, according to composer Marco Beltrami, it is not uncommon for directors to be taken off a project, with the composer continuing to work with the executives only.[16] Beltrami shared an anecdote about his work on *World War Z* (2013), for which he eventually had to compose two scores:[17] He first composed a large-scale experimental score that featured percussive sounds of animal skulls and grinding teeth, recorded at Air Studios in London. This score followed Beltrami's creative vision for the film and resonated with that of director Marc Forster. Simultaneously, Beltrami ran scoring sessions with a much smaller chamber ensemble at a small studio facility. This small-scale score was composed in response to the demands from studio executives. It was ultimately not up to Beltrami what elements from which score ended up in the final film. According to him, there was also a falling out between the executives and Forster, which consequently led to the director being excluded from directorial decisions. Beltrami did not mention that key sections of the film, notably the opening and closing scenes, prominently feature the pre-existing instrumental piece 'Isolated System' by the British band Muse.[18] The way the piece is integrated in the soundtrack and works in the respective passages, it fulfils the functions of non-diegetic underscore, presumably having replaced some of Beltrami's bespoke cues. This example illustrates that when

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[14] See also Chapter 5.

[15] Several anecdotes on studio executives placing unreasonable demands on music can be found in Previn (1993).

[16] Marco Beltrami in a masterclass at the Transatlantyk International Film Festival on 8 August 2013 mentioned that he has worked on at least six projects where the director was taken off a project and either replaced by another director or executives took over themselves.

[17] During the same event at the Transatlantyk International Film Festival on 8 August 2013.

[18] From their album 'The 2nd Law' (2012).

studio executives get involved in decisions about music, their input and demands can interfere with the collaborative relationship between composer and director:[19] Executives may not have been party to the meetings and discussions between composer and director and their outlook on the music may not be musically informed, nor shared by the director. Executives' involvement can also be directly detrimental to the score at hand.

The blockbuster computer game *Dead Space* (2008) is an interesting case in which the composer was freed from commercial constraints, thus enabling him to take a more experimental route. Composer Jason Graves has described his approach to the score:[20] asked by audio director Don Veca to compose 'the scariest music you can possibly write', Graves decided that an aleatoric approach with full orchestra would be most appropriate. He drew inspiration from techniques employed in Penderecki's *Threnody for the Victims of Hiroshima* (1960). In 2006, when Graves started working on *Dead Space*, commercially available sample libraries did not yet provide many aleatoric patches.[21] Graves asked other composer colleagues if they had any aleatoric bits of orchestral playing in their personal libraries,[22] but was unable to find suitable material. Therefore, the dilemma he faced was that the aleatoric score he envisioned could not be demoed. Expecting that without a demo he would never be given a budget for scoring sessions, Graves consulted Veca. He explained to him that in order to compose truly terrifying music he would have to work with a live orchestra *before* a single note was written. He would then need three months to catalogue and splice the audio recordings and build sampler instruments with them. Then he would require a further two months to actually compose his score, using these new samples. Much to Graves's surprise, Veca did give him the go-ahead and approved six hours of orchestral recording sessions. Graves went on to craft the musical palette for *Dead Space* from multiple aleatoric layers recorded separately across the timbral range of the orchestra. The score is considered a remarkable achievement in helping deliver truly terrifying gameplay and won two BAFTA Awards.[23] The high level of trust invested in Graves by Don Veca temporarily liberated the composer from financial and logistical restraints that would have prevented

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[19] See also Chapter 4 on collaboration.
[20] Speaking at SoundTrack_Cologne 10 on 21 November 2013.
[21] A niche that has since been filled by Symphobia and Albion.
[22] Composers often use spare time at the end of a recording session to record snippets of material for future use.
[23] For 'Best Original Score' and 'Best Use of Audio'.

this creative achievement. The score for *Dead Space* is an example of improved musical creativity and a compelling outcome that were enabled by a part-suspension of commercial limitations.

When challenged as to whether his approach constitutes 'composing',[24] Graves concedes that perhaps his work on *Dead Space* is more akin to 'arranging' or 'painting with sounds'. This suggests an ideological dichotomy between 'real composition' and recent, more technical approaches to creating music for media. However, Graves feels that composers' approach to composing depends on the project at hand: director and producers often 'want the music to get out of the way, no melodies or big themes à la *Star Wars* which seems old-fashioned now'. In reference to the largely loop-based score for *Fast & Furious 6* (2013),[25] Graves wonders what traditionalists such as John Williams or Jerry Goldsmith might have composed for the film. He then answers his own question, musing that both of them would have turned the film down, knowing that neither their musical styles nor their working methods would be compatible with a contemporary action film. Graves remembers how he spent years being miserable as a young composer in Los Angeles, working on adverts and television projects where he had no creative freedom. Working in computer games has given him an opportunity to experiment. Nevertheless, he insists that being a media composer always remains hard: 'You want to be creative and you constantly ask yourself how you can top a previous project creatively.' It is implied that a motivated and driven composer will never be complacent about his of her craft but continue to strive to explore new techniques and modes of expression.

Before I address some specific commercial phenomena of Hollywood films, it seems useful to take a look at the distribution of workload among Hollywood composers. How many composers actually work at the top of the field, the most successful mainstream Hollywood films? How regularly can individuals among this population of top-level film composers find work? Faulker (1983, p. 179) noted as early as 1983 that 'Big Hollywood appears to be a market of a few dozen producers looking for a very select, and acclaimed and successful, group of "major league" composers.' Faulkner's

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[24] By moderator Helge Bogarts at SoundTrack_Cologne 10 on 21 November 2013.
[25] Emerging Spanish composer Lucas Vidal is credited with the score. I know from first-hand accounts that Lorne Balfe and Remote Control Productions were called in late in the post-production stages to replace large sections of Vidal's score that did not meet the producers' expectations. Vidal's credit was kept on the film only to comply with the funding rules of certain Spanish government grants.

study looked at composers in the 1960s and 70s. He observed that 'the freelance Hollywood scene is a bunch of tangible film composers, with various track records and accomplishments, attracting to themselves and their work a population of buyers' (ibid. p. 179). Today's film composers are freelancers who in order to find work depend on contacts, connections, satisfied customers and successful projects. Even if the responsibility of choosing a composer may initially lie with directors, the hiring and firing of a composer is ultimately a studio executive's decision. Nepotism (see the Newmans and the Gregson-Williams brothers) and favouritism appear to play a role, but track records are important as well. Executives must be able to trust a composer, which is one of the reasons why most Hollywood film composers are older than 30.[26] One of the best ways for an aspiring screen composer to get into Hollywood film scoring is to gain experience and exposure by starting out as an established composer's assistant. Several of my former students now work full-time for established film composers and are gradually working their way into the industry. Daniel Elms works with British composer Alex Heffes (*Mandela: Long Walk to Freedom*, 2013) Samuel Pegg with George Fenton (*The Bounty Hunter*, 2011) and Nathan Stornetta with Hans Zimmer (*Man of Steel*, 2013). In mid-2014, Nathan will be moving from London to Los Angeles to join Zimmer's Remote Control Productions as a staff composer, proof that starting out as an assistant can lead to better opportunities.

Composers know they must be on good terms with studio executives, producers and directors. Ilan Eshkeri (*Stardust* (2007)) explained in 2009 – at the time not yet established in Hollywood – that he employed several people to do nothing but scope out new projects and make contacts with the respective industry leaders. Eshkeri also shared an anecdote whereby he attended a Hollywood cocktail party complaining to a group of people about a difficult film producer with whom he had just finished a project, only then to realise that the very producer was standing right behind him and had overheard the conversation. Veteran composer Hans Zimmer was also present and later came up to Eshkeri to say 'this is why I am where I am and you are where you are.'[27]

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[26] An observation put forward by composer Christian Henderson during a visit to the Royal College of Music on 8 May 2012.

[27] Eshkeri during his keynote address on 6 November 2009 at the Film Music Conference (School of Music), University of Leeds.

As part of my preliminary research for this thesis, I undertook a study to determine who composed music for the 50 top-grossing Hollywood films in each year between 1980-2009, and analyse the trends therein.[28] This study was inspired by Faulkner's work (1983), and aimed to see if trends identified by him continued in successive decades. The uneven distribution of workload will be discussed with a view deducing potential implications for stylistic trends and composers' artistic influence. It particularly struck me when Faulkner (1983, p. 31) summarizes that in the 1960s and 70s, 'to a remarkable extent, considering the diverse quality of commercial films, productivity is in unabashed alliance with success. [...] 50 percent of composers who have a credit "event" at all experience only the "single point" in their years in Hollywood. [...] Less than 10 percent of composers are responsible for over 45 percent of all films scored.' The present study looked at the 50 top-grossing films for each year between 1980-2009. 'Top-grossing' was defined as the top 50 most financially successful films in terms of domestic box office takings in U.S. dollars as reported on Box Office Mojo and The Internet Movie Database.[29] The top 50 provided an adequate sample size with 1,500 data entries. For each film, the following data were collected: name of movie, year of release, studio, name of composer, name of director, opening weekend box office gross and total box office gross.[30] The name of the composer(s) and director(s) attached to each film were searched and verified.[31] To facilitate analysis and focus on individual composers, only single composer credits were considered in this study. Where more than one composer was identified, the label 'Collaboration' was applied. These films were omitted from analysis, as the study was aimed at the workload distribution among individual composers. In addition, musicals and song and compilation scores without a clear composer credit were labelled 'Other' and also omitted from analysis. The top 10% of composers in the sample were identified based on ranking them in terms of number of films scored in the time period of analysis (1980-2009). For these top 10%, the number of films per composer was tabulated and visualised. The distribution of films scored per composer per year was calculated and graphed. Both the number of films and the box office takings were analysed. The top ten composers in the sample were also compared

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[28] Some findings of this study were first presented at the Music and the Moving Image conference at New York University on 1 June 2013.

[29] www.boxofficemojo.com, www.imdb.com.

[30] The complete dataset is available by request. Inflation adjusted using the Consumer Price Index (CPI-U) according to data from the U.S. Bureau of Labor Statistics.

[31] An analysis of collaborative links between composers and directors is presented in Chapter 4 below. Searches on Box Office Mojo, The Internet Movie Database, and Google

with each other in terms of number of films and total box office gross in order to pull out the commercially most successful composers.

Figure 1 shows the number of films scored by each composer in the whole sample (some names are omitted) in order of most films to least films. Alan Silvestri scored 49 films, followed by James Horner, who scored 47 films, etc. 10% of the composer sample is to the left of the dashed red line.
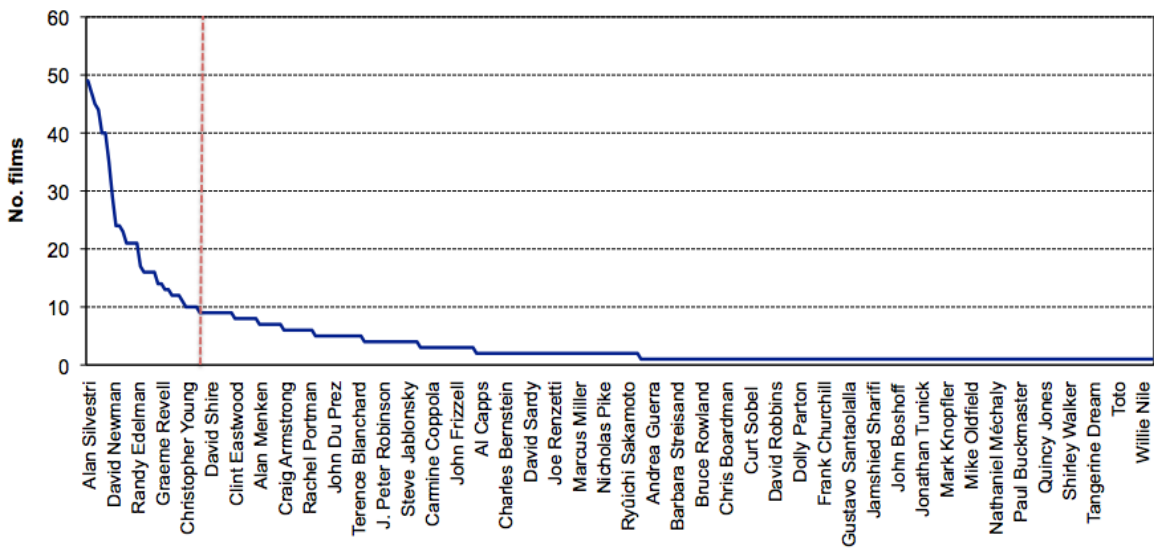
Figure 1: Number of films per composer (10% of the composer sample are to the left of the dashed red line. Note that some names are omitted.)

Table 1 ranks the composers in the sample by the number of films they have scored up to the point where 50% of all films in the samples have been reached. The table reveals that Alan Silvestri composed 3.27% of all films in the sample and that Alan Silvestri, James Horner, John Williams, and James Newton Howard together accounted for 185 films, which is 12.33% of the all the top 50 top-grossing films between 1980-2009. 50% of the films in the sample were scored by 37 composers or 12.13%. The top 10% of composers (31 composers) scored 46.4% of all films in the sample.

Table 1: Composers ranked by number of films up to 50% of movies from whole sample

Composer	No. films	Cumulative films	% Share of Films	% of Total Movies (cumulative)	No. Composers	% of Total Composers
Alan Silvestri	49	49	3.27%	3.27%	1	0.33%
James Horner	47	96	3.13%	6.40%	2	0.66%
John Williams	45	141	3.00%	9.40%	3	0.98%
James Newton Howard	44	185	2.93%	12.33%	4	1.31%
Hans Zimmer	40	225	2.67%	15.00%	5	1.64%
Jerry Goldsmith	40	265	2.67%	17.67%	6	1.97%
Danny Elfman	35	300	2.33%	20.00%	7	2.30%
David Newman	29	329	1.93%	21.93%	8	2.62%
Howard Shore	24	353	1.60%	23.53%	9	2.95%
John Debney	24	377	1.60%	25.13%	10	3.28%
Thomas Newman	23	400	1.53%	26.67%	11	3.61%
Bill Conti	21	421	1.40%	28.07%	12	3.93%
John Powell	21	442	1.40%	29.47%	13	4.26%
Michael Kamen	21	463	1.40%	30.87%	14	4.59%
Randy Edelman	21	484	1.40%	32.27%	15	4.92%
Elmer Bernstein	17	501	1.13%	33.40%	16	5.25%
Basil Poledouris	16	517	1.07%	34.47%	17	5.57%
Marc Shaiman	16	533	1.07%	35.53%	18	5.90%
Mark Isham	16	549	1.07%	36.60%	19	6.23%
Randy Newman	16	565	1.07%	37.67%	20	6.56%
David Arnold	14	579	0.93%	38.60%	21	6.89%
Graeme Revell	14	593	0.93%	39.53%	22	7.21%
Maurice Jarre	13	606	0.87%	40.40%	23	7.54%
Trevor Rabin	13	619	0.87%	41.27%	24	7.87%
George Fenton	12	631	0.80%	42.07%	25	8.20%
John Barry	12	643	0.80%	42.87%	26	8.52%
Marco Beltrami	12	655	0.80%	43.67%	27	8.85%
Carter Burwell	11	666	0.73%	44.40%	28	9.18%
Christopher Young	10	676	0.67%	45.07%	29	9.51%
Elliot Goldenthal	10	686	0.67%	45.73%	30	9.84%
Teddy Castellucci	10	696	0.67%	46.40%	31	10.16%
Theodore Shapiro	10	706	0.67%	47.07%	32	10.49%
Aaron Zigman	9	715	0.60%	47.67%	33	10.82%
Bruce Broughton	9	724	0.60%	48.27%	34	11.15%
Christophe Beck	9	733	0.60%	48.87%	35	11.48%
David Shire	9	742	0.60%	49.47%	36	11.80%
Ira Newborn	9	751	0.60%	50.07%	37	12.13%

Figure 2 is a word cloud that displays the name of every composer in the sample in a size proportionate to the number of films scored.

Figure 2: Word cloud of composers' names in size proportionate to number of films scored

Figure 3 shows the tabulated data from Table 1 starting with Alan Silvestri and ending with Teddy Castellucci (i.e. top 10% as per the above definition, on the left of the dotted red line).
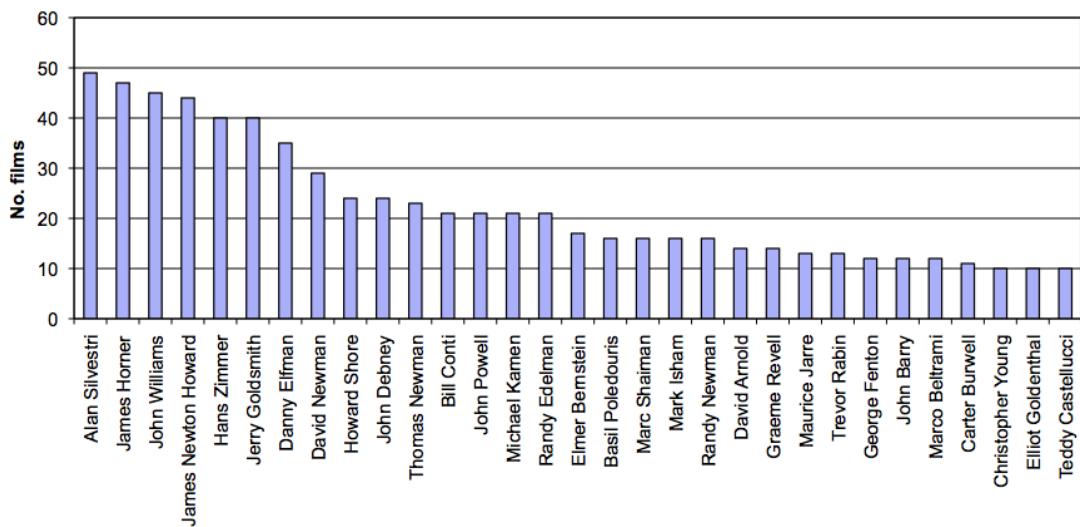
Figure 3: Number of films of top 10% of composers

Figure 4 shows the relationship between the number of films scored per composer between 1980-2009 and the total gross box office revenue these films generated. Films scored by John Williams cumulatively earned the most although he is only ranked third in terms of number of films scored.
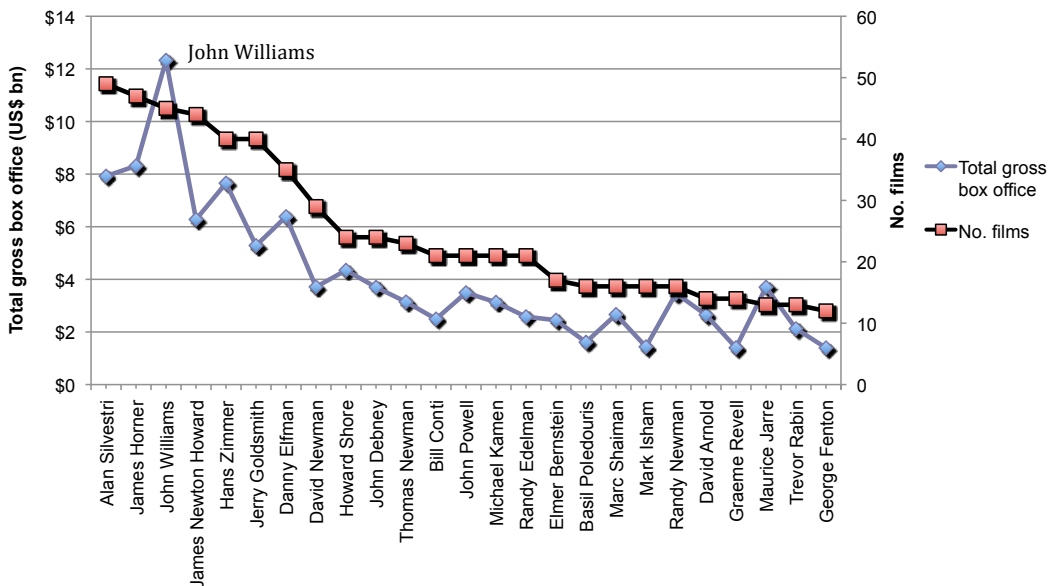
Figure 4: Total gross box office figures and number of films for top 25 composers

Figure 5 illustrates the total gross box office takings per year for films scored by the 10 busiest composers. The lines have been smoothed by using a 5-point moving average.
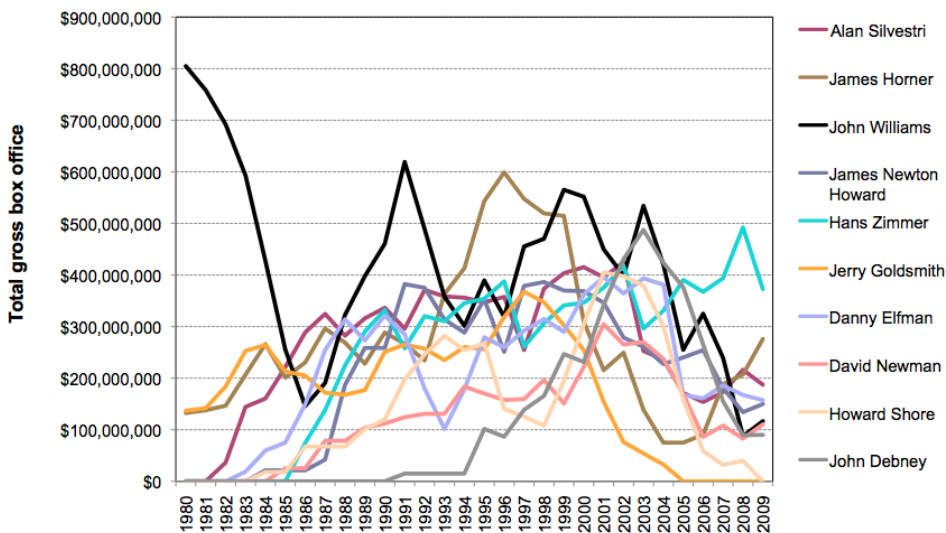
Figure 5: Total gross box office for top 10 composers 1980-2009 (5-point moving average)

The results show that Faulkner's statement that 'ten percent of the population is responsible for one of every two industry projects' (ibid., p. 25) still holds true. The markedly uneven distribution of the overall workload is clearly illustrated in Figure 1:

Very few individuals attract a relatively large number of films. The steep curve drops sharply towards the 10% line (10% of composers) and then quickly flattens out. Figure 3 further illustrates that among the top 10% of composers (out of a total 305 composers in the sample), who account for 696 of all films (or 46.40%), only 28 scored more than 10 films. Fifteen composers scored more than 20 films. Seven individuals were attached to more than 30 films, and only four composers scored more than 40 films.

Hollywood films are a business product and once a company (= studio) finds a successful product (= film), it will aim to maximise income from that product.[32] Once a successful format, formula or franchise has been identified, these are replicated for added revenue. The most successful films are most likely to have the largest impact on the film industry's future output: they induce trends by adaptation, imitation, and repetition, as evidenced by the large number of sequels [e.g. *Cannonball Run II* (1984), *Saw IV* (2007)], re-issues [e.g. *The Rescuers* (1983), *The Fox and the Hound* (1988)], and remakes [e.g. *Red Dawn* (1984), *The Pink Panther* (2006)] in the sample. A successful film also influences creative and personnel choices for future projects. Faulkner quotes a film composer as saying 'the greatest award in Hollywood is to be asked back again' (ibid., p. 50). Marco Beltrami confirms that 'the way you get work in this business is through past work and experiences.'[33] Higher commercial success may also raise a film's impact on creative practice in two ways: Because it reaches a larger audience, it is in a better position to change audience expectations, much like trends in fashion are induced. It makes sense that future films will cater to those altered expectations. At the same time, a highly successful film is more likely to be noticed by more members of the creative community, inspiring (or convincing) them to re-evaluate and alter the way they work and skew the creative direction in which they take future projects. Of course, the creative community is not purely self-referential and also draws on a broad set of outside influences such as commercially less successful films, independent films, avant-garde films, animation, foreign films, television, the visual arts, theatre, music, literature, factual media, the internet, fashion, current affairs and world politics. However, in terms of impact, the more successful a film is, the more likely it is to affect the way future films are made. The score of a highly successful film gains more exposure and thus

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[32] This study did not account for foreign-territory box office or domestic rentals, both significant sources of revenue.

[33] Marco Beltrami during a masterclass at the Transatlantyk International Film Festival on 8 August 2013 in Poznan, Poland.

impact. I would argue that some trends in Hollywood film music are an indirect result of box office success, leading at worst to homogenised or derivative scores.

Faulkner (1983) discusses how film composers find work in Hollywood and his description of the prevailing working conditions in the 1960s and 70s still feels applicable today. Figure 4 shows that the workload among the top 25 composers from the sample is generally proportionate to the cumulative gross box office taking of the films they have scored. There are a number of composers who have scored relatively fewer films with relatively higher gross box office takings: Maurice Jarre, Randy Newman, Mark Shaiman, John Powell, and Howard Shore. This indicates that these composers work on fewer films but that these films on average do better commercially. Danny Elfman and Hans Zimmer are exceptional in that they have scored 35 and 40 films respectively, which earned a disproportionately high $6.4 billion (an average $182 million per film) and $7.7 billion (an average $191 million per film). The cumulative box office takings of the 45 films scored by John Williams by far surpass those of any other composer: At $12.3 billion (an average $274 million per film), Williams's scores are attached to films that *on average* would rank in the very top of any given year. This is hardly a surprise, considering Williams's involvement in the hugely successful franchises of *Star Wars* (1977-ongoing), *Indiana Jones* (1981-2008), and *Harry Potter* (2001, 2002, 2004). John Williams did not score a film every year, which is not unusual.[34] But in sixteen of the thirty years between 1980-2009, a film he scored ranked among the top 3 of that year. Figure 5 gives a somewhat different impression of the top 10 composers' work as measured by gross box office takings per year (5-point moving average). Here too, John Williams often comes first by a large margin, scoring the most successful films. However, on occasion Alan Silvestri (*Back to the Future*), James Horner (*Titanic*), and Hans Zimmer (*Pirates of the Caribbean*) take the lead.

According to music editor Michael Connell, it is a recent development that even established composers have to pitch for big-budget commissions.[35] Advances in music technology have enabled composers to create demos of impressive quality.[36] Marco Beltrami reveals that whilst he did not have to audition for James Mangold's *3:10 to*

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[34] Bearing in mind also the scope of the study: It is highly likely that many the composers that appear in Table 4 score additional films that did not break into the top 50 of any given year.

[35] In conversation with Michael Connell when he visited the Royal College of Music on 28 January 2014.

[36] See Chapter 5.

Yuma (2007), he competed with five other composers when pitching for *World War Z* (2013).[37] Those who hire composers in Hollywood are not normally musically trained and thus have to rely on other instincts. Veteran music supervisor Maggie Rodford of Air Edel says she is sometimes approached by producers with a list of names of composers. If the list comprises composers of disparate styles, she feels that the producers have compiled it considering composers' commercial track record rather than musical qualities.[38] Gabriel Yared laments that some composers take on too much work and as a result do not have the time to push beyond their habits. He explains that if he only had three months to score a film (which is the norm in Hollywood) he 'would rely on [his] habits'.[39] From the point of view of a musically ambitious composer this comment is understandable. On the other hand, Yared himself has admitted that his attitude prevents him from working in Hollywood more frequently.[40] Those with a more flexible – or less ambitious – attitude fare better: 'A standardized demand for a standardized score may work to the advantages of both filmmaker and composer. It facilitates decreased cooperation, defines vision, and decreases mutual risk' (Faulkner, 1983, p. 83), the risk being mostly financial.

The fact that composers attached to commercially successful films are likely to attract further commissions is illustrated in Figure 6 and Table 2 (Appendix V). Between 1984-2009 (26 years), Alan Silvestri consistently worked in 1-3 films per year (except 2005 and 2008).[41] All top 10 composers enjoyed a similar stream of steady work. Many composers went through periods in which they scored a number of films per year for a shorter span of time. For example, Bill Conti (*First Blood*, 1982) was steadily working between 1980-1991 (12 years). Rolfe Kent scored 1-2 films per year between 2001-2006 (6 years). Marc Shaiman worked regularly between 1989-1998 (10 years). Yet others did not begin to work on top-grossing films until more recently. Theodore Shapiro scored his first film in 2003 and continually worked until the end of the sample, possibly continuing to the present day.[42] The vast majority of composers score only one film. This, too, is a

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[37] Marco Beltrami during a masterclass on 8 August 2013 at the Transatlantyk International Film Festival, Poznan, Poland.

[38] Maggie Rodford in a masterclass on music supervision on 7 August 2013 at the Transatlantyk International Film Festival, Poznan, Poland.

[39] Gabriel Yared in a 'BAFTA Masterclass: Composing for Film' at the BFI Southbank on 26 June 2013.

[40] Ibid.

[41] Given the scope of this study, the number of films scored per year shown here is not necessarily the number of all films the respective composer has scored in any given year.

[42] For example, he scored the recent *The Secret Life of Walter Mitty* (2013).

finding that confirms Faulkner's previous research. There are many factors that determine why a composer may not work again, including obviously a box office flop.
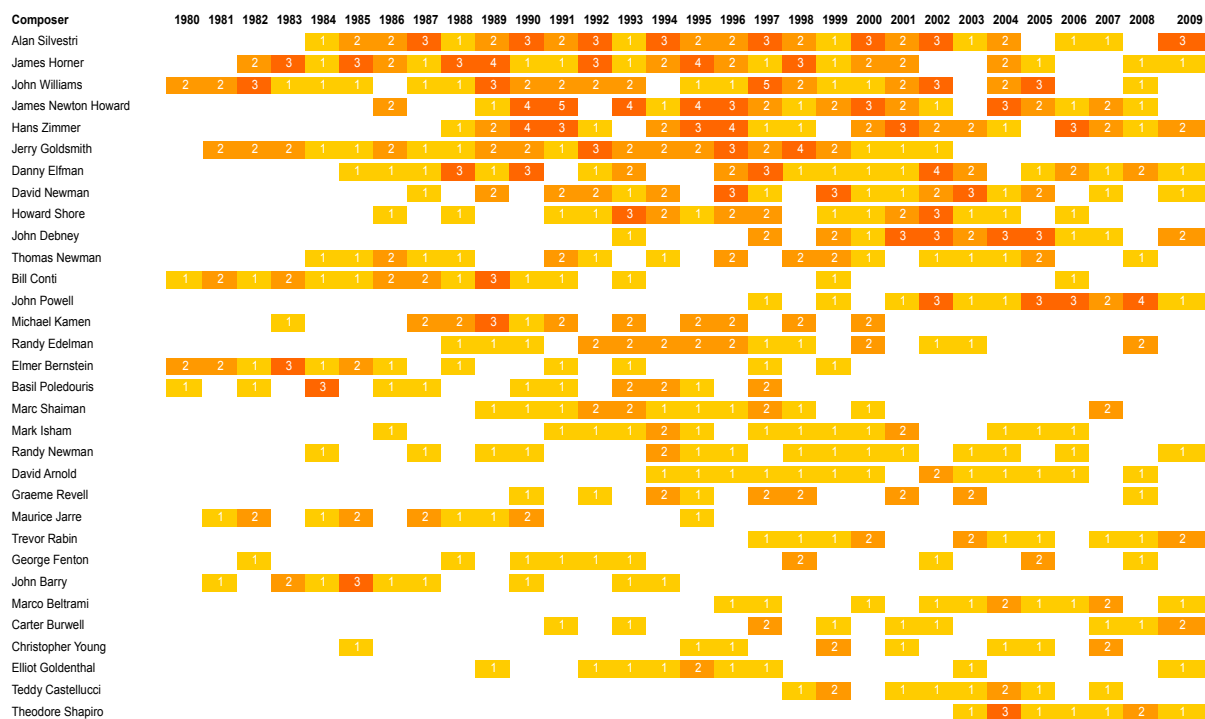
Figure 6: Individual composers' workload and continuous employment.

The uneven workload distribution among Hollywood film composers skews the overall output of film music and impacts on prevailing creative practices to favour those of a few disproportionately successful individuals. A concentration of market share means these most successful individuals have a wider audience reach and clout within the industry, perpetuating further success and influencing creative practices and outputs. Empire-building Hans Zimmer is a prime example of a composer who has leapt from strength to strength and whose successes have transformed the entire field of film music. Following his breakthrough score *Rain Man* (1988), Zimmer distilled film music's latent preference for electronic sounds into a more emotive musical language. He has securely been at the forefront of film music since then. Whereas the individual composers Silvestri, Horner, Williams, Newton Howard, Zimmer, Goldsmith etc. all scored on average more than one top-50 film per year since 1980, Hans Zimmer's company Remote Control Productions (RCP, formerly Media Ventures) scored a combined 117 films. RCP employ a large number of composers, within the sample Hans Zimmer (40 films), John Powell (21), Trevor Rabin (13), Mark Mancina (9), Harry Gregson-Williams

(8), Rupert Gregson-Williams (6), Klaus Badelt (5), Steve Jablonsky (4), Ramin Djawadi (3), Nick Glennie-Smith (2), Henry Jackman (1), James Dooley (1), Marc Streitenfeld (1), Geoff Zanelli (1), Atli Örvarsson (1) and Heitor Pereira (1).[43] RCP are never credited as a company and, because of lack of access to contracts and other legal documentation, it cannot be verified whether all the above worked on behalf of Remote Control exclusively. It is more likely, in fact, that more experienced composers such as Harry Gregson-Williams and John Powell also work independently of the company. However, all the above entered the top-level Hollywood realm as part of the RCP team. Zimmer's company is an exemplary model for the integration of film music creation into Hollywood's current business model.[44] Zimmer oversees a large team of composers, assistants, engineers and technicians who may concurrently be working on any number of projects, ranging from feature films to television programmes to computer games.[45] The above-mentioned individuals are just a few of the many composers who have emerged from formative years at RCP and have subsequently become established composers in their own right. It is an open secret that Hans Zimmer oversees a large number of projects while he is credited as composer on only a few. Even the scores for which he does take composer credit invariably have other composers attached. In the case of *The Simpsons Movie* (2007), six composers supplied additional music: Ryeland Allison, Lorne Balfe, Jim Dooley, Henry Jackman, Michael A. Levine, and Atli Örvarsson. Zimmer has at least twice been disqualified in the 'best score' category by the Academy Motion Picture Arts Sciences, for *Batman Begins* (2005) and *The Dark Knight* (2008), because too many contributors were listed on the music cue sheet.[46]

The Zimmer brand delivers reliable and effective results. Even whilst Zimmer may not himself compose much or any of the music on any given project he ensures consistent quality and homogeneity in the output. A master networker, Zimmer attracts an impressive number of projects. RCP are evidently so well attuned to the industry's needs, and Zimmer so well respected within the field, that filmmakers and executives trust the company to deliver workable results. Zimmer himself manages to refer and delegate

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[43] This list was compiled from names mentioned in conversation by Ramin Djawadi, Harry Gregson-Williams and Klaus Badelt. The number of films scored was taken from the sample.

[44] Information about Remote Control Productions is collated from first-hand accounts from a number of colleagues who over the years have worked with RCP; from stories shared by industry insiders at ASCAP and elsewhere in Los Angeles; and by reports from my former student Nathan Stornetta who now works with RCP.

[45] In 2013, Zimmer launched a second company, Bleeding Fingers Inc., in partnership with SONY/ATV, to provide stock music for U.S. television programmes.

[46] See also below and Burlingame (2008).

projects to members of his team, which is most likely how, for example, director Michael Bay, for whom Zimmer scored *The Rock* (1996), ended up working with the relatively unknown Steve Jablonsky on the *Transformers* franchise.

One might say that Zimmer is more of a producer than a composer and it would seem that in new employees he looks mostly for production skills, as evidenced by a recent recruitment drive: seeking team members for his Santa Monica-based Bleeding Fingers Inc. (a facility with numerous writing suites), Zimmer launched the website www.hanszimmerwantsyou.com.[47] On the home screen, the site provided a link to a SoundCloud page where participants could download a master track and individual stems (recorded instrumental parts). It also showed Zimmer posing in Uncle Sam fashion and a messages saying:

> Calling all composers! This original theme called 'Destiny's Door' created exclusively for this contest by Mr. Zimmer himself is yours to reimagine, replay, recompose or revise to your heart's content. Below you'll find a link to the theme plus everything you need to get the creative juices flowing. We're looking for originality, curveballs and adventurous amphonics [sic].

Strictly speaking, candidates were not actually asked to compose music (i.e. apply to Bleeding Fingers Inc. with original music) but to arrange an existing piece by means of music production. When the message says Zimmer is looking for 'originality', it is inventive ways of re-working an existing idea – by definition an arrangement – not original compositions.

At the musical level, Zimmer has in the past pioneered new musical idioms, leading the way in popularising the use of synthesizers and digital samplers in Hollywood film music, and truly revolutionising composers' outlook on music technology and the scoring process. On the back of successive box office hits Zimmer has benefited from generous music budgets. Frequently, Zimmer forfeits purely music concerns in favour of flexible scoring solutions at the service of the respective film. At the same time, he always upholds an assured sense of tone. For example, the cue 'Chevaliers de Sangreal' at the end of *The Da Vinci Code* (2006) may be less than interesting musically, in its overly repetitive harmonic structure, but it effectively lends gravitas to the film's conclusion. In this example, the musical idea can be reduced to a simple four-note motif

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[47] Accessed 27 January 2014.

that moves sequentially over shifting key centres. The accompaniment relies on undulating semiquaver patterns in the low strings, characteristic of much of Zimmer's music. Overall, Zimmer's composition and production style may be described as one that blends orchestral elements with synthesizer drones, relies heavily on rhythmic patterns, low-profile ostinati, heavy percussion, and generally eschews extended prominent melodies. There is a distinct emphasis on timbre and texture, and virtually all sounds are blended, for example strings doubling synthesizers. Reviewing the musical qualities and tendencies presented in Chapter 1 and how they align with Zimmer's stylistic idiosyncrasies, it is quite possible that his commercial success and influence have been a factor in shifting the overall aesthetic in recent Hollywood film music.

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. A number of video compilations on YouTube juxtapose scores that are strikingly similar. Many of these scores are composed by RCP employees and include *Pirates of the Caribbean* (2003), *King Arthur* (2004), *Batman Begins* (2005), *Gladiator* (2000), and *Transformers* (2007).[48] So widespread is the influence of RCP that other composers such as James Newton Howard (particularly for *Salt* (2010)) and even traditionalists like Patrick Doyle (for *Thor* (2011)) have also found occasion to adopt a musical style that is strikingly similar with that used by RCP. Doyle admits that in order to find work in lucrative mainstream Hollywood films such as *Thor* he had to adapt his symphonic style of writing, from a more developed, through-composed approach, to a more simplified, textural one.[49] Aspiring and hobby composers, too, are keen to emulate Zimmer's sound. Producers of sample libraries and software instruments have begun to offer Zimmer-esque tools and packages to keen buyers: for example, EastWest 'Stormdrum' for loud, heavy percussion, Project Sam 'Symphobia' for ready-to-use rich orchestral chords, Kontakt-based Spitfire 'Albion' for convincing rhythmic string textures and arpeggios. In late 2013, Zimmer himself joined in and released a sample library called 'Hans Zimmer Percussion' with Spitfire.

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[48] http://www.youtube.com/watch?v=-tQpAPMT_Rc;
http://www.youtube.com/watch?v=pINDapfDNog&feature=related;
http://www.youtube.com/watch?v=VGudWMHVZ7o&feature=related [Accessed 30 July 2012].
[49] Dolye did not say 'dumbing down', but very much alluded to this during a on-stage interview at a WDR Radio Orchestra concert in Doyle's honour on 4 November 2012 in the Großer Sendesaal, Funkhaus Wallrafplatz, Cologne, Germany.

In the realm of Hollywood film music, RCP stands out as a concentration of commercial power and a unified musical output. Hans Zimmer has built considerable clout for the RCP brand whilst at the same time divesting responsibilities and delegating much of the actual work of composition and production. The financial benefits of centralising operations and perpetuating a relatively homogenous workflow and output are manifold. Studio facilities can be shared and usage optimised, business acquisition can be streamlined and multiple projects can be run concurrently. Although the end results may vary in the details – and while a specific director may work with one RCP composer rather than another – production value, reliability and quality control are assured. It is tempting to draw parallels between Zimmer's business model and a phenomenon in the food and consumables industries, whereby a progressive consolidation of brands and companies has led to a handful of large corporations controlling almost the entire market. Companies benefit from streamlined operations and efficiency savings in the supply chain and production process and also form increased leverage in distributions and sales negotiations. Profit margins increase. Consumers benefit from reliable and affordable supplies whilst a range of choice is maintained. Perhaps pessimistically, the phenomenon has been labeled the 'Illusion of Choice'. It is illustrated in Figure 7.

Fig. 7 – Illusion of Choice[50]

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[50] Source: http://www.webpronews.com/the-brands-that-own-the-brands-infographic-2012-04 [Accessed 15 August 2013].

More recently, in the U.S. media a similar consolidation of assets has taken place, leaving only six media companies in control of most of American printed press, television and music labels. This is illustrated by Figure 8. Space does not permit a detailed exploration of the cultural significance of these phenomena with regards to the entertainment industry, specifically their implications for creative freedom, diversity and equal competition. Increasing concentration of workload and consolidation of assets with a few select businesses or individuals also find parallels in the net worth and financial wealth distribution in the U.S. at the beginning of the 21st century, except that top-heavy tendencies are even more pronounced.[51]
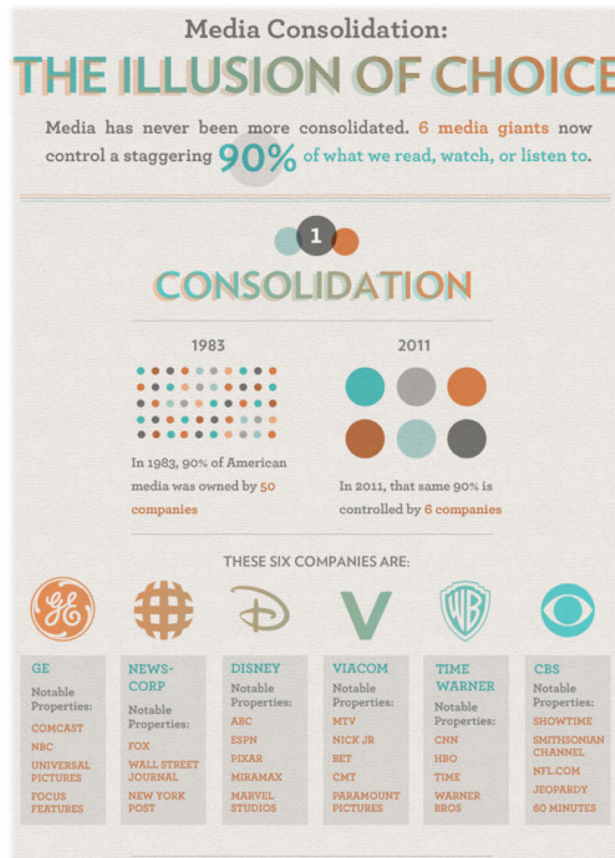
Fig. 8 – Consolidation of media companies in the U.S.[52]

Further study might capture and categorise the RCP musical style and its influence on the musical output of other film composers. Industry insiders notionally know what

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[51] See G. William Domhoff (2013).

[52] Source: http://www.webpronews.com/the-brands-that-own-the-brands-infographic-2012-04 [Accessed 15 August 2013].

constitutes the RCP sound. Among those currently or formerly working for RCP that I have spoken to (Djawadi, Badelt, Gregson-Williams, Stornetta, Greenaway) no one was cynical about the stylistic strictures imposed by the company. Instead, they would without exception hail the benefits of the working methods employed. These reach far beyond the extensive technical setup RCP is known for. It also encompasses working closely with the filmmakers and being open to dialogue, frequent changes and last-minute adjustments. Klaus Badelt, for example, explained that working on a film means accepting and accommodating change:

> You're constantly re-addressing… You go the final dub stage and suddenly think 'now I understand.' Even in the finished, mixed cue I can make changes to a synthesizer sound or a melody. […] I don't have to rely on others to cut my music around and I have a lot more creative freedom that way.[53]

It transpires that RCP work in ways that are flexible and place a sense of control back with the director, producer and executives. Working in flexible ways and keeping the score changeable, RCP manage to reduce the potential for risk and conflict. Yet, as a side-effect of creating malleable scores much of RCP's music is markedly low-profile and textural. This is not to say that RCP have never produced interesting and innovative scores. For example, Hans Zimmer is known to work closely with director Christopher Nolan, most recently on *Man of Steel* (2013). The scores for *Inception* (2010) and the *Batman* franchise match these exceptionally sophisticated and multi-layered filmic narratives. *The Dark Knight Rises* (2012) is perhaps the pinnacle of Hollywood's recent cinematic achievement. It is a complex, intelligent and gripping narrative that features well defined and investable characters (admittedly pre-established by the comic book series and previous films), stunning set pieces, unprecedented special effects and compelling cinematography. Overall extremely rhythmical, music in *The Dark Knight Rises* has raw tribal qualities and generally avoids emotional indicators other than aggression and anger. Even when key characters suffer tragic losses, Nolan leaves little room for sentimentality. The score is intricately tailored to the film. Ambient music designer Mel Wesson describes how lessened financial restraints allowed room for experimentation at the dubbing stage, which he deems crucial. The example shows that in the hands of filmmakers who value the contribution of music, the relationship between high budgets and film music need not be negative.

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[53] Klaus Badelt interviewed on 10 November 2011 by Skype. For the full transcript see Appendix II.

> When you're on the dub stage […] it's your last chance […] to really change what you've done or to make absolutely sure that your idea is what you really intended […] I can't understand why a composer wouldn't go. I know a lot of directors are quite keen to get on with it. Years ago, I used to work in the recording industry, you know you'd be producing bands and you don't want the band down when you're mixing because the drummer comes down and the drums aren't loud enough and then the bassist comes in and the bass isn't loud enough and the singer and guitarist – and all you've done at the end of the days is moved your faders higher. It's completely pointless. I think in the dub stage there is a point. On a Hans project – or for that matter, someone like James Newton Howard – these guys have music editors that have worked with them – pretty much exclusively – for years so they are their ears on that stage. […] But things get changed constantly there. I think it's important to consider the dub part of the process: part of the creative process. Not just the mix. It's more than that. It's the opportunity to experiment, if you've got time. […] And when we were mixing [*The Dark Knight Rises*], we were mixing on the dub stage and we had seven days a week for six weeks. So you could go in – it was an open-ended day - so if Chris wants to keep people there 14 hours on a Sunday and he's paying them triple rate, he doesn't care. And it's just Warner's problem. […] In an environment like this, it's all about experiment. Try things out. But it's a very expensive way. A very expensive place.[54]

Innovation and experimentation are not necessarily key ingredients in the Hollywood business model, except where new levels of spectacle ('unlike anything you have ever seen before') promise higher box office returns. This commercial outlook places Hollywood cinema at the polar opposite of avant-garde or art film. In order to better understand the creative strictures imposed on ambitious creative minds, including those of composers, it is important to remember that Hollywood executives, when it doubt, will play safe. Epstein (2010, p. 185) poignantly remarks that 'in Hollywood, originality is anything but a virtue'. Composers working on mainstream Hollywood films are fully aware that they have to live up to certain expectations. John Powell, speaking about his score for *Face/Off* (1997), remembers being compared to Hans Zimmer, having worked alongside him for some time prior to 1997. He concedes (in DesJardins, 2006, p. 209) that in conceiving of the score they were commissioning, the filmmakers clearly 'expected Hans' and that in working on an $80m film there was little room for experimentation.

Whilst Hollywood would not like to be seen to literally repeat itself, truly original, untried material poses a great risk of commercial failure. Hollywood is never shy to exploit a previous film's success. The replicability of an idea ensures future revenue streams. When advertised in a poster campaign as 'this year's *Sixth Sense*', *Red Lights*

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[54] During a talk at the Royal College of Music on 13 November 2013.

(2012) hardly promises originality.[55] To the cinemagoer it may nevertheless signal worthwhile entertainment. Promotional campaigns announcing films as originating 'from the makers of…' or 'from the studio that brought you…' are commonplace. Established actors have an even stronger pull and seem to matter far more than content. If Angelina Jolie stars in a film, her fans are likely to go and see it, regardless of plot or quality. All-star cast films blatantly exploit this, for example *Ocean's 11* (2001), *Rat Race* (2001), *Pulp Fiction* (1994) and particularly the all-star spoof comedy *Mars Attacks!!* (1996). Appignanesi (1995, p. 136) warns that 'the last 25 years of the 20th century will go down in history as [being] symptomatic of a total lack of originality. Our scanty resources on invention are all parasitically confined to reproduction. Everything apparently "new" […] is feeding on the originality of the past'. Hollywood film composers can easily fall victim to the pressure to conform to prevalent stylistic trends and demands. This phenomenon was observed as early as 1983 when Faulkner (1983, p. 95) noted that film composers copy each other through 'exposure to and association with other composers. They are all great students of one another. They listen to one another's work and joke about stealing from each other.' Composers draw on each other's ideas 'like recipes from a cookbook' (ibid., p. 96), resulting in an overall sameness of much of Hollywood film music at any given point. In his candidly titled chapter 'No Musical Revolutions', Faulkner addresses the conventions composers are asked to follow and that in the area of film music, similarly to the Hollywood business as a whole, 'no one wants to take a chance' (ibid., p. 91). Faulkner quotes an unnamed film composer as saying 'a lot of it is just writing things that are expected, that have to be done on time, and that have to follow the format you're working in. It's just not the time to start fooling around' (ibid., p. 89). Composers settle for the lowest common denominator, which at worst can result in derivative, homogenous and predictable film scores.

Sequels and so-called franchises are produced first and foremost to capitalise on a successful film's box office draw.[56] Although composers may be replaced along the way, a certain level of continuity at the music level is important for branding. The *James Bond* franchise draws on the same iconic theme even fifty years on although five different composers have worked on the films. The *Star Trek* and *Harry Potter* franchises have had

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[55] http://ilbuioinsala.blogspot.co.uk/2013/11/recensione-red-lights.html [Accessed 28 January 2014].
[56] Cooke (2009) devotes an entire volume to sequels.

multiple composers but the original themes were reused and adapted.[57] Composers working on a franchise must not overreach creatively. For the much-anticipated re-launch of the James Bond franchise, *GoldenEye* (1995), Eric Serra took over from veteran composer John Barry and experimented with a distinctly more eclectic, even avant-garde sound. His approach was deemed so problematic by the filmmakers that in the final dub, a key scene is accompanied by John Barry's well-established Bond theme, replacing an original cue by Serra. His score was considered a 'disgrace to the franchise' by some and he was not asked to score the next film.[58] It can be a daunting challenge for filmmakers and composers alike to try and reinvigorate an ageing franchise without disappointing devoted fans. John Ottman (quoted in Hoover, 2010, p. 15) describes the combination of internal and external pressures working on *Superman Returns* (2006), with some fans of the old franchise emailing him at his private email address demanding that he pick up John Williams's original theme. Ottman took his score in a different direction but his anecdote demonstrates that it can be a thankless task to try and strike a balance between commercial considerations of brand identity and continuity, the expectations of the target audience and the creative team's own vision and aspirations. Thomson (2011, p. 114) comments that when 'the American film business became international, it moved towards what it believed was material for the 18-24s with franchising prospects: violent, cruel, cool, self-interrupting. The executives listened to the marketeers, and the filmmakers had to decide whether to go along with them. The alternative was to go independent, or try television. Both of which meant a drastic cut in income.'

There are some sequels that continue a franchise's narrative in compelling ways. *Terminator 2: Judgment Day* (1991, dir. James Cameron, score by Brad Fiedel, sound design Gary Rydstrom) was the second instalment of an ongoing franchise that to date has produced four films, a television series, and a theme park attraction. The franchise is based on the premise that Skynet, a military computer system, will in the near future become self-aware and start a nuclear war to eradicate all humans. Various incarnations of so-called terminators travel back in time to try to kill Sarah Connor and her son John, the future leader of the human resistance. *Terminator* (1984) was a surprise box office success that established writer and director James Cameron. The film was an impressive

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[57] Webster (2012) comments on this adaptation of themes and different composers' musico-narrative strategies in the Harry Potter franchise.

[58] See http://www.filmtracks.com/titles/goldeneye.html [Accessed 15 August 2013].

accomplishment, particularly in its cost-effective creation of visual effects. In this first instalment, Sarah Connor (Linda Hamilton) defeats the Terminator (Arnold Schwarzenegger). Her protector Kyle Reese (Michael Biehn), sent back in time by the human resistance, is killed in the process, but leaves Sarah pregnant with John. The film ends inconclusively, as Sarah escapes to the Mexican desert. *Terminator 2* (*T2*) was released to great anticipation built-up by an elaborate marketing campaign, which focused on the film's use of never-before-seen computer-generated imagery (CGI), and its large budget (an estimated $102m in 1991 or $343.79m inflation adjusted for 2013).[59] Schwarzenegger reprised his role as the Terminator, which significantly added to the film's box office draw. *T2* is set more than a decade after the first film. Sarah Connor is institutionalised for presumed paranoia and young John (Edward Furlong) lives with foster parents. The Terminator returns to protect John from the T-1000 (Robert Patrick), an advanced cyborg that has come to kill him. Although this sequel received an R-rating, *T2* is clearly aimed at a younger audience. Whereas *Terminator* emphasised Sarah Connor's fight for survival and her romantic interest in Kyle, this sequel foregrounds teenage John, portrayed as a surprisingly mature boy with leadership skills. Sarah has used her time in solitary confinement to exercise and become a tough androgynous fighter. By proxy, she represents the enduring warrior John is to one day become. Eventually, the Terminator succeeds in destroying the T-1000 thus saving John's life. Along the way, John insists that his mother be freed from hospital and that Cyberdyne be stopped in their development of artificial intelligence, hoping this might prevent nuclear war.

Composer Brad Fiedel composed the scores for both films. His themes in particular contribute to a sense of brand continuity across the franchise. For *Terminator*, Fiedel composed a synthesizer score that comprises percussive sounds, dissonant leads and pads and angular bass drones. Prolonged passages of this first score are remarkably atonal and abstract, the overall sound being at times alienating, at times ominous and threatening. This resounds with the Terminator, a cyborg-antagonist who throughout his pursuit of Sarah Connor indiscriminately kills bystanders. A blend of artificially created instrumental colours helps paint a dystopian picture. This synthetic approach reflects at once the intrusion of artificial intelligence on human life and Sarah's surreal

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[59] http://www.imdb.com/title/tt0103064/ [Accessed 28 January 2014]. Inflation adjusted using www.usinflationcalculator.com.

predicament. It therefore adds a subliminal layer of artificiality and alien-ness. Fiedel's tonal language is on the whole rather more abstract than one might expect from a mainstream Hollywood film, except for two notable themes that return in *T2*. The first theme may be perceived as a harbinger of hope or fate, as personified by Kyle Reese and the yet-to-be-born John Connor (Figure 9).[60]

Figure 9: Fate Theme

The repetitive melodic theme is easily memorable. It comprises a symmetrical pair of 8-bar phrases that act as antecedent and consequent. The first two bars of antecedent and consequent are exactly identical, as are bars 5-6, resulting in a highly repetitive inner structure reminiscent of a popular idiom. The theme's minor mode may be perceived as subdued, evoking a pensive mood in the context of this film. The chord change to a major chord on the submediant in bar three is commonly found in 1980s pop music, as is the progression of major chords on the submediant (bVI) to subtonic (bVII) at the end of the consequent phrase, which on repetition leads back to the minor tonic (i). The theme keeps returning back to D-minor on the commencement of another statement of the theme. Fiedel uses a synthetic flute-like sound that easily covers the theme's relatively wide pitch range of an octave and a perfect fourth without shifts in timbre one might notice with an acoustic instrument. To a musically experienced listener this may underline the artificiality of the score. In *Terminator*, the Fate Theme is used frequently and in different contexts. Most lyrically, it is performed on an electric piano in the above harmonisation, when Kyle confesses his love for Sarah. This piano performance brings the theme closest to resembling a pop ballad, creating a sentimental moment. On the soundtrack album, this rendition is labelled 'Love Theme'. Elsewhere, the theme's

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[60] I am grateful to my former students Robert Ashbridge and Andrew Simmons who first suggested that this theme may signify hope.

melody is played unaltered but over a tonic pedal, lending it a more insistent, urgent quality.

In *T2*, the Fate Theme is stated in the opening title, making a thematic and affective link between the sequel and the original film. Given the sequel's shift in focus to John, it seems logical that the theme is used less frequently in *T2*. After the opening title, the theme is rarely used. Where it does occur, it tends to underscore moments that present a wider outlook, beyond the plot at hand. For example, when Sarah muses over her son's relationship with his protector (1:25:16), a subtly re-harmonised rendition of the theme is played on guitar. When in order to destroy all traces of the original Terminator, John retrieves components from the Cyberdyne lab, the theme is heard (1:48:50). The most overt statement accompanies the Terminator's destruction (2:20:45), playing along as Sarah lowers him into the molten steel pool. There is a marked absence of any romantic encounters in *T2*, surely in part motivated by its aim to appeal to younger viewers. Whereas the fate theme accompanied Sarah's relationship with Kyle in the original film, it serves no such purpose in *T2*. On the lack of romance in *T2*, Thompson notes that 'although there is no romance, John's friendship with the Terminator and that relationship's humanizing effect on the latter provide comparable emotional appeal.'[61] Importantly, the use of the Fate Theme in the opening title of *T2* makes an immediate musical link between the sequel and the original film, acting as a potent tool to engage pre-invested viewers.

The second musical idea established in *Terminator* and used again in *T2* is a series of drum hits that announce the presence of the Terminator. Used as a rhythmic cell set in 6/8, the pattern is used to accompany the fate theme during *Terminator*'s main title. Rebecca Eaton has provided a transcription and brief discussion of the pattern in the context of *Terminator* (2008, p. 112).[62] In any case, in *T2*, the pattern has been simplified (Figure 10) and it is now firmly in 6/8, resulting in an even more assertive, powerful sound. Overall, the main title music of *T2* closely resembles that of the original film, the main difference being an updated sound, resulting from the use of more advanced drum computers. Fiedel again chooses to rely on synthetic sound sources even though the

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[61] Thompson (1999, p. 42).

[62] Eaton claims that what she calls a syncopated rhythmic tattoo in 6/8 hangs over the bar. In my view, she has transcribed the passage incorrectly: Whilst indeed syncopated, the short motif nevertheless fits perfectly into each bar of 13/16.

film's (music) budget presumably would have allowed him to use acoustic percussion. Fiedel's choice may have been conceptually motivated in that a purely synthesized sound stays true to the franchise's roots and resounds with the sequel's sci-fi/action genre and dystopian subject matter. In *T2*, the pattern is rarely used, aside from the opening and closing titles. This makes sense, because whilst in the original film it stood for the threat of the Terminator, he is now John's protector. The only time during the film the pattern is heard at all is in a variant form, the rhythm adapted for a low strings ostinato with drum accents during a helicopter chase (1:57:20).
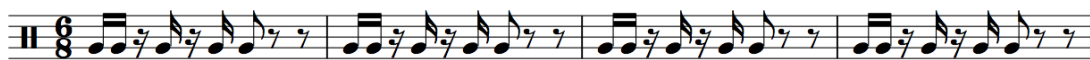
Figure 10: Terminator sonic mnemonic

This pattern of drum hits has acquired an extra-filmic life of its own, so recognisable that it has come to represent the *Terminator* franchise as a whole. A so-called sonic mnemonic is 'a short sequence of sounds that can be used across various media to aid brand recognition.' (Bronner & Hirt, R. (eds.), 2009, p. 207) The *Terminator* drum pattern is sufficiently concise and unique to function as a sonic mnemonic that reminds viewers of the franchise outside the context of the first two films. Marco Beltrami scoring *Terminator 3* (2003) and Danny Elfman scoring *Terminator: Salvation* (2009) have used the pattern. It is also used extensively in the 'Terminator 2 – 3-D' attraction at Universal Studios and consistently accompanied trailers for the short-lived *Terminator: The Sarah Connor Chronicles* (2008-2009) television series. Whereas advertising jingles commonly end up representing in the public consciousness the brand they promote, few if any other film scores have taken on an extra-filmic life in the way the *Terminator* drum pattern has. The shower scene string stabs from *Psycho* (1960) and the semitone motif from *Jaws* (1975) come to mind, both often quoted outside the context of their respective film. The difference, however, is that whereas quotations of motifs from *Psycho* and *Jaws* refer back to the films they originally accompanied, the *Terminator* sonic mnemonic is used to represent a whole franchise. The main title theme from *Star Wars* perhaps functions in a similar way, but, this is a composed piece in A / B / A form that is over a minute long. Even its most recognisable phrase (the antecedent phrase after the opening fanfare) takes nearly five seconds and comprises six different pitches. The

Terminator sonic logo lasts less than two seconds and requires no musical pitch to be recognised. Perhaps the only comparable precedent is the opening of the Twentieth Century Fox fanfare. In creating a sonic mnemonic comprising only unpitched drums, Fiedel ironically gave up any enforceable claim to copyright: A rhythm alone is not protectable.

So-called remakes are another way in which Hollywood tries to contemporize, stylistically or culturally adapt films that have proven commercially viable in another era or another country. Christopher Nolan's *Batman Begins* (2005) was a reboot for Warner's once lucrative but now ailing Batman franchise.[63] Tim Burton's 1989 highly acclaimed film had portrayed the conflicted and complicated hero (Michael Keaton) fighting a hilariously camp Joker (Jack Nicholson) in a dark, neo-Gothic Gotham. Danny Elfman's score dramatically underpinned the flamboyant comic book atmosphere and has been analysed in Halfyard (2004). By contrast, Nolan created a film that engaged new audiences and breathed new life into a familiar character, by skilfully striking the balance between staying true to the Batman mythology while also applying his own keen sense for character development and narrative flow. *Batman Begins* was 'imbued with a cinematic realism that is unconventional in comic book adaptation; […] a deliberate recuperation of the Real after Tim Burton's hyperstylization in *Batman* and *Batman Returns*' (Isaacs, 2008, p. 52). Nolan sought a cleaner visual style, convincing character backgrounds, and intelligent, philosophically charged discourse. The 2008 sequel, *The Dark Knight*, introduced perhaps one of the most compelling Hollywood villains in recent memory, Heath Ledger's take on the Joker. Hans Zimmer and James Newton Howard are jointly credited with the score. The PRS cue sheet reveals that the film features an impressive two hours, seven minutes and 37 seconds (2:07:37) of original composed underscore and an additional eight minutes of other music.[64] This means that the film at a running time of just over 2:30:00 is almost continuously accompanied by music. Zimmer is assigned a writer's share of 17.25%, James Newton Howard 12.5%, Mel Wesson 9%, Lorne Balfe 7.5%, Henry Jackman 2.5% and Alex Gibson 1.25%. Although it is not clear what each individual contributed to the score, anecdotal evidence suggests the two credited composers divided their workload whereby Zimmer

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[63] *Batman* (1989), *Batman Returns* (1992), *Batman Forever* (1995), *Batman & Robin* (1997).
[64] See Appendix 5.

scored passages featuring the Joker and Howard those with Dent / Twoface.[65] This is supported by the marked difference between the cues respectively accompanying those characters. Zimmer's work on the Joker is predominantly based on eerie acoustic and electronic sounds, whereas Howard's approach to Dent draws on an orchestral palette, far more traditional in style. The assignment of discrete musical forces acts as part of a leitmotivic approach. There are of course many non-film precedents for this leitmotif-by-instrumentation, for example in Bach's St. Matthew Passion, wherein only a string quartet, in contrast to the *recitativo secco*, accompanies solo voice whenever Christ's words appear.[66] What would appear to be Zimmer's contribution to the score is minimalist (with the typical string ostinati and repeated motifs), structurally fragmented, and closely shaped to the onscreen action. The Joker receives his own one-note motif whereas Dent is accompanied by more through-composed material. Throughout the film, the ever-present string ostinati, often associated with Batman's presence (physical or spiritual) and actions, in their mechanistic predictability suggest a level of control and certainty. In that most ostinato figures are confined to a minimum of pitches (e.g. two semiquavers per pitch, only two pitches alternating, a minor third apart), they act as small musical cells. These can be liberally added and withdrawn from the musical texture. The involvement of Mel Wesson as so-called ambient music designer raises questions as to role of the credited composers in terms of creative input, decision-making, and conceptual workflow. The fact that a de facto musical sound designer was employed perhaps brings the conceptualisation of the score much closer to the realm of sound design. Conventional sonic hierarchies are unsettled. The role of timbre in this score is significant because much of the musical development takes the form of timbral shifts rather than melodic or harmonic progression. The Joker's one-note motif is an extreme example of this. Such low-profile scoring makes for music that can easily slip in and out of the sonic environment, seamlessly integrated in the soundtrack as an organic part. The resulting score is a potent storytelling tool but markedly lower in profile than Danny Elfman's score to *Batman* (1989). I will return to the role of music in *The Dark Knight*, specifically addressing the interplay of music and sound design in the film, in Chapter 4.

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[65] The score was disqualified from the Oscar race in 2008 for having too many composers involved (see http://www.theguardian.com/film/2008/nov/13/dark-knight-score-oscars, accessed 16 September 2013). I had a long discussion with Simon Greenaway, Head of the ASCAP London office, when I was refused access to the cue-by-cue breakdown of *The Dark Knight*, which of course is available to ASCAP and also Warner Brothers. Proprietary considerations and concerns over confidentiality were flagged.
[66] Another example can be found in Don Giovanni, where trombones are linked to the Commendatore.

Trying to market a hybrid between sequel and remake, Disney successfully built up anticipation for *TRON: Legacy* (2010), the belated follow-up to the science-fiction film *TRON* (1981). Set in the present day, the plot reprises the same characters and cast from the original and also introduces a new generation of protagonists, which makes it resemble a sequel. However, the underlying conflict, set pieces, and major plot points are nearly identical to the original film, which is rather typical for a remake. Sam Flynn (Gareth Hedlund) is lured to his missing father's abandoned game arcade from where he, like his father before him, is transported into cyber-reality, the so-called Grid. He gets captured by Clu, his father's virtual nemesis, whom he narrowly escapes with the aid of Quorra (Olivia Wilde). She leads Sam to his father, who has been trapped in the Grid, unable to return to the real world. Overcoming many obstacles, father and son reach the exit portal, but the former must sacrifice himself in a final fight against Clu. Joseph Konsinski, who had previously directed only commercials, directed *TRON: Legacy* (*T:L*). Like its predecessor, *T:L* pioneered new visual effects. Showcasing the latest CGI technology, shot partly in the IMAX format, and screened in 3-D where available, the film comprises dazzling set pieces and stunning action sequences. Kosinski hired the popular French electronic music duo Daft Punk (Guy-Manuel de Homem-Christo and Thomas Bangalter) to compose the score. Whilst Daft Punk had enjoyed commercial success and critical acclaim since their formation in 1994, this was their first feature film score. In preliminary meetings between Daft Punk and Kosinski reference was made to Wendy Carlos, Vangelis, and Philip Glass,[67] and these influences are evident in the soundtrack. Whereas in a sequel music might aim to maintain a brand identity by re-using familiar themes, the music in *T:L* only makes one single reference to the original: When during the prologue Sam's father tucks young Sam into bed, he briefly sings Wendy Carlos's original *TRON* theme. With their score, Daft Punk depart from their retro pop dance music sound and instead blend electronica with acoustic orchestral elements. Given the considerable advances in music technology since the early 1980s, Daft Punk had far more sophisticated resources at their disposal than Wendy Carlos thirty years earlier. In a traditional sense, in terms of thematic material and musical development, their score may not be as sophisticated as Carlos's. However, Daft Punk's score draws on a vastly increased range of synthesized tone colours and a wider palette of timbres and makes extensive use of digital effects processors. The

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[67] Lee (2012) [Accessed 29 September 2012].

resulting score is an assured melange of regal orchestral passages and sleek, powerful synthesizer elements. The musical material is distinctly minimalist and the score's overall synthetic nature works synergistically with the film's high-gloss visual aesthetic. The soundtrack album for *T:L* was commercially successful and the film performed well at the box office.[68]

To maximise a film's potential box office draw, studios undertake exhaustive market research whose results can cause creatives and executives to clash. Wyatt (1994, p. 158) confirms that 'at least 75 percent of the top two hundred films yearly are market researched in some form' and that these studies are conducted during pre-production (concept testing, casting testing, title testing) or post-production. Test screenings are conducted to gauge audience responses and seek feedback on all aspects of the film, including music. The practice is so common that it was considered a rare exception when director P. T. Anderson had a contractual agreement that blocked test screenings for his period drama *There Will Be Blood* (2007).[70] Altman gives an insightful account of the test screenings for *Cocktail* (1988), which although screened in the same version each time was introduced to test audiences in different ways to observe changing responses. 'Tom Cruise/Romantic Drama,' 'Saturday Night Fever', 'Success Is Not Enough', and 'Like Brothers' were the various terms used to describe the film beforehand (Altman, 1999, p. 133). Following on from the fact that a single – and seemingly mono-dimensional – film can be made to appeal to different audience groups, Altman elaborates on Hollywood's unexpected 'filmic multivalency' (1999, p. 135). Negative responses from test screenings can result in re-editing, re-shooting or changes to any aspect of the film. Occasionally, feedback on the score can necessitate changes to the music. Gabriel Yared was famously replaced by James Horner on *Troy* (2004) following negative comments on the score at test screenings. He was quite vocal in airing his discontent. Having spent more than 18 months on the project, Yared still seemed emotionally affected when he spoke about the incident at a recent BAFTA event.[71] Mychael Danna was replaced at short notice by Danny Elfman on *Hulk* (2003) and although there are various rumours as to the reasons, poor test screenings may have

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[68] The soundtrack album reached number ten in the Billboard Top-200 charts in December 2010. http://www.billboard.com/charts/2010-12-25/billboard-200 [Accessed 29 January 2014].
T:L grossed an estimated $400m worldwide, more than double its reported budget of $178m. http://www.boxofficemojo.com/movies/?id=tron2.htm [Access 29 January 2014].
[70] See Semanick & Scarabosio (2008) [Accessed 24 June 2012].
[71] Gabriel Yared at a BAFTA masterclass at the BFI Southbank, London on 26 June 2013.

been a factor.[72] Having to make changes to a film because of poor test screening results cannot be a rewarding experience for anyone affected. Although from a business perspective it makes perfect sense to test films, the data obtained constitutes a limited quantification of subjective responses to the respective film. It must be difficult for filmmakers and composers alike to accept these screening results as workable, constructive feedback. Composer Thomas Newman reflects on his views on test screenings:

> They're going to do everything they can to make the movie as presentable, as close to their vision as they can make it. The terrible thing is, it's a half-way point. It's a non-finished product that's presented as if it's finished so that the studio hopefully can get behind it or they can get high numbers or whatever. What happens after a preview, if it's gone well, is you can definitely feel a narrowing of creative scope or possibilities. All of a sudden a director will say, "Well now look, here's why this temp music works so well and this is what we need." It's a little dismaying. You feel a little bit like you're already forced into a direction as opposed to being more initially creative.[73]

Over recent decades, Hollywood has refined film formats into concise sellable assets. Two forms are the so-called blockbuster and films that adhere to the notional rules of so-called high concept. The two concepts are related and overlap. Music in these films must work to relatively strict parameters in order to reinforce the narrative premise and commercial intent of the film as a whole. The blockbuster was the natural continuation of Hollywood's commercial tradition, following the phenomenal commercial success of Steven Spielberg's *Jaws* (1975).[74] A blockbuster was expensive, spectacular, and designed to be a substantial box-office hit. Hollywood began serving an audience demand it had constructed in the first place. Thomas Elsaesser (2001, p. 16) explains that a blockbuster 'combines (in the most exemplary but also the most efficient form) the two systems (film-as-production/cinema-as-experience), the two levels (macro-level of capitalism/micro-level of desire), and the two aggregate states of cinema experience (commodity/service)'. He calls blockbusters 'miracles of engineering and industrial organization' (ibid., p. 17) and compares Hollywood studios' attempt to outdo each other's blockbuster efforts to the Cold War arms race. Whilst the race for ever more

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[72] Anecdotes circulated among the Berklee College of Music film scoring community, including members of the faculty close to first-hand sources, when news of the replacement first broke in 2002.

[73] https://www.editorsguild.com/Magazine.cfm?ArticleID=528 [Accessed 16 September 2013], reprinted from an interview from the front page of Editors Guild Magazine (January-February 1996: Volume 17, Number 1). Interviewer not named.

[74] The use of past tense here reflects the notion that blockbusters have been superseded by so-called high concept films.

impressive visual effects was certainly on, blockbusters remained markedly conservative in their displayed value system and americo-centric outlook, carrying 'the prevailing values, attitudes, and tastes of the American public' (Wyatt, 1994, p. 174). For the most part, heterosexual males battled villains and monstrous evil on American soil to save fellow law-abiding American citizens. A blockbuster was widely advertised in print, poster, and TV campaigns many weeks in advance. Merchandise, particularly toys, would begin to appear in shops, aiming to attract especially younger consumers. Promotional tie-ins with fast food chains, soft drink firms, and even car manufacturers would encourage audience participation and pre-investment in the film. Of the film itself the audience might only see small fragments in the form of teaser trailers that revealed little more than a few visual vignettes and of course a recognisable logo. A popular singer would release a so-called theme song loosely related to the film. For example, R&B singer R. Kelly released 'Gotham City' for *Batman & Robin.*[75]

Soundtrack albums for blockbuster films often featured a combination of compiled and newly composed material. Unsubtle large-scale scores helped deliver an engaging high-impact viewing experience and were reinforcing of the film's style, outlook and message. Bankable pop songs would facilitate extra-filmic consumption. Stephen Holden (2011, p. 440) points out that the soundtrack album of *Top Gun* (1986) sold millions of copies. The song 'Take My Breath Away' is commonly associated with *Top Gun* and became widely popular outside the context of the film. Remarkably, in the film itself it only features for eleven consecutive minutes. In terms of intra-filmic narrative and experiential value, the song plays a relatively smaller role than Faltermeyer's composed underscore, which lasts just under 50 minutes.[76] On the other hand, the song successfully pre- and post-conditioned listeners, effectively acting as a tool for audience bonding and likely encouraging repeat viewing of the film among those invested in the romantic storyline of the film. Blockbusters provided lucrative opportunities to film composers, but the films' commercial and conservative nature precluded ground-breaking musical experiments. It is not surprising that blockbuster scores were largely unoriginal and derivative when effectiveness and instant accessibility were of primary concern. At the same time, scoring a blockbuster was the height of achievement for a

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[75] In the chorus, R. Kelly muses 'A city of justice, a city of love, a city of peace for every one of us. We all need it, can't live without it: Gotham City, oh yeah.'

[76] See PRS cue sheet in Appendix V. Note that due to an as yet unexplained administrative error, 'Take My Breath Away' is not listed in the cue sheet. See a more detailed discussion of the composed score below.

Hollywood composer, certainly in financial terms. They would enter into a project aware of the limitations placed on them, but also aware of the possibilities in terms of available resources and income prospects. Although for a film composer they may have offered limited scope for originality, they nevertheless constituted a highly desirable and lucrative opportunity for wide audience exposure and the strengthening of a composer's track record.

Geoff King (2003, p. 119) comments that 'contemporary blockbusters of the large-scale spectacular variety are often lumped together with spin-off forms such as movie-based theme-park rides or videogames. The fact that films are sometimes converted into such formats is used by some commentators as a basis on which to imply that the films themselves exhibit the far less narrative-based qualities of rides or games […] Narrative is said to be subordinated to the provision of a spectacular "thrill-ride."' King then undertakes a detailed narrative analysis of *Terminator 2*, demonstrating how even a blockbuster can sustain a compelling and complex narrative. *Terminator 2* tackles a complex premise and rich character set. Comprising multiple narrative strands, the film invites a range of readings that probe deeper than its surface plot. Whereas according to Halfyard (2004, p. 53) the Terminator was a 'supervillain' in the first film, this time he returns as a protector and saviour. Anton Kozlovic (2001) identifies religious connotations, pointing out how both Jesus Christ and the Terminator 'sacrificed their lives, though innocent, for the sake of humanity' and how a 'second coming' is important to both narratives. King plausibly outlines that in the case of *Terminator 2*, the emphasis on spectacle does not stand in the way of a well-constructed, engaging narrative, with well-developed characters and plausible cause-effect chains. In predictable blockbuster fashion, Brad Fiedel's score effectively reinforces primary aims of the film and helps imbue key scenes with a suitable sense of tension, drama, danger, etc. In rare moments of pause and reflection, for example during the desert retreat around the mid-point of the film, the score shifts accordingly to a mellower tone and perhaps for the only time an acoustic instrument (a guitar) is used. The fact that the score must help drive this high-octane sci-fi blockbuster does not preclude opportunities for some interesting nuances. For example, what appears to be a leitmotif for the T-1000 villain is a low metallic moan that reliably accompanies him. This quasi-musical sound is reminiscent of *music concrète*. The interaction of music and sound design is addressed in Chapter 4.

Blockbusters were cherished cultural commodities that resounded with a large international audience but they increasingly became predictable and interchangeable. *Twister* (1996), *Independence Day* (1996), *The Core* (2003), and *Armageddon* (1998) all offer similar thrills. While these formats remained popular for more than two decades, new breeds of high-budget, large-scale action films emerged in the 1980s that no longer fit the blockbuster label. According to Wyatt (1994, p. 80), 'high concept can be viewed as a progression from the blockbuster'. A high concept idea has to be easily understood, concisely summarized in a sentence or two, intrigue the audience, be full of conflict, have a big event, leave room for a sequel, attract an A-list star, be fresh and marketable, and have a unique take on a known idea or genre. Examples of high concept films include *Speed* (1994) (there is a bomb on a bus), *Face/Off* (1997) (good guy and villain swap faces), *Se7en* (1995) (serial killer commits murders based on the seven deadly sins), *Elf* (2003) (human adopted by elves returns to live among humans), *Die Hard* (1988) (one man fights a group of terrorists), *Groundhog Day* (1993) (man relives one day over and over), *Independence Day* (1996) (What if aliens invaded Earth?), *Jurassic Park* (1993) (What if dinosaurs were brought back to life?), and *The Incredibles* (2004) (What if there was a family of superheroes in hiding?).

High concept films may be built around popular actors: Jim Carrey as God (*Bruce Almighty*, 2003), Robin Williams in drag (*Mrs. Doubtfire*, 1993), Arnold Schwarzenegger and Danny DeVito as fraternal twins (*Twins*, 1988), Vin Diesel as a nanny (*The Pacifier*, 2005). Although the term 'high concept' may seem counterintuitive at first, it stems from the idea that a film's premise should be pitchable in just a few words. As Stephen Spielberg (Hoberman & Duncan, 1988; quoted in Wyatt, 1994, p. 13) says, 'if a person can tell me the idea in 25 words or less, it's going to make a pretty good movie. I like ideas, especially movie ideas, that you can hold in your hand.' Blake Snyder (2005, p. 3) emphasises the importance of so-called loglines that speak to the target audience and 'cut through all the traffic that's competing for their attention'. He explains that paired with a catchy film title a logline should ideally contain irony, conjure up a compelling mental picture and hint at a target audience and production cost (ibid., pp. 15–16).[79] Wyatt (1994, p. 24) points out that high concept films focus on style and marketing,

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[79] A fascinating collection of loglines can be found at http://thescriptlab.com/logline-library. [Accessed 16 September 2013].

relying on the five elements look, stars, (pop) music, character, and genre while encouraging a single reading. A high-gloss visual aesthetic is common to most high concept films.

An emphasis on surface qualities means characters are presented as types and their physical attributes are focused on, as for example in Rocky Balboa in *Rocky* (1976), Alex Owens in *Flashdance* (1983) (Wyatt, 1994, pp. 53–60) or Neo in *The Matrix* (1999). High concept relies 'heavily upon replication and combination of previously successful narratives', and 'economic risk is minimized through emphasizing the familiar over the original' (ibid., pp. 13/160). Wyatt concedes that 'Hollywood is only producing more of the same' (ibid., p. 104). High concept films streamline narrative in the service of accessibility and marketability, and distill stories, emotions, looks and all aspects of filmic expression to a product that encourages a single reading. This prevents any creative expression that is not directly reaffirming that reading. In all their glossiness and big budget impact, high concept films leave little space for moments of excess, lyricism, pause, or ambiguity. Everything the audience sees or hears must be conducive of an unambiguous message, including music.

Since the early 1980s, producer Jerry Bruckheimer has produced some of Hollywood's most commercially successful films and television series.[81] Starting with *Top Gun* (1986), Bruckheimer was a key driver of blockbusters and high concept films with an emphasis on style and marketing. Encouraging a single reading, the promotional material for *Top Gun* included a 'posed "glamour" still [showing] masculine Tom Cruise [striking] a pose against a jet, while blonde, voluptuous Kelly McGillis hangs from him. The image encapsulates the sexual dynamics and genre (action with romance), both marketing focuses for the film.' (Wyatt 1994, p. 36) *Top Gun* targets a wide range of male and female viewers with military equipment, attractive pilots, fast motorcycles, americo-centric patriotism, and Californian sunsets. Much of the film alludes to the spoils and glory of war whilst avoiding the stakes of true military or interpersonal conflict. Most of the gripping aerial combat segments are training exercises. In the few real enemy encounters, token opponents are fended off effortlessly. Harold Faltermeyer's score relies heavily on synthesizers and the TR-808 drum computer but also makes extensive

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[81] For example, *Days of Thunder* (1990), *Crimson Tide* (1995), the ongoing *Pirates Of The Caribbean* franchise, several *CSI : Crime Scene Investigation* television series (2000-present). See also www.jbfilms.com [Accessed 20 October 2012].

use of electric guitars. Virtually all cues derive either from composed themes or one of the especially written rock songs. Faltermeyer takes a modular approach to this score and assigns musical themes to triumphant in-flight Maverick (successful flying = 'Top Gun Anthem') and to the death of co-pilot Goose (mourning = 'Memories'). Flight sequences are consistently underscored with instrumental derivatives of rock songs heard elsewhere in the film, co-written and arranged by Faltermeyer. The song 'Take My Breath Away' underscores the relationship between Maverick and Charlie and is adapted to serve narrative requirements (romance = 'Take My Breath Away'). Overall, the resulting score is an assembly of three musical vignettes, interspersed with marketable rock songs. In the predictable way these vignettes reappear they may at times feel heavy-handed. Serving this high concept film, the score serves its purpose in complementing impressive key visuals and adding emotional depth to less than fully developed main characters. The score's style and idiom contribute to the desired contemporary feel of the film and underline a testosterone-driven sense of power and machismo. At the same time Faltermeyer's songs are highly sellable material. The award-winning 'Top Gun Anthem' is the main theme heard throughout the film to signify victory and triumph on Maverick's part.[82]
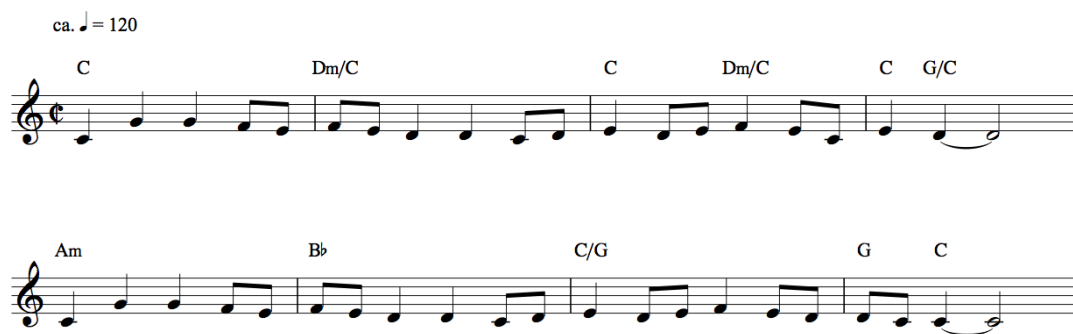
Figure 11: Top Gun Anthem

The theme is written in a simple 8-bar form and comprises two nearly identical antecedent and consequent phrases. The first two bars in each phrase are exactly alike. The fourth beat of bar 3 is identical in rhythm and similar in shape to the third beat in bar 7 except that the last quaver in the consequent phrase is a step higher. The fourth bar ends on a half cadence with a somewhat tension-filled dominant chord over a tonic

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[82] Faltermeyer shared a Grammy Award for 'Best Pop Instrumental Performance' with studio guitarist Steve Stevens and was also nominated in the 'Best Score' category.

pedal. The eighth bar ends with an appoggiatura on the downbeat, resolving to the tonic with a perfect cadence. In its simplicity and repetitiveness (the theme not only repeats in itself but also recurs frequently throughout the film), the 'Anthem' is likely to be one of the more memorable aspects of the score. It spans only a perfect fifth, and is thus limited in range and pitch set. The melodic contour resembles that of an idiomatic rock melody. The theme instils a sense of pride and grandeur with its masculine harmonisation and assertive rhythmic stride. The choice of electric guitar as the lead instrument makes for an assured and familiar sound, underlining the overall style and appeal of a rock song. This resounds with the machismo attitude of the film's protagonists and speaks to a large proportion of the presumed target audience. The use of electric guitar is significant in that Faltermeyer eschews traditional sounds of military bands and heraldic brass, which for evocative purposes might normally accompany such a deeply patriotic U.S.-American narrative. Instead, there is a certain down-to-earth-ness about this 'Anthem' whose very name suggests an aim of wide appeal and accessibility. The theme also helps instil a sense of commonality and group ethos, both important elements in the film.[83]

Composed scores can play an important role in high concept films, but the composer must understand the required tone and intended audience appeal to contribute suitably to the film. Avoiding ambiguities, music must reliably enforce the already obvious and enter into redundant affirmations of the same. Overall, music may complement the visual aesthetic of a high concept film and help construct an engaging and easily accessible narrative. Composed scores that challenge the audience to a more critical engagement do not belong in high concept films. And yet, for many film composers, Hollywood films remain the ultimate aim of many years spent interning, training, ghost-writing, working in advertising, television and independent film. Even though workload is distributed unevenly among Hollywood composers, the business continues to provide lucrative and attractive opportunities for many. In a business sense, film music must often bow to commercial considerations and pressures that may be at odds with originality and artistic integrity. Hollywood composers nevertheless enjoy generous resources and a chance to make a creative contribution to a product whose audience reach by far surpasses that of the concert hall, opera, and most other media.

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[83] On film music instilling a sense of commonality and shared destiny compare Gorbman (1987, p. 81).

Today's Hollywood films are cross-promoted, tied in with merchandise, synergised, streamlined, audience tested, re-edited, sequel-ed, prequel-ed, franchised, and remade. Studios profit from commercial content regurgitation. Not surprisingly, there is a widespread disdain among critics and theorists for recent Hollywood practice. Wheeler Dixon (2001, p. 356) pessimistically lists twenty-five 'reasons it's all over' for contemporary cinema, blaming among other factors cinema's teen-driven formulae, the influence of television, commercial pressures, and erosion of values conveyed, a lack of originality, and threats from other media including the internet. But systematic flaws in Hollywood's content selection, production, and promotional practice must not blind critics and theorists from acknowledging what the system nevertheless achieves in terms of creative and cultural expression. As Bruce Isaacs (2008, p. 67) points out, 'commodities do not negate cultural meaning or aesthetic value to the consumer'. Tara Brabazon (1999, p. 8) feels that the likes of *Star Wars* have been judged unfairly, because 'to discuss a Lucasfilm conspiracy of slick marketing is to completely misread the event. The uncomfortable recognition that too many journalists seem unable to grasp is that millions of men and women possess an emotional investment in this film.'. However, there are some recent trends that can be seen to have positively impacted on Hollywood practice towards a more diverse and less predictable field. According to Hilary Radner (2001, p. 72), since the 1990s there has been an ingress of European *auteur* directors who have transformed 'the conventions of classical Hollywood in order to convey a personal message and vision'. Radner also sees an increase in the number of Hollywood films with an international cast, crew, and financial structure, for example *Highlander* (1986), to which I would add *The Bourne Identity* (2002). Cousins (2011) predicts that we will 'still keep hearing about the business of film, of course, because movies make money as well as meaning. But to focus too much on the money is to miss the point, the pulse, the potency. Stanley Donen, who co-directed *Singin' in the Rain* (1952), told me that Hollywood was just a garden. Many flowers grew there.'

At the most commercial end of the spectrum Hollywood film scores evidence sameness in output.[84] The homogenisation of Hollywood films and film music is the result of fiscal pressures, risk-averse creative thinking and competition in the marketplace. These conditions have favoured a select few composers and concentrated workload with them. And yet, throughout Hollywood's short history, there certainly have been some inspired

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[84] See above, particularly in reference to Faulkner (1983, pp. 89-91).

scores of outstanding inventiveness and musicality, contributing to a diverse range of musical styles and genres in the Hollywood film music of the last thirty years. Hinting at the multifacetedness of recent Hollywood film music, Graves suggests that for every highly technical and low-profile Hans Zimmer score such as *Inception* (2010) there is another, 'properly composed' score by the likes of Marco Beltrami.[85] Expanding its portfolio of films to appeal to a wider range of viewer demographics, Hollywood has remained adaptive to shifting audience tastes. In doing so, it has explored novel forms and means of filmic storytelling that also call for new approaches to and styles of film music. I will address developments in filmic storytelling in the next chapter.

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[85] Speaking at SoundTrack_Cologne 10 on 21 November 2013.

Chapter 3 – Changes in Hollywood Storytelling

Film music is intricately linked with the filmic narrative and can serve as a powerful storytelling tool. Composer John Frizzell explains: 'I think that my inspiration for what I write is that I perceive my job as part of storytelling. I'm part of a storytelling team.'[1] In this chapter, I highlight ways in which film forms and formats in mainstream Hollywood have evolved over recent decades and make a link between such changes in storytelling and the accompanying music. In Part 1, I will first summarize some well-established concepts of classical and post-classical Hollywood film in order to subsequently outline perceived changes in the way more recent films tell stories. I will argue that changing narrative strategies and techniques have had a profound impact on the type, style and scope of composed music composers are able to contribute to film and also the modes in which that music is conceived and produced alongside the film during post-production. Whereas Hollywood's Golden Era canon was relatively unified in content, outlook, and conventions, recent films comprise a body of texts whose diversity is ever widening. Recent Hollywood writing has undergone a paradigm shift at story level that has necessarily altered the way film music is employed. If in the past classical Hollywood film scores adhered to proven narrative principles, then recent film music must adapt where established conventions are subverted. Observations on unsettled genres and musical generic coding precede an overview of new approaches to teleological narrative, mythopoesis, heroism and morality. In Part 2, I outline changes in film technology and evaluate their impact on prevalent scoring techniques and strategies. Changes in Hollywood storytelling have been facilitated by rapid digitalisation, which has transformed film production and post-production practices. Emerging camera technology, digital editing, and CGI have had a profound impact on film scoring that in turn has indirectly affected film music composition and production. Faced with a more flexible, non-linear approach to filmmaking, some composers may have struggled to adapt their creative process. Without a locked picture, traditional scoring methods fail and a final recorded score is quickly outdated as the edit changes. Accelerating editing speeds have temporal and affective implications for accompanying film music and audience interaction. The increasing use of CGI is transforming the way diegetic environments and objects are created and rendered, potentially precluding contributions film music might traditionally have made. Finally, in Part 3, I describe

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[1] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.

selected developments and trends in U.S. television that are felt to have had an effect on Hollywood film music. Pertinent factors include the role and gradual disappearance of the television theme tune, the effect of musical repetition and fragmentation, and the influence of popular music. I link the notable televisionalisation of cinema to business decisions and audience targeting. I will posit that developments in the scope and overall aesthetics of recent U.S. television programmes may have had an effect on scoring strategies and led to a shift in the way music is used in film also.

Part 1: Changing concepts and conventions

Bordwell, Staiger, and Thompson provide a definitive account of classical Hollywood cinema.[2] As Richard Maltby (2003, p. 333) suggests, 'the typical Hollywood movie appears as a coherent unified, story-telling whole'. Thompson (1999, p. 11) observes that classical Hollywood films employ basic techniques of progression, clarity, and unity and that a narrative should consist of a unified teleological chain of causes and effects that is easy for the spectator to follow.[3] Hollywood films 'tend […] to be much easier to understand, lacking the ambiguities and symbolism that can make many art films fascinating or pretentious'. A classical Hollywood film's premise must be clear and graspable. Snyder warns that if a film's premise, historic context or environment is too complex, its narrative exposition may get tedious. He calls the introduction of a film's narrative world 'laying pipe' and warns that 'audiences can only stand so much pipe' (2005, p. 26). He notes that films are most effective if problems are kept primal, for example 'don't get eaten'.[4] Cause and effect are easily readable in classical Hollywood film and the concepts of 'dialogue hooks' (Thompson, 1999, p. 20), a 'dangling cause', foreshadowing and the use of a repeated object or line of dialogue are well understood cohesion devices (Bordwell, 2006, pp. 41–43). To complete a satisfying viewing experience, 'everything in the film should be motivated', and 'virtually all Hollywood films achieve closure in all plotlines and subplots' (ibid., p. 12). Well-defined, investable characters are crucial for audience engagement and film 'needs characters with sufficient traits to be interesting and that these traits will be reiterated often' (ibid., pp. 14/17).

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[2] See Bordwell et al. (1985).
[3] Paraphrased from Thompson (1999, p. 10).
[4] Snyder (2005, p. 61).

Established conventions sustain a reliable tool set that film composers could rely on to predictable effect. Gorbman (1987, p. 72) has outlined the principles of narrative film music in classical Hollywood film. Flinn (1992) provides a comprehensive account of classical Hollywood films' inherent aims and outlook and music's status therein. Nicholas Cook (2000, p. 104) describes music's complementary contribution to classical filmic narratives and Kalinak (1992, p. 62) adds that classical Hollywood cinema harnessed 'some of the most powerful effects of music not just to support the seamless storytelling that Hollywood perfected but also to engage the audience uncritically in the world that the story creates. The classical Hollywood film scores revolved around a core set of functions.' For the purpose of this chapter, it is important to emphasise that a traditional Hollywood film that has a well-connected teleological narrative and characters with clearly described goals and motivation accommodates, and is effectively served by, a traditional, often orchestral, film score. To an entrained audience, traditional musical concepts of antecedent and consequent, anticipation, delay, tension and release naturally lend themselves to accompanying classical Hollywood films.

Hollywood's post-classical era is generally understood to include films from 1960 onwards.[5] It is no coincidence that a wave of experimentation swept Hollywood in the 1960s when for the first time young directors entered the field who were largely film school-educated. These young filmmakers had internalised classical Hollywood storytelling techniques and began experimenting with deviations from the norm.[6] Bordwell (2006, pp. 22/118) notes that young 'filmmakers had become conscious of the rules in a more abstract sense, as a codified set of preferred practices'. It is highly likely that this included a raised awareness of film music, its narrative and connotative potential. Harris (2009) illustrates how Hollywood practice may also have changed under the influence of European art cinema, particularly French *nouvelle vague* (ibid., p.12) and an undermining of the U.S. production code (ibid. p.181). Following a period of experimentation in the 1960s, Hollywood filmmaking settled into altered modes of storytelling that some feel departed considerably from classical practice and thus constituted a new, post-classical style. Thompson (1999, p. 344) notes that the 'primary traits ascribed to "post-classical" filmmaking are the breakdown of coherent plot development and character traits by the increasing dominance of spectacular action and

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[5] See, for example, Reay (2004, p. 21).
[6] The arrival of film school-educated directors in Hollywood is chronicled in Pye & Myles (1984).

special effects'. Field (2005, pp. 2–3) agrees that since the 1970s there has been an 'evolution of writing for the screen: […] the images are fast; the information conveyed is visual, rapid; the use of silence is exaggerated; and the special effects and music are heightened and more pronounced.' There is some disagreement over nomenclature and definitions and, according to Thompson, 'the classical approach to narrative has not been replaced by a new model; it has just not been as well applied recently as it had been in years past. One problem is that big producers have actually increased the traditional redundancy of Hollywood narratives in order to compensate for a supposed short attention span among spectators.' (ibid. 1999, p. 337) Director Roland Emmerich – maker of the super-spectacles *2012* (2009)*, The Day After Tomorrow* (2004)*, Godzilla* (1998)*, Independence Day* (1996)*,* and *Stargate* (1994) – insists that 'the Hollywood default remains characters we care about' (quoted in Bordwell, 2006, p. 107). Composer Klaus Badelt agrees that it is essential to have investable characters and for music to help build these characters:

> In general, music – if it's done right – does a lot of the storytelling. It does a lot of the 'caring-for-a-character' part. I think it's a very simple formula: If you care for the character, you can tell any story you like. The story can even have flaws. Look at *Pirates* [*of the Caribbean*] – the story… there's some open questions I still have about the story. But it doesn't matter. You allow this to happen because you get immersed [in] it. In that same film, for example, I think it took you thirty seconds to fall in love with the character Jack Sparrow. And you would care for him, and he could do whatever he liked. He doesn't even get the girl in the end. Or in *Gladiator*, our hero doesn't just not get the girl: He dies. That's brave for Hollywood filmmaking, isn't it? But you base a story on making the audience connect with a character. Let's say to simplify the idea a film has maybe the first five to ten minutes to grab the audience or not. I had a film called *K-19*, which was originally four hours long, but it had the whole pre-story of the characters: how they grew up in Russia in the Cold War, their relationship to the military, their relationship to their country. […] We didn't have time to tell that in the movie. The music had to introduce the characters. And that happens a lot actually, that the music will give you an impression of what the characters are in a film. And therefore, [music] is a major part [in determining whether the audience will] go with a film or not.[7]

Just as classical Hollywood films developed abovementioned techniques to achieve an engaging narrative, film composers refined reliable musical strategies also. For film composers, scoring conventions provide the reassuring certainty of knowing what will work in a given situation. As Gorbman (1987, p. 30) points out, music 'in film *mediates*, [...] the connotative values which music carries, via cultural codes and also through textual repetition and variation, in conjunction with the rest of the film's soundtrack and

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[7] Klaus Badelt interviewed on 10 November 2011 by Skype. For the full transcript see Appendix II.

visuals, largely determine atmosphere, shading, expression, and mood.' Film music mediates film but is in turn mediated by it. Musical structure, idiom, expressive range, etc. are shaped by the film during the post-production process, the result evident in the final musical product. One place in films where music could exist more freely were orchestral overtures at the beginning of a film, i.e. thematic expositions that exploited the undivided attention of the viewers to plant memorable musical ideas in their minds. Bazelon (1975, p. 26) notes that 'the theme tune during the lush, symphonic era arose as a built-in promotional advertisement heralding and selling the film in which it appeared'. Despite tried and tested benefits for audience bonding, the use of musical main titles or overtures has declined significantly in recent years.[8] The main titles for the ongoing *James Bond* (1962-present) and *Mission Impossible* (1996-present) franchises now are rare exceptions. Among the films since 2005,[9] only approximately one in five opened with a main title or overture. The choice whether to have a musical opener is one of style and preference on the part of the filmmakers. Filmmakers may prefer to omit a main title segment in favour of dropping the audience directly into the action, as is the case in Nolan's *The Dark Knight*. By contrast, Tim Burton's *Batman* (1989) opened with a romping musical overture, which to today's viewers may seem old-fashioned and heavy-handed. A main title sequence or overture effectively delays the film's start. This is particularly apparent in films where the music plays under a static visual or title card, as for example in *My Fair Lady* (1964). In more recent films such as *Back to the Future II* (1989) and *Forrest Gump* (1994) the extended opening segments with a musical main title delay narrative progression. Main titles are proven tools to build audience anticipation, to help the audience get settled in their seats and forget about everyday life, suspend their disbelief, and settle into the film. They help set the film's tone, leaving the audience suitably primed by the time the story starts. Films lacking an overture may feel less constructed and more intriguing to viewers, enticing their curiosity by offering the immediacy of a beginning unannounced and unmitigated. This strategy now appears to be pursued and equally widespread across different genres.[10]

Top Gun (1986) does not open with an overture, strictly speaking, but it begins with a prologue that relies on music and stylised visuals. [In *Top Gun*,] 'music functions to

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[8] See Chapter 1.

[9] From among those sampled in the study in Chapter 1.

[10] One may also see parallels with common screenwriting advice for story structure: Start in the middle of a problem.

create an excess in the opening, which traditionally has always privileged self-conscious and concentrated narrative information' (Wyatt, 1994, p. 42). At the beginning, the score enters with just a TR-808 drum sound, a modern sound at the time, if clearly reminiscent of the 1980s to today's ears. Using synthesizer pads and omitting the melody, Faltermeyer uses these first minutes to introduce the chord progression of his 'Top Gun Anthem' in its revolving entirety. The film's premise is explained with a wordy title card announcing that 'Top Gun' is an elite school for aerial combat training. The music is timed so that a downbeat on the tonic coincides with the title card 'TOP GUN', accented with the chime of a tubular bell. Dispensing with any character exposition, the film instead opens with a montage of shots of routine activities on the deck of an airplane carrier. Set at dawn, this opening segment sets up locale and environment but more importantly focuses on the sleek fighter jets (visual) and their roaring engines (sonic). The iconic running sequence in *Chariots of Fire* (1981) makes similar use of synthesizers and drum loop accompaniment that provide an affective counterpart to stylised visuals. Faltermeyer's score here effectively resembles a pop song intro, which may speak to the target audience. The overall sound of the music is soothingly bass-heavy at first and relies on smooth and calm electronic timbres. Then a cut-off filter on the synthesizers gradually opens (1:40), resulting in brighter chords on the fade-up to Faltermeyer's composer credit. The same chord progression continues. This first cue subliminally seeds the film's main musical theme in the viewer's ears and minds. When a little later the actual melodic theme is heard over the same chord progression, it therefore feels more familiar. Tony Scott's directing credit (2:30) is embedded in a harmonic build-up over a dominant pedal, leading to a shot of jet engines firing (2:38) and a sudden segue to the rock song 'Danger Zone'.[11] Crucially, the main theme ('Top Gun Anthem') is not heard in this opening, only the theme's harmonic accompaniment. Faltermeyer's compositional approach might be considered ambient and low-profile and as such has a certain contemporary flavour that retains much currency today.

By contrast, the more recent *TRON: Legacy* (2010) opens with 'The Grid', which underscores a brief off-screen monologue.[12] The last line of the monologue cues the *TRON* theme, which starts as the film's title is shown in screen-filling letters. The theme

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[11] Written by Giorgio Moroder and Tom Whitlock, performed by Kenny Loggins.
[12] Track names taken from the iTunes soundtrack release.

is performed on a synthesizer with a bold, angular, masculine sound, sitting atop a string ostinato and padding synths. The cue sounds proud and assertive, if at once ominous and intimidating. Overall the score features hardly any melodic material.

Figure 1: TRON Theme

The diatonic chord progression accompanying this theme is distinctly cyclical, the chord roots descending in stepwise motion over a span of ten bars and then rebounding more swiftly back to the tonic (via bVI and bVII). This closed unit of 16 bars suggests a popular idiom and has no drive towards development or variation.[13] The theme and the chord progression that accompanies it recur throughout the film in different re-arrangements but are not discernibly attached, in leitmotivic fashion, to any particular character. In its simple sequential make-up, the theme quickly attains a certain familiarity, which facilitates viewers' investment in the film. In the context of the film the theme serves a unifying function, in a similar fashion to how the film's consistent black and blue colour scheme provides a visual constant.

Overtures and the occasional love theme aside, there are abundant examples of scores whose musical coherence is compromised in the service of other filmic elements. Brown points out that film leaves music 'no space to develop a traditional melody' (Brown, 1994, p. 112). He regrets the 'death of musical forms, cadences [and an abundance of] pre-existing formulae' (ibid., p. 95). Well-balanced, conclusive melodies were a relatively

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[13] At an IMAX presentation of this film, the audience can *physically* feel the theme's entry.

rare occurrence in classical Hollywood films and they are perhaps even rarer in recent Hollywood films. Composers have adapted to films' structural requirements in devising fragments of melodies, motifs that would enable them to more flexibly start and stop musical movement. Brown observes that melodies are 'quite often broken down into brief motifs that allow the viewer/listener to recall the entire theme [...] without hearing its entire elaboration. […] Among other reasons, the cinematic situation often affords only enough time for a motif taken from a melody.' (ibid., p. 42) When composers rely on melodic fragments that in the form of motifs recur throughout a film, they can use these fragments as musical building blocks from which scores can be crafted, while also facilitating film music's meaning-making functions. This is not a new technique. Composers as far back as Bernhard Herrmann devised small musical units from which substantial passages of his scores were then constructed. He explained that 'the short phrase is easier to follow for audiences, who listen with only half an ear. Don't forget that the best they do is half an ear. The short phrase also serves as a more manipulable building block better suited than a developed theme to the rapidly changing nature of the cinema and its edited flow of images.'[14]

It is debatable whether film scores should be melodic at all. From a composer's point of view, a well-developed high-profile melody played by a large ensemble is highly rewarding. In terms of writing effective film music, however, melodies may be less than necessary. Observers as early as 1935 suggested that film music should merely serve as an accompaniment, 'the "left hand" to the (right hand) melody presented on screen'.[15] In the context of autonomous music, it is often melody first and foremost that holds the listeners' attention, and it is the melody in a composition that listeners are most likely to remember. In that it is of a high-profile, melody in film music risks intruding on dialogue, the filmic element that is deemed most important. As narrative and filmic Hollywood techniques progressed, film music moved away from prevalent melodies. Composer Ramin Djawadi concedes that 'lush, long melodies are very hard to place in a lot of movies nowadays'.[16] Jeff Atmajian explains Thomas Newman's compositional approach:

> Thomas Newman actually told to me how he very cleverly created a sound
> concept of his own voice that didn't rely on melody. It actually was just

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[14] Herrmann quoted in Brown (1994, p. 291).
[15] Sabaneev (1935, p. 18).
[16] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

soundscapes of bits. Whether it's ringy piano things or marimba-y things. And I think that part of the reason that's being done is because they don't have the option of being harmonically or melodically adventurous. So they're having to look to other elements. Whether that's using synthetically created sound design or orchestral colours.[17]

Atmajian also notices that 'having themes that go with characters is almost completely forbidden now in terms of it being a melodic thing.' […] 'it's considered cheesy now to have [recognisable themes]'.[18] Composer John Frizzell wonders whether 'this lack of melodicism and texture and ambiences is really a sophisticated, evolved approach to expressing things in a more intimate way.'[19] Frizzell links filmmakers' reservations against melodic themes to developments in digital editing technology:

Yes, I think that there is a resistance to melodies today. And I think that the cause of that – and this is just a crazy theory of mine, which probably most of the things I say are – is that because of everything being digital now, and films are seen so many times over and over in the cutting room. There is no rewind time on the dub stage. You're able to switch and watch the film so many times while you're making it over and over and over…and the music is done earlier and so much more processed than it used to be… I think that filmmakers are hearing their score – and I'm talking about directors, producers, and editors–are hearing the music many, many more times. There's much more repetition than there used to be. And so if you take a score that has a theme, if you play it five times, in today's world that seems to the filmmakers like a lot. But it's not a lot to the viewer, because they won't hear that music five times, because they only see the movie once. My theory is that the digital way we work has changed people's perception – because of the repetition – and made things seem more repetitive than they actually are perceived to be by the viewer. And that's a bad thing.[20]

Ramin Djawadi describes how he had to cut back on melodies when writing for *Iron Man* (2008).

I actually wrote a gigantic hero theme with a long melody. And John [Favreau] listened to it and said 'you know, Ramin, I love it. It's really great. But I want to push more towards the guitar. This is not how I see Iron Man. I want it more to be like a rocker.' And that's how we ended up with more of these rhythmic, motivic elements [sings an example]. Because once I steered more towards the guitar, I realised that if I played the melody on the guitar, it's going to sound like *Top Gun*. It's going to sound way too much like an 80s movie. It would have sounded dated. – I loved all the 80s music. And I loved […] *Top Gun*, which has a beautiful theme. But again, that's something that would have not worked in our movie, just because of the time we're in now. So that's how, all of a sudden, I felt myself restricted to cutting back melody for the purpose of making it sound modern and rhythmic and cool and hip.

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[17] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.
[18] Ibid.
[19] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.
[20] Ibid.

> And that's how I came up with playing these rhythmic, motivic things. That was a very interesting discovery I made through the process.[21]

Djawadi sums up that '…certain styles are considered […] "cheesy" nowadays. So sometimes, even if musically we would want to write a certain way, it's just literally not allowed anymore – or doesn't fit a certain style of movie.'[22]

Drones and pads are the antithesis of high-profile melodic film scoring and abound in recent Hollywood film scores. Drones have become the ambiguous stock device for ominous tension and pensive moments. They can cover, prime, or fill extended film passages whilst remaining inoffensive, discreet. Drones conveniently do not get in the way of other filmic elements and often require little compositional input from the composer. Once a suitable sound is found, the composer need merely suppress a single key on their keyboard. Gorbman (1987, p.15) reminds us that 'whatever music is applied to a film segment will *do something*, will have an effect – just as whatever two words one puts together will produce meaning different from that of each word separately'. Therefore, when scoring in real-time to a working edit of the film at hand, drones can give the composer the illusion of instant achievement when in fact synthesized drones are an irreducible musical gesture with limited expressive capabilities.[23] Daft Punk use a completely un-shifting drone early on in *TRON: Legacy*, during a montage of news broadcasts that provides vital background information and context for the film ahead. In its unwavering stasis, the drone aids continuity without detracting from the wordy and visually charged flow of information. Drones provide complementary bedding akin to a musical pedal point on which the filmic narrative can ride. Beyond composers' keyboard interface reliance (no other interface would encourage endlessly held notes),[24] drones tend to be generated by synthesizers rather than acoustic instruments because, as composer Joseph Horovitz observes, acoustic instruments performed by humans struggle to sustain extremely long notes is a steady fashion.[25] The synthesized drone's closest acoustic equivalent is perhaps organ pedal tones. In that they are inherently inexpressive, drones are ideally suited to help create and sustain ambiguity. Drones can

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[21] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.
[22] Ibid.
[23] I do not wish to incite a debate about music and meaning here. When I say drones are in-expressive, they are so as compared to more developed narrative film music whose harmonic language, use of melody, placing and other principles are widely accepted to be contextually and connotatively expressive.
[24] On interface reliance, see also Chapter 5.
[25] In conversation in June 2011. Horovitz commented on our students' tendency to rely on drones and then occasionally trying to realize these drones with a live ensemble, which often proved problematic.

be found in Hollywood films of all genres as diverse as *Dear John* (2010, melodrama, when Jack is shot), *Avatar* (2009, science fiction, e.g. 36:00 in the forest as Sully says to Neytiri 'Only you can teach me.'), *A Few Good Men* (1992, dialogue-driven drama, throughout) and *A Nightmare on Elm Street* (1984, horror, opening sequence).

Leitmotivic writing need not be melodic and continues to be effective in recent Hollywood film music.[26] Using leitmotifs as structural and semantic devices, the early film composers worked in ways that they had found effective in their earlier concert and operatic works. In his essay on Herrmann's score for *Vertigo* (1958), Cooper (2003, p. 241) describes a particular melody as 'signifying the "romantic" or the "feminine"' and states that 'the use of motifs (in the Wagnerian sense) as binding elements in classical and more recent film scores is very well understood'. Adorno (1981, p. 46) claims that 'the sole function of the leitmotif is to announce heroes or situations so as to help the audience to orientate itself more easily'. Irwin Bazelon (1975, pp. 24-25) posits that in the realm of film music leitmotifs facilitate 'easy-access' for audiences. Brown (1994, p. 102) writes about the 'potency of the leitmotif technique' and draws parallels between film music and Wagnerian opera: '[…] in Wagner full themes and tiny, quasi-thematic fragments – motifs – are more important both in their immediate emotional impact and in their relationship to their dramatic structure of the opera than they are to its underlying musical structure'. A comparison of the use of leitmotif in film music with Wagnerian opera remains tempting, although Wagner cannot be credited with the invention of leitmotif in concept or name.[27] While it naturally invited a musicological analysis of film scores, the use of leitmotif in film music inevitably came with considerable baggage. Scholars agree that conceptual complications inherent in the use of leitmotifs in opera are further compounded when they are used in film music. Abraham (1925, p. 177) finds leitmotifs 'wearisome' in their frequent, undeveloped repetition.

Practitioners and theorists commonly refer to the influence of Wagerian opera on film music. This creates a sense of historic context and musical heritage, presumably to raise film music's artistic value. Whilst film music clearly has adopted the leitmotif as a

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[26] The use of leitmotifs in film music has been covered widely. See, for example, Hatten (2004), Cooper (2003), Duchen (1996).

[27] Discussions of early uses of leitmotifs can be found in Abraham (1925), Davison et al. (1928), Sabaneev & Pring (1932).

storytelling device, the relationship to Wagnerian opera remains tenuous. In a poignant lecture on Howard Shore's score for *The Lord of the Rings – The Fellowship of the Ring* (2001) Christoph Henzel (2004, p. 114) has addressed the issue:

> A closer analysis of some leitmotivically constructed film scores reveals no evidence of an adaptation of Wagner's own leitmotif technique as demonstrated in the Ring Cycle. It seems that the commercial narrative film lacks the necessary conditions for such a technique, notably the required time structure and a role of the music that propels the narrative. Whenever composers nevertheless referred to Wagner as an influence or wherever their compositional techniques are likened to those of Wagner's, this may have had apologetic reasons…

Recognisable leitmotifs continue to feature in some recent Hollywood scores but it is rare that they take the shape of a recognisable, tuneful theme. On the whole, composers now tend to resort to less high-profile, less obvious ways of achieving a sense of musical coherence. Advances in music and sound reproduction technology, addressed below, have allowed composers to explore new aspects of musical composition and production. Consistency in instrumental colour, texture, and timbre across a score can provide a high level of unity without the use of prominent themes. In pursuit of subtler, understated expression, simpler musical gestures take on the role of leitmotifs. These may be merely a binary progression from one chord to another or even, in the case of the Joker in *The Dark Knight*, a single note. The aforementioned so-called batflaps signify Batman throughout Chris Nolan's trilogy.[28] They are a non-musical dark rumbling sound that resembles large wings flapping. Nolan grew so attached to the motif in *Batman Begins* (2005) that Wesson was not allowed to change any aspect of it in the later films. Composer Nicholas Hooper explains his approach to the *Harry Potter* franchise of which he scored two films:

> I quite like things to cross over and not be thematically consistent, or not so obvious, because I do not want people to know exactly what is going to happen. So I am not someone who gets a theme and says: 'That's Dumbledore's theme, it is always going to come up when Dumbledore appears'. I prefer it to be a little less obvious than that. But certainly with Harry Potter it went more in that direction than some of my other work where themes are used in all sorts of ways. It is a big blockbuster movie and people like to have an obvious line – you do have to steer towards the idea of providing reassuring musical information, as it were. It is a large audience and they need not to get confused. It is a difficult balance. If you get it right you have a really good film.[29]

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[28] Addressed by Mel Wesson during a talk at the Royal College of Music on 4 October 2013.
[29] Interviewed in Mera (2009, p. 94).

Filmmakers I have spoken with are keenly aware of the fact that audiences will spot heavy-handed musical gestures and clichés.[30] Contemporary audiences may have a high level of competence with regards to decoding musical meaning in the context of a Hollywood film. The average audience member will have no trouble recognising a smoldering saxophone solo as a well-established signifier of sensuality and desire. Sweeping strings are readily equated with romance and pizzicato strings with light-hearted comedy. Used over decades, many scoring devices have worn thin. As early as 2000, Justin London (2000, p. 88) suggested that in effective film music, 'stock musical gestures, from cadences and generic chord progressions to stingers and sequences that mickey-mouse the onscreen action are to be avoided' because a lack of distinctiveness in the musical expression results in a less than effective communication with the audience. Where audiences become consciously aware of stock signifiers, these risk turning into musical clichés of potentially poor effect. Orchestrator Jeff Atmajian, who has worked in numerous Hollywood scores, explains that scoring clichés must be avoided: 'You know, from the corniest, cheesiest 1920s [sings boldly] *bum-bum-bohm*. And "now the sweet high violins for the little darling girl" [sings softly] *dah-dee-dah-dee-dah-dee-dah*. That definitely you can't do.'[31] Adorno and Eisler (1947, p.13) attacked scoring clichés as far back as 1947 and declared them artistically bankrupt. Their comment also helps one appreciate how little first generation film composers departed from the musical language of, for example, Mahler and Strauss.

> Mountain peaks invariably invoke string tremolos punctuated by a signal-like horn motif. The ranch to which the virile hero has eloped with the sophisticated heroine is accompanied by the forest murmurs and a flute melody. A slow waltz goes along with a moonlit scene in which a boat drifts down a river lined with weeping willows.'

As Snyder (2005, p. 21) says, a 'screenwriter's daily conundrum is how to avoid cliché. "Give me the same thing... only different!"' John Fiske (1989, pp. 117–118) explains the origins of the term *cliché* from French type-setting and notes that 'sensational, obvious, excessive, clichéd – the qualities of popular texts are almost indistinguishable from one another. [...] The obvious and the clichéd are two sides of the same coin'. Fiske agrees that 'clichés are the commonsense, everyday articulations of the dominant ideology.' But he concludes that 'clichés deny the uniqueness of the text' (ibid. pp. 118-120). For all their homogeneity and formulaic-ness, Hollywood films nevertheless aim to eschew

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[30] My students at the London Film School often voiced this concern in seminars and meetings.
[31] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.

clichés. Musical scoring clichés are effective tools at the film composers' disposal. Synthesized 1980s tom-toms fell out of fashion following overuse in pop and film music over several years. Smouldering solo saxophones survived into the 1990s. Sweeping orchestral love themes have virtually disappeared from contemporary film music, having become a consciously decoded cliché when Elmer Bernstein composed a lush love theme for the spoof comedy *Airplane!* (1980). Undulating quaver patterns in minor thirds are omnipresent of late and among composers are considered a cliché,[32] as are bombastic drum hits that currently permeate most film trailers and many action films. Once a musical device has been identified as clichéd, composers will seek to find alternatives so as to not unsettle a Hollywood film's fragile aesthetic balance. Ramin Djawadi notes that…

> …moviemaking has progressed: special effects, sound effects, there is so much that has progressed – so that musically, that kind of went with it. So, many things stylistically are just not standard anymore. For example, woodwinds are many times omitted just because they give the feeling of being 'too light', or 'that feels too much like a comedy', or 'that feels too much like an animation movie'. Especially in these big action movies, many times, woodwinds are not even being used anymore.[33]

Mainstream Hollywood films in recent years have started to unsettle narrative conventions, steering away from over-determined, one-directional storytelling. This has had profound implications for the way these films draw upon music. Classical and post-classical Hollywood films by and large tended to deal in unambiguous terms and encourage a single reading. Brown (1994, p.10) notes that 'a given passage of music, instead of leading the viewer/listener towards an open and/or paradigmatic reading of a given situation, imposes a single reading by telling the viewer/listener exactly how to react and/or feel that situation'. Hubbert (2003, p. 183) addresses the balance of 'allusion vs. the over-determined' with regard to the use of music in film. Hollywood has traditionally employed music to help alleviate the 'displeasure of the image's potential ambiguity, which Barthes characterized as "the terror of uncertain signs"'.[34] Music can be a powerful ally in encouraging the audience's reading of a particular situation. At the same time, music may be felt by filmmakers and viewers alike to be overpowering or overly obvious. It is widely agreed among contemporary filmmakers

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[32] Hans Zimmer relies notably less on such quaver patterns in *The Dark Knight Rises* than he did in the previous two films of Christopher Nolan's *Batman* trilogy.
[33] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.
[34] Gorbman (1987, p. 58).

that viewers do not want to be told what to think or feel. For example, in *Iron Man* (2008), director John Favreau shied away from using a love theme, in scenes where a love theme would in the past have been deemed appropriate. Ramin Djawadi remembers working on this particular aspect of the film. He implies that a love theme was felt to be overly emotional and generally not in keeping with the overall tone of the film:

> I actually wrote a love theme [for the scene on] the balcony and also when he asks [his assistant Pepper] to remove the heart, switch it out. […] I wrote a beautiful love theme that only ever gets hinted to. [The problem with the love theme is partly] the colour too, it has a clarinet, it has a vibraphone in there, and then the warm strings, but as soon as you just hint at those colours – they're never used anywhere else in the movie – you get that sense 'oh, here we go, here we go, here we go…' – and then it's gone again.[35]

Tongue-in-cheek humour is a common relief device when a scene risks getting too emotional. *Stardust* (2007), a fairytale romance, is full of such interruptions. The accompanying score by Ilan Eshkeri is largely minimalist in nature, contains hardly a passage that might be read as truly romantic. Films that speak a progressive language and tackle difficult subject matter tend not to use conventional film music that comes with the excess baggage of an escapist classical Hollywood tradition. More challenging films tend to feature unconventional scores or no scores at all. Filmmakers may fear that traditional orchestral colours, use of melody, and generally emotive music may carry connotations of melodrama, and that heraldic brass may evoke the pathos of Wagnerian opera. It is not uncommon for filmmakers to refer to even the most minimalist piano piece as 'emotional'. Hollywood filmmaking that takes itself more seriously seeks to reduce excess and present viewers with a seemingly less mitigated, less heightened, less manipulated (and manipulating) filmic narrative.

The opening passage of *American Beauty* (1999) is a good example of the guiding principles of musical understatement and ambiguity at work. The score brought composer Thomas Newman to wide public awareness and earned him one of his to date eleven Academy Award nominations. The cue 'American Dream', heard at the beginning of the film (1:07) and is based on a simple i-IV blues riff in C-minor, played on marimba, which is repeated *ad infinitum* (Figure 2).

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[35] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

Figure 2: Marimba riff in 'American Dream'[36]

The blues riff in 'American Dream' may engage attentive listeners with its catchiness but its connotative attributes are far from clear. Newman gradually adds layers, piling on complementing rhythms, marimba superstructures in a higher register, and a mellow synth and underpinning fretless bass. These layers can be liberally applied and withdrawn at any point, allowing Newman to loosely shape the music to Lester Burnham's opening monologue. This opening scene is an important character exposé. With the opening cue Newman subtly balances a high level of accessibility provided by the chosen idiom with an eclectic range of intriguing sound choices that stir in the viewer an interest in the story to come. 'American Dream' defies a single reading. It is not a mood-maker but rather remains enigmatic, insouciantly sincere so as to not sound comical but at the same time not sounding downtrodden or heavy. A range of instruments is introduced here that will return throughout the film, but the cue is not a thematic exposition. The music eloquently facilitates audio-visual continuity but sufficiently stays out of the way of Lester's monologue. Due to its eclectic choice of instruments, it provides no clues as to geographic or temporal placement, clues that are instead provided visually.

With his score for *American Beauty*, Newman established a signature style that would later also appear in the title music to the HBO series *Six Feet Under* (2001-2005). Again, a simple motif, a fragment, or so-called hook is repeated almost throughout. Intricate layers of instruments and timbres are interwoven. Synthetic and acoustic elements are blended seamlessly and sampled voices and indistinct sound effects incorporated. Rather than relying on an extended melodic theme, the main title comprises two contrasting short motif of just a few notes each (Figures 3 and 4). In-episode cues, where they occur at all, are consistently non-melodic, relying on synthesizer pads.

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[36] Like many other DVDs of U.S. films poorly converted to the European video frame rate (29.97fps to 25fps), the sound on this DVD is pitched up by nearly exactly a semi-tone. My transcriptions were taken from the audio CD soundtrack, whose tracks are exact copies of the cues addressed here.

Moderato ♩ = 112

pizz. strings

Figure 3: Motif 1 from *Six Feet Under* Main Title.

Moderato ♩ = 112

cor anglais

continues...

Figure 4: Motif 2 from *Six Feet Under* Main Title.

Later on in *American Beauty*, Newman strikes a delicate balance between dream-like sensuality and a sense of bewilderment at Lester's unfolding mid-life crisis without tipping the scene one way or another. As with the opening title, he again employs a compositional method of additive layering, whereby instrumental strands can be liberally added and removed. The resulting cue is low in profile and lacks a distinct melody. Lester is lying in bed, still in bliss over Angela Hayes, a cheerleader he has met in the previous scene. At 18:40, she materialises on the bedroom ceiling, bedded in rose petals. This iconic shot is as visually arresting as it is surreal. The scene is underscored with a child-like, kaleidoscopic cue in Ab-Lydian (Figure 5).

♩ = ca. 150

finger cymbals   vibraphone II

soft synth   vibraphone I

low marimba (soft mallet)   marimba (hard mallet)

Figure 5: 'Arose'

Beautifully innocent and light, 'Arose' consists mostly of this repeating pattern of four bars. Musically without aim or consequence it forever revolves, mirroring Lester's blissful marvel at the beauty on his ceiling, a myriad of rose petals gracefully descending towards him. Lester's awe-filled exclamation 'Spectacular!' (19:13) actually distances the viewer and perhaps invites a smile of pity, in that he is so clearly misguided in his desire and in that his expression is embedded in this benign, less than profound sounding cue. Through Lester's initial encounter and this night-time fantasy Angela is built-up as an idealised object and focus of Lester's desire. When, towards the end of the film, he finally attains a certain level of real, physical, intimacy with Angela, it effectively feels like an anticlimax, lacking a similar level of visual finesse and sensual underscoring. Of course, this subliminally furthers the narrative. Lester ends up not sleeping with Angela when given the chance.

Music in recent Hollywood films can serve a complementary role and remain low-profile. The cue 'Son of Flynn' early on in *TRON: Legacy* (2010) is an example for music adding to the surface appeal of a scene. In its construction, (Figure 6a/b) the cue is reminiscent of Bach's Prelude in C-Major. It evolves in a steady semiquaver pattern whose shape remains unchanged while it moves through different harmonic permutations. While the chord progression in Bach's prelude is progressive, 'Son of Flynn' is circular. The pattern is performed on a mellow solo synth over a soft bass pedal and warm pads adding subtle textures. The cue suits the nostalgic mood set up previously: Sam misses his father. Although Sam is riding his motorcycle at a high speed and is soon chased by a police car, the underscore remains calm and dignified. Outsmarting the police patrol, Sam jumps off an exit ramp. The sole notable sync point (a chord change to a secondary dominant, A/C#) occurs on this dramatic jump (6:47).

76

Figure 6a: Son of Flynn (cont. overleaf)

As Sam parks his Ducati, the machine is beautifully framed and lit, the logo nicely displayed. The whole ride and its musical accompaniment resemble a high-gloss commercial. It is this advertising aesthetic that Kosinski brings to the film and continues to employ throughout, to good effect. The motorcycle chase as a preparatory plot device serves two functions: It sets up the notion that Sam shows no concern for the consequences of his actions and also makes plausible how Sam Flynn could possibly stand a chance in a lightcycle race.

Figure 6b: Son of Flynn (cont.)

Music has traditionally played an important role in indicating and affirming generic codes. Through established stylistic and semiotic conventions music could effectively help root a film in one genre or another. Composers could rely on effective signifiers, be it in instrumentation, stylistic choices or musical languages used. Hollywood composers understand what, traditionally, constitutes a score well suited to a romance, a drama, a military epic, a comedy. Composer Teddy Castellucci agrees with Christian

DesJardins (2006, p. 43) that film composers can get pigeonholed by genre a mixed blessing for individuals who have excelled in scoring one genre but may nevertheless feel perfectly capable of working in a range of genres, in fact desire to do so. Scheurer has indexed and categorised musical approaches to standard genres, including science fiction, historical romance, and the Western.[37] His work is a useful aid in understanding how film scoring techniques relate to generic coding. Observers as far back as Adorno (2001, p. 169) have pointed out that film genres 'have developed into formulas which, to a certain degree, pre-established the attitudinal pattern of the spectator before he is confronted with any specific content and which largely determine the way in which any specific content is being perceived'. Altman (1999, p. 15) observes that 'genres are defined by the film industry and recognized by the mass audience'. To him, generic claims are first of all discursive and aim to attract an audience (ibid., p. 102). Elsaesser (2001, p. 16) feels that a generic label suggests 'the same as different: genre cinema and the norms of story construction involve the self in remembered pleasure and anticipated memory, both of which lock the spectator into a kind of repetition compulsion that ties the cinema experience to recollection and expectation'.

Hollywood films' battle against predictability has acted as a driver for an evolution of genres. Some genres have flourished, others disappeared completely, some have been hybridized. Bordwell (2006, p. 51) assumes the point of view of a filmmaker when he asks 'How can I raise the premises to new levels of achievement? How can I revive a defunct or disreputable genre?' Genre hybridisation can be seen as a way of widening the target audience base, 'by building an interlaced, multi-generic plot offering every possible chance for positive audience response' (Altman, 1999, p. 139). Rather than describing recent films in terms of traditional film genres, Snyder (2005, pp. 25–26) prefers to categorise types of movies: 'Golden Fleece, Out of the Bottle, Dude with a Problem, Rites of Passage, Buddy Love, Whydunit, [sic] The Fool Triumphant, Institutionalized, Superhero.' These categories liberate one's perception of films from conventional genre-specific expectations, including musical coding. Snyder's approach allows for a more flexible consideration of genre hybrids that might be an uneasy fit for any particular genre label. For example, J. J. Abrams's *Super 8* (2011) is neither a pure action-adventure, science fiction nor a family film, but fits in Snyder's 'Rites of Passage' category. Michael Giacchino's orchestral score is a suitable *homage* to John Williams,

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[37] See Scheurer (2008).

much as the film is an *homage* to Steven Spielberg's 1980s family-friendly films (*E.T.* (1982), *Jurassic Park* (1993), *Indiana Jones* (1981-2008)) and, distinctively, *The Goonies* (1985).[38] Altman (1999, p. 142) notes that in order to maximise audience reach, films may draw on 'textual features promoting multiple genre identification include the use of excess material, multiple framing, fertile juxtaposition and multifocalization. [...] At the level of film promotion, studios preferred to imply the presence of multiple genres, while naming none.' As genres blur, film composers rely less commonly on traditional generic scoring conventions, some of which date back to 19th-century concert music and opera, others of which were established throughout the early years of sound film or on television. Composers can try new musical styles and strategies, which is one contributing factor to a diversification of composed music employed in mainstream films today. DesJardins (2006, p. 66) lauds Don Davis's sore for *The Matrix* for laying the foundations for a 'new tradition in terms of scoring action-film music'. Davis's moody score is markedly textural and features virtually no melodic passages, relying instead on percussive *ostinati*, dance beats, undulating synthesizer patterns and strong, dissonant brass *crescendi* for emphasis. The blend of synthesized, acoustic and orchestral elements mirrors the juxtaposition of humans versus computers in the narrative. The instrumentation and musical language allow for close-scored segments and a relatively large dynamic range in the music without attracting attention.

Music can make a significant contribution to generically unsettled films if composers are allowed to explore new expressive means. For example, *There Will Be Blood* (2007) paints a bleak and complicated picture of American entrepreneurship and individual strife. Johnny Greenwood's most unsettling, dissonant and restless score seems at odds with the narrative. The long opening segment, Daniel Plainview (Daniel Day-Lewis) is shown digging for gold. Not a word is spoken for many minutes. Johnny Greenwood's terse score for string orchestra seemingly contradicts Plainview's excitement when he finds gold. Were this incongruence of narrative and musical expression to be an isolated event, then it might be a case of what Nicholas Cook (2000, pp. 102–103) has described as 'contradiction' or 'contest' between music and image. However, the composed sections of the score remain tense throughout the film, pushing beyond the boundaries of musico-narrative conventions of Hollywood cinema within which Cook's model operates. Addressing the use of the bright first movement of Brahms's violin concerto

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[38] Noted in Zoller Seitz (2011).

in a particular scene, Gorbman feels that music and narrative are disconnected to a degree where the music 'does not mean anything'.[39] Contrarily, I feel that music in *There Will Be Blood* – both the specially composed and pre-exisiting cues – may indeed lack a clear indication of meaning (at a level of musico-narrative clarity audiences have come to expect from Hollywood film), but it nevertheless adds a meaningful narrative layer to the film. The score requires a high level of intellectual engagement of the audience to try and interpret the score's intention: One might argue that the music connotes the corrupting effect of greed or Plainview's evil nature. The ambitious score in *There Will Be Blood* makes for a richer filmic text that challenges the audience to engage. Film composers may welcome the challenge to contribute to films that explore novel ways of storytelling as it may give them the opportunity to experiment with new forms of musical expression. Filmmakers tread a thin line between new storytelling strategies and accessibility. If a film does not sufficiently cater to the mainstream, it may not be profitable and thus not get financed. Even established filmmakers such as Steven Spielberg and P. T. Andersen can struggle to get their films made. Spielberg's *Lincoln* (2012) after 20 years' gestation almost ended up as an HBO television movie.[40] P. T. Andersen's *The Master* (2012) nearly did not get made at all and eventually was single-handedly financed by billionaire heiress Megan Ellis.[41]

Independent of an allegiance to genre, some recent Hollywood films at story level take a less than teleologically connected approach. Field (2005, pp. 286–287) contemplates that…

> …many filmmakers today insist the narrative story line is passé, out of date, not 'part of the scene' anymore. […] Since *Pulp Fiction*, there have been many films that illustrate this approach in fracturing the form, though more for shock value, I think, than for anything else; *Fight Club, Body Shots, Go* and *Best Laid Plans* are just a few examples. […] It's also true that filmmakers are indeed searching for new ways of telling their stories: *Being John Malkovich, The Matrix* (Andy and Larry Wachowski), *Magnolia* (Paul Thomas Anderson), *The Sixth Sense (*M. Night Shyamalan), *Wonder Boys* (Steve Kloves), *American Beauty* (Alan Ball), *Traffic* (Stephen Gaghan), and *Gladiator* (David Franzoni) push the form both in style and content.

Unconventional recent Hollywood films stand apart from the effects-driven, mono-directional, spectacular blockbusters discussed above. Bordwell (2006, pp. 24/74–75)

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[39] On 31 May 2013 in her talk 'Heard Music' at the Music and the Moving Image VIII conference at New York University, Steinhardt School of Culture, Education, and Human Development.
[40] See Spielberg quoted in Guidry (2013).
[41] Chronicled in Grigoriadis (2013).

pinpoints the likely source of new trends in narrative techniques, explaining that 'the New Hollywood has been raised on Old Hollywood and 1960s art movies, but the Newest Hollywood brought TV, comic-book, videogame, and pulp-fiction tastes to the movies, and a free approach to narrative came along.' Since the 1990s, a growing number of Hollywood films has emerged whose narrative style and strategies are more experimental in nature, whilst drawing on a familiar visual language, known actors and other creative personnel. These films strike a balance between being comprehensible to a wide audience whilst challenging viewers to engage with less than straightforward narratives. Whereas, as outlined above, 'narrative causality (organized around human agency, particularly in terms of psychological motivation) [was] considered to be primary in classical cinema' (Davison 2004, p. 17), some recent films purposefully break with this convention. Toying with the viewers' expectations of a teleologically structured filmic narrative, some films show effect before cause (*Syrianna* (2005), *Memento* (2000)), delay effects and conflict resolution (*The Sixth Sense* (1999), *The Matrix* (1999)), deceive the viewer by providing unexpected developments (*Crash* (2004)) or withhold such resolution altogether (*Inception* (2010)). Plot point A may no longer lead to B but rather to C, which then leads to E via B and D. Charlie Kaufmann's screenplays range from being confusing to the outright absurd (*Being John Makovich* (1999), *Adaptation* (2002), *Eternal Sunshine of the Spotless Mind* (2004), and *Synecdoche, New York* (2008)), pushing filmic narrative to nearly incomprehensible extremes. Music in these less connected, more ambiguous narratives must comply with new rules and parameters: Composers must often forego a whole range of traditional devices such as emotional markers, foreshadowing and suggestion of character intent.

Recent Hollywood films may pursue novel ways of storytelling because filmmakers feel that audiences have grown more knowledgeable of codes and conventions, similar to the way musical scoring clichés are now being avoided. *Crash* most gratuitously draws on audience conditioning, knowing certain storytelling clichés and narrative setups will trigger in the viewer anticipation of specific consequences. Akin to musical false cadences, *Crash* repeatedly resolves situations differently than one might expect. A woman who dramatically falls down a staircase does not end up paralysed. In a stand-off, the police do not shoot a person they think might be armed (the audience knows he is not). A little girl does not die when seemingly shot in the back (the gunman has obliviously loaded blanks). Mark Isham's minimalist and textural synthesizer score relies

on low-profile tones and pads that do not intrude on the narrative. I am reminded of Wim Mertens (1998, p.88) calling minimalist music 'a-teleological'. Isham, who is perhaps best known for his emotive orchestral scores for *A River Runs Through It* (1992) and *Nell* (1993), clearly adapted his musical approach to suit *Crash's* contemporary filmic language. *Synechdoche, New York* perverts Hollywood film technique by purposefully omitting explanatory scenes and transitions that would help the viewer make sense of the story. Jon Brion's music is used sparingly and often relegated to mere textural and filler function. The score helps create the illusion of narrative connectedness and continuity even where the plot is incomprehensible and absurd.

Filmmakers may feel that music risks intruding on carefully crafted narratives and that the use of music may in itself be perceived to imply an authorial voice or a manipulative hand that filmmakers are keen to mask. Confusing the audience may occasionally be exactly what the filmmaker aims to achieve, for example, the with the ending of *Inception* (2010) (is Cobb dreaming or not?). *The Dark Knight Rises* (2012) leaves it up to the viewer to decide whether or not Batman dies. Conflicting visual information is purposefully intercut: a close-up of Batman inside his so-called Bat vehicle with a close-up of the timer on a neutron bomb he is carrying out to sea, seconds before the explosion. Moments later Bruce Wayne is shown alive. Interestingly, such a complete break with cause-effect logic demands more active viewing. Zimmer's score, too, remains ambiguous so as to not encourage one reading or another. During Bruce Wayne's funeral, the music is distinctly not mournful, even though this would be appropriate were we to assume Wayne is dead.

Less than straightforward recent films need not dismiss composed underscore altogether. Music continues to be ascribed some of its aforementioned traditional functions, for example the establishing of geographic locations (for example, the use of ethnic singing and woodwinds in the opening of *Syrianna* (2005)), the bridging of spatio-temporal transitions (for example, the abovementioned *Synecdoche, New York*), and a general aesthetic heightening. However, music is far less relied upon as a signifier of emotion. This affirms a widespread notion among composers that filmmakers have grown reluctant to draw on emotive scoring. Even during romantic encounters or moments of sadness and hardship music is avoided. For example, there are no mournful strings when Rachel dies unexpectedly in *The Dark Knight*. And yet some of the most

moving moments in recent films can result from the juxtaposition of an emotionally charged scene with relatively expressionless, impartial music. The closing segment of *Babel* (2006), accompanied by Sakamoto's 'Bibo no Aozora' is a powerful example. The stoic minimalist music contrasts the film's conclusion as several characters are shown at their most emotionally exposed.

The templates for Hollywood's highly accessible and effective narratives can be traced to age-old forms. Propp (1968, pp. 79–80) catalogues seven *dramatis personae* in the folktale. Within any given narrative, seven 'spheres of action' correspond to the respective characters who fulfil any number of thirty-one possible functions, in an always-identical order (ibid, p. 25). These are observations that apply to classical and many post-classical Hollywood film plots with remarkable consistency. At storytelling level, effective filmic narratives have traditionally drawn upon familiar character prototypes whilst varying only superficial qualities.[42] Joseph Campbell (2008, pp. 30–32) describes the hero's journey as central to Western cultural myths.[43] The mythic journey template resurfaces in myths the world over, retold in infinite variation, including Hollywood films such as *Star Wars* (1977), *Raiders of the Lost Ark* (1981), *Terminator* (1984), *Die Hard* (1988), *The Matrix* (1999), *TRON: Legacy* (2010). Field (2005, pp. 46/160) adds that 'in mythic terms, the first part of any journey of initiation must deal with the death of the old self and the resurrection of the new […] The hero has to die in order to be reborn.'[44] Invariably, well-constructed Hollywood films will show the hero leave their settled lives behind to face a challenge sprung upon them (e.g. Simba in *The Lion King* (1994), Sarah Connor in *Terminator* (1984), Frodo in *The Lord of the Rings* (2001-2003)). Underlying premises and conflicts, too, have usually remained firmly grounded in the familiar and established. To compose a musical underscore for a relatively predictable range of characters and narrative situations, classical Hollywood film composers could rely on variations of familiar musical gestures and scoring clichés. The heroic themes for *Rocky* (1976), *Superman* (1978), Luke's theme in *Star Wars*, *Raiders of the Lost Ark*, *Batman*, and *Braveheart* (1995) are widely familiar. But once writers and filmmakers began exploring less conventional characters and alternative narrative strategies, composers had to adjust their approach. Changes to Hollywood mythopoesis in general, and the construction and destruction of heroic figures in particular are continually emerging. *The*

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[42] Christopher Booker (2005) covers the link between folktales and Hollywood cinema in detail.
[43] Campbell (2008, pp. 30–32); also quoted in Isaacs (2008, p. 118); see also Vogler (2010).
[44] Field cites Campbell & Moyers (1989).

Matrix is among a growing body of Hollywood films that challenge the way films draw on ancient concepts of the mythical journey. Neo, the chosen one, by the end of The *Matrix Revolutions* (2003) does in fact sacrifice himself to save Zion (therein lies a not-so-subtle parallel to Christian mythology), he actually dies with no eternal life or resurrection in sight. This ending to the trilogy may have been deeply upsetting and unsatisfying for some viewers – and constitutes a marked departure from classical Hollywood's strive for resolution.[45]

Some recent Hollywood films aggressively subvert audience expectations for character development. A main protagonist may die unexpectedly (e.g. Llewelyn Moss in *No Country for Old Men* (2007), or Chad Feldheimer in *Burn After Reading* (2008)), the heroine may turn out to be a villain (Evelyn Salt in *Salt* (2010)), friend turn foe (Harvey Dent in *The Dark Knight* (2008), Harry Osborn in *Spider-Man 2* (2004)), and a beloved be murdered (Rachel in *The Dark Knight*). The more films try to subvert established narrative concepts and conventions, the less film music can rely on traditional modes of expression. Perhaps with the exception of *Spider-Man 2*, music in these recent films seems primarily concerned with visceral impact and eschews well-developed, connected musical scores. The score for *Burn After Reading* consists primarily of frantic *taiko* drum episodes that are not in any obvious way motivated by the narrative. In line with a subversion of established character sets and their narrative function, some recent films have begun to reconsider the notion of heroism.[46] Bordwell (2006, p. 82) muses that a 'willingness to deheroicize protagonists probably owes something to the new demands for character flaws'. Scheurer (2008, p. 111) confirms that the 'old faith in the classic hero is not always present in more recent films'.

The Dark Knight Rises (2012) is a prime example for recent Hollywood's overt, and intelligently nuanced, deconstruction of its heroes. To observe the marked difference between heroes in contemporary films and older entries, one need only compare *Superman* (1978) with *The Dark Knight Rises*. The former reinforced worn gender roles, promoted a patriotic, jingoist world-view and celebrated its hero's deeds with pompous fanfares (by John Williams). Coincidentally, *Superman* features a romantic encounter in

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[45] On rare occasions, Hollywood has offered challenging or shocking endings in the past. For example, *To Kill a Mockingbird* (1962) – which was of course a literary adaptation – ends tragically for point making.
[46] This approach has a precedent in earlier *film noir*, which helped establish the cinematic portrayal of ambiguity between good and bad.

which Superman takes Lois Lane for a flight during a date. During the flight, Lois recites a poem in voice-over, accompanied by gentle strings ('Night Flight'). The combination of trite rhymes and an overly sweet musical accompaniment render this segment rather dated and less than effective, from today's point of view. The *Dark Knight Rises* enacts gender equality (with the most emancipated Catwoman yet), suggests a philosophical and political outlook skeptical of wealth, weapons, and the authorities. Batman is without national allegiance. An impactful but markedly bleak score accompanies the film. Hans Zimmer describes how he composed a heroic theme for Batman in 2005 (working on the first installment of the trilogy) that was thrown out following discussions with Chris Nolan.[47] It was felt that a traditional theme would have 'blanded out' the Batman character and would have been ill-suited to a plot that undermines the very notion of the Dark Knight as hero. Only at the very end of the film does Batman perform the heroic act of saving Gotham from nuclear destruction. But no fanfares celebrate the deed and no swashbuckling themes herald the hero. In fact, the musically most remarkable element in this score is a menacing percussive ostinato in 10/8 for the villain Bane.

Music has of course traditionally helped construct heroes, conveying to the viewer a sense of epic grandeur and commonality by association. Gorbman (1987, p. 81) remarks that 'this capacity of music to refer to commonality, destiny, and the like, is exploited for producing emotion and pleasure. The appropriate music will elevate the story of a man to the story of Man.' Landy (1996, p. 111) elaborates: 'In the music of the films and in operas, especially in Verdian operas, one hears brilliant fanfares of trumpets and trombones. […] Orchestral and choral music also functions as a means of distinguishing between the individual and the collectivity, especially of distinguishing the great individual from the masses. The use of many instruments contributes further to this sense of the vastness and greatness of the individuals and the events. Orchestration also contributes to the illusion of transcendence, or surpassing both individual and collective struggles, where the interests of the state is [sic] visible as a major producer of monumental national images consumed through visual and aural modes.' No wonder, then, that where recent films eschew clear-cut heroes their musical accompaniment is altogether different. Scheurer (2008, pp. 113/123) suggests that this is not because 'heroism is dead or that adventure no longer has appeal, it is just that we are more

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[47] At a talk at the Royal College of Music on 4 October 2013.

sceptical of these things and the music reflects this scepticism. […] Just as our attitudes about war, heroism, and the roles of women in society have changed over the years, so composers have had to find musical correlatives to signify these ideological and attitudinal changes in their scores.' In pursuit of less mitigated realism, these films often shun the use of music as an overt signifier of emotions. Filmmakers are understandably concerned that music's manipulating capabilities may be seen to be patronising their viewers. Obviously, many Hollywood films continue to promote widespread (American) myths. Many films still propagate 'the capitalist myths of freedom of choice and equality of opportunity, the individual hero whose achievements somehow "make everything all right," even for the millions who never make it to individual heroism' (Wyatt 1994, p. 198). The mythic lies of the American Dream that if you never give up trying hard will pay off, that good will prevail, that there is such thing as love at first sight, and that true love never dies are still commonly found. Given their commercial track record, some may feel that Hollywood films are ineligible to occupy moral high ground and preach values. After all, even the most intelligent and thought provoking Hollywood film still has to deliver on its *raison d'être* to make money.

On the other hand, in an ever-widening spectrum of Hollywood films some have emerged that question values and commonly held beliefs. Arguably, the last 30 years have seen the most prolific outpouring of intellectually stimulating Hollywood films yet. *American Beauty* (1999), *Magnolia* (1999), *The Royal Tenenbaums* (2001)*, Punch-Drunk Love* (2002), *Sideways* (2004), and *The Secret Life of Walter Mitty* (2012) are among many inspired films that have enriched and helped diversify Hollywood's output. The postmodernist films of Quentin Tarantino exist alongside post-structuralist films such as *The Matrix*. One can find existentialist traits in *Fight Club* (1999) and nihilist existentialism in *I ♥ Huckabees* (2004). Psycho-analytical depths are explored in *Donnie Darko* (2001) and the surreal and terrifying *Black Swan* (2010). The heart-wrenchingly sad *Magnolia* (1999), *Crash* (2004), and *Babel* (2006) highlight the interrelatedness of seemingly distant individuals and communities who have common aspirations and struggles. Where these films feature composed underscore at all, it is almost invariably non-traditional and non-orchestral so as to not disturb the nuanced realistic tone and style of the film with what might be perceived as an artificially heightened score.[48]

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[48] Among rare exceptions are the orchestral elements in Clint Mansell's score for *Black Swan*, which are adapted from Tchaikovsky's 'Swan Lake'. Michael Andrews's score for *Donnie Darko* features some

Directors and composers have advocated the value of silence and leaving sonic space in recent films. Despite the long list of functions attributed to composed film music, films can be exceedingly effective without it, particularly given recent technical advances in film and sound technology. A considerable number of recent Hollywood films use composed underscore only sparingly, but few mainstream Hollywood films have as yet gone to the extreme of having no music at all. *Cloverfield* (2008), in aiming for a *cinéma vérité* style, features no composed underscore. The film depicts the invasion of an extra-terrestrial monster from the point-of-view of a single handheld camcorder. Highly constructed, manipulative sound design (for example, while the protagonists take a brief respite in a subway station) provides affective impact, in ways far subtler than a musical underscore could. Composer Michael Giacchino has to wait until well into the end credits to place a large-scale symphonic closing title. *No Country for Old Men* (2007) features no discernible music at all and yet unquestionably is highly effective as a filmic whole.[49] Recalling his work on *Iron Man*, composer Ramin Djawadi remembers:

> …sometimes in the movie – and this also goes back to the way things get written nowadays – there is great dialogue, which this movie had, and there's great acting: the music doesn't need to do that much. Of course, as composers, if you ask us to write music, we go all out and write these lush melodies and go crazy – but then you stick it up to the picture and you go 'oh wait, that is killing the dialogue right now', or 'that's way too busy'. So you start literally stripping things out: less and less and less and less. But at the end of the day you have to do what serves the picture best. So that's why these scenes ended up being so delicate.[50]

Not unlike Giacchino in *Cloverfield*, Djawadi, too, has had the experience of having to omit thematic material from the film it was composed for: 'That's why actually we sometimes record some of our thematic ideas: because they do play well on the [soundtrack] album. But then in the movie we don't really have room for that. You see that all the time. I think nowadays people like to have the music less busy and let the dialogue do its thing.'[51] This insight reveals that composers indeed have thematic and melodic aspirations for their scores that are clipped by other members of the creative team. This will be addressed in more detail in Chapter 4.

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orchestral strings but these are incorporated into a richly layered synthesizer score that effectively traces the film's psychological horror premise

[49] See also Chapter 4.

[50] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

[51] Ibid.

The Dark Knight (2008) is an interesting example for a film that favours sound and visual effects over composed underscore in extended sequences that traditionally would have been accompanied by large-scale musical underscoring. In an unexpected plot twist, Harvey Dent has given himself up to the authorities, claiming to be Batman. This occurs almost exactly halfway through the film. As Dent is being transferred to a prison across town, the Joker attempts to take him hostage and attacks the heavily armed police convoy. Throughout the ensuing chase there is a marked lack of music. At 1:14:35, the diegetic sound effects of the convoy and police helicopters are noticeably faded down, and the Joker theme enters forebodingly. Rarely are the artifice of sound design and the balance of music versus sound effects so obvious as in these few seconds, when only the Joker theme can be heard. Besides announcing the Joker's arrival, this momentary calm acts as a springboard for the sonic chaos that is to follow. All camera movements are slowed temporarily, mirroring the soundtrack's relative calm. This visual deceleration, too, acts as a contrast to the ensuing fast-paced chase shot with multiple cameras, many of which are moving at a high speed. The police convoy's intended course is blocked by a burning fire engine and the convoy diverts into a tunnel system.

As the Joker's crew attacks the armoured vehicle that transports Dent, the soundtrack is suddenly filled with engine roars, gunshots, and impact noises. Rarely has a chase sequence been composed with such sonic impact and visual flair. Batman's arrival on the scene, in his batmobile, remains musically unannounced (1:16:56), but the vehicle's sonic identity (elegant digital sounds) contrasts with the crude analog nature of the vehicles thus far seen and heard.[52] The batmobile is hit by a bazooka and spectacularly crashes. Batman emerges on a motorcycle that detaches in spectacular fashion from the batmobile. The use of CGI seems somewhat heavy-handed here, perhaps its most obvious use in the whole film. It seems sensible then, that this is the only moment in the segment that music is called upon, perhaps to smooth over this momentary aesthetic break. At the level of audience engagement, the revelation of Batman's motorcycle will be enjoyed by devoted fans, a worthy moment to celebrate with a brief reprise of a reassuring ostinato weighty beats. The Joker casually has his men crash a police helicopter and shoots multiple people in passing cars. One wonders why Batman does

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[52] Also, a sound akin to a sonic boom can be heard just before the Joker looks over and sees the batmobile, revealed in a reverse cut.

not kill the Joker when he finally has the chance, after spectacularly flipping over his 18-wheeler truck.[53] When after nearly eight minutes the Joker is arrested by Gordon (the convoy was a setup), the score re-emerges in the aftermath. It conjures up a sense of satisfaction and relief as though capturing the Joker somehow justified the death toll incurred. The decision not to score this extended segment seems sensible, as music could hardly add to the sonic and visual impact already achieved. The score stays out of the way and refrains from commenting on the Joker's actions in response to Batman's intervention. Also, this chase sequence, perhaps the most resource-heavy in the whole film, might risk throwing the film off balance. By not scoring the segment, later scenes can feel profound and exciting even if they are less sizeable in scope and scale.

Changes to narrative concepts and conventions have resulted in engaging and effective mainstream films whose appearance and outlook is markedly different from traditional, classical and even post-classical Hollywood films. In order for composed music to successfully serve these films, composers have had to adjust their approach at every conceptual level. There is another aspect of filmic storytelling that has developed perhaps more rapidly than any other in recent decades: Emerging camera and editing technologies have revolutionised the way films are shot and edited and given filmmakers an unprecedented degree of creative flexibility and freedom. Film composers have had to respond to new threats to their most time-conscious craft and find musico-narrative solutions that can succeed in a new, digital production and post-production environment.

Part 2: Changing technology and techniques

Hollywood film production has always been at the pioneering edge of film technology and has perhaps been the driving force behind most technological innovation in the area of filmmaking. Allen (1998, p. 109) notes that 'the development of cinema technology over the past four decades has been the result of a complex interaction between industrial needs (in both production and exhibition), product differentiation, economics

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[53] Another never-before-seen plot element and stunt. A real truck was flipped over for this scene, and on the UK-release Blu-ray, a special featurette outlines the technical challenges of this stunt. Seven different cameras were used to cover this unrepeatable stunt. In the final film, only two angles were used, and the event itself was hardly stretched. This compared to 1980s and 90s-style filmmaking where special effects and car crashes might have been shown from multiple angles over an extended length of time. Compare, for example, *Speed* (1994) where, near the end of the film, an airplane is shown exploding multiple times.

and audience expectation.' Hollywood's exploration of new technologies is propelled by filmmakers' search for novel ways of filmic expression but also commercial considerations such as the underlying need to control production costs. Spectacular new effects achieved with emerging film technology help to attract and grow Hollywood's consumer base. No aspect of filmmaking has remained untouched by recent technological advances and ensuing shifts in modes of production. Film music is perhaps among the areas most affected. How does, indeed how can, recent composed film music relate to and integrate with the film it accompanies? How effective is that music at the point of audition?

Early on in the short history of Hollywood film, cameras were liberated from their stationary confines to allow for more energetic shots, were mounted on trucks, dolly-tracked, or suspended from cranes. For *Rope* (1948), Alfred Hitchcock famously choreographed his cast to perform in front of a single unwieldy camera to create what looked like one continuous 70-minute shot.[54] Later developments of the Steadicam, helicopter mounts, and remote-controlled camera carriers further enhanced dynamic possibilities of camera use. *The Matrix* (1999) draws on ground-breaking camera techniques to good effect. Don Davis's score parallels drawn out slow-motion effects with glistening brass crescendos and suspended cymbal swells. This aestheticisation of the visuals constitutes a remarkably high degree of synergistic audio-visual congruence.[55] Effective camera work aims to hold the viewer's attention. Christopher Nolan has offered an insightful analysis of the interrogation scene between Batman and the Joker in *The Dark Knight*, demonstrating his keen awareness for camera moves and character choreography.[56]

> We wanted to be very edgy, very brutal. We wanted it to be the point at which Batman is truly tested by the Joker and you see that the Joker is truly capable of getting under everybody's skin. I'm realizing this now about that scene – I haven't thought this through before – the synthesis of all the different elements that I'm most interested in within filmmaking all come in that scene.

The scene is lit by only a desk lamp and feels dark and confined. As police commissioner Gordon pretends to be going out to get a cup of coffee, overly bright

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[54] See, for example, http://www.reverseshot.com/article/rope [Accessed 4 February 2014].

[55] In this particular case, audio-visual parallelism – perhaps more common to high-gloss advertising – is akin to what Chion (1994, p. 18) refers to as 'vectorisation'. I have addressed the concept of synergy of narrative vehicles in Hexel (2010.)

[56] In Boucher (2008) [Accessed 10 May 2012].

lights come on 1:27:15, revealing Batman standing behind the Joker. He slams the Joker's head on the desk and a low-pass filtered drum hit rings out on a timed delay (suggestive of flapping wings). Batman displays a brutal side not seen before and the scene feels raw and unmitigated. The sudden harsh lighting adds to this. A subtle drone persists but might as well be diegetic noise, perhaps from an air vent.

Figure 7: Gong-like pattern

At 1:27:58, the Joker laughs hysterically and confesses 'I don't wanna kill you! What would I do without you? Go back to ripping off mob dealers? No. No. No! You… you complete me.' As he then enters into a monologue about his criminal philosophy and his thoughts about society in general and his relationship with Batman in particular, a gong-like pattern plays along quietly (Figure 7). The music is contemplative and calm, lending weight to the Joker's words. It is only when Batman suddenly grabs him violently that the spell is broken. He slams the Joker against a wall and the aforementioned flapping is back. The Joker reveals he has taken not just Dent but also Rachel Dawes hostage and that Batman will have to choose whom to save. The Joker's previously established one-note motif starts at 1:29:36 and gets increasingly louder. The more enraged Batman gets, and the more violently he attacks the Joker, the more unforgiving the motif sounds and feels. The score underlines the fact that even though Batman is physically superior, the Joker is in control of the situation. As he utters 'you have nothing, nothing to threaten me with', (1:30:15) Batman begins to realise he has to play the Joker's game if he wants to save Dent and/or Rachel. The audience is inclined to empathise with Batman, hoping he can save Rachel.

Pioneered by George Lucas prior to the filming of *Star Wars I-III*,[57] digital film cameras render film stock obsolete, one of the costliest aspects of film production. This has enabled directors to shoot more footage for coverage in the knowledge that key creative

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[57] *Star Wars: Episode I - The Phantom Menace* (1999), *Star Wars: Episode II - Attack of the Clones* (2002), *Star Wars: Episode III - Revenge of the Sith* (2005).

decisions could be made later during editing.[58] In 2007, Red Digital Cinema released RED One, the first commercially available digital camera to offer picture quality akin to that of a 35mm film camera. RED One was also compatible with conventional camera peripherals such as changeable lenses, thus requiring a minimum of adjustment from camera operators. RED One granted low-budget and television productions access to the look of a high-budget feature film. The camera was quickly adopted into contemporary practice, including Hollywood filmmaking. *Pirates of the Caribbean: On Stranger Tides* (2011), *Contagion* (2011), *The Muppets* (2011), *Underworld Awakening* (2012), *The Hobbit: An Unexpected Journey* (2012), and *Prometheus* (2012) are just a few examples of mid- to high-budget films shot on RED.[59] Digitally captured footage facilitated instant transfer to the digital editing suite, which was already transforming the way films were assembled.

Allen (1998, p. 121) observes that since the early 1970s 'the fundamental drive in developing […] new editing technologies [was] to make the editing process cheaper, more efficient and more creatively flexible'. Following the breakup of the Hollywood studio system, its established film assembly line vanished and new modes of post-production emerged. While editing magnetic tape had already transformed the way and the speed at which editors could work, virtual editing became possible with the introduction of laserdiscs and then hard disk and software-based systems: 'With the advent of digital technology, response speed of the equipment is now such that the element determining the time-span of the editing process is now the decision-making capabilities of the editor.' (ibid., p. 122) The editor's workflow is facilitated by computer workstations that give the editor instant access to any piece of footage. These workstations also allow for the instant re-play of a scene or segment without having to rewind. Director John McTiernan (quoted in Taylor, 1999, p. 288) cautions that the '[Avid] machine eliminated the last vestige of reluctance to cut, the cost of cutting'. The ability to edit in non-destructive and non-linear fashion has drastically altered Hollywood practice in that filmmakers and editors now spend proportionately more time editing their material. This naturally has had a profound impact on film music composition. Traditional scoring methods cannot cope with the variables of an ever-changing picture cut. Composers used to rely on click books, stop watches, click tracks

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[58] On overshooting see also Bordwell (2006, p. 156).
[59] For a more extensive list, see http://www.red.com/shot-on-red [Accessed 10 May 2012].

and visual cueing aides, all of which require a locked picture for planning purposes.[60] Film composers by necessity are conscious of time, as film music is fundamentally dictated by the film's structure at the macro and micro level. Traditionally, the film composer would first be introduced to a film at the spotting session, in which music requirements were discussed and agreed, including the start and end points of each cue. Early methods of synchronisation involved the co-creation of film and music, in the field of animation as early as during storyboarding.[61] In live-action film, studios' prevalent modes of post-production dictated that music was composed to so-called locked picture, in an assembly line process. Composers could rely on the certainty of an unchanging edit and its inner timings. Detailed verbal timing notes, created during the spotting session, verbally represented every scene to be scored. During scoring sessions, composers would draw on an array of methods to ensure synchronisation between music and picture, using click tracks, a stopwatch, or visual aides. Common to all methods was their reliance on a picture edit that remained unchanged. Faulkner (1983, p. 36) notes that 'a freelance composer […] is ordinarily one of the last specialists to contribute to the creative side of the film.'

Picture editing programmes such as Avid or Final Cut Pro provide relatively crude logging capabilities to communicate editing changes. If the picture edit is changed, determining what has been changed is not always a straightforward process for the composer. Music editors are employed to help adjust cues already composed. But depending on the project, these adaptive measures may not suffice to help the score keep up with the picture. Because it allows endless revisions, non-linear digital editing has removed film even further from traditional, linearly conceived film music. On the one hand, filmmakers' ability to repeatedly alter, revise, and refine their films offers them the benefit of greater creative freedom with little added expense. On the other hand, repeated changes to the edit lessen the need for filmmakers to have a creative vision and forethought and potentially diminish a film's structural integrity. Editors lose the once painstaking and focused process and tactile experience of handling physical film. Ironically, composers, too, can now easily access the latest picture edit. VHS tapes and, more recently, digital video files have enabled composers to synchronise their music with footage at the computer. Whilst the technical apparatus thus allows

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[60] These and other traditional scoring methods are explained in Karlin & Wright (2004), Davis (1999), Hagen (1990), Manvell & Huntley (1975).

[61] For an insightful account of Disney's career, including his pioneering sync methods see Gabler (2008).

composers to readily observe changes to the picture, film edits now often change faster – and more frequently – than music can feasibly be revised. Traditionalists may struggle with these new working conditions. Composer Gabriel Yared explains that he 'cannot stand being in front of a video all the time'.[62] He feels that it is futile trying to fit music to images that keep changing and that may be edited at much faster speeds than in the past (see also below). Yared feels that music 'should capture the spirit of the image rather than trying to hit every little detail.' He elaborates that 'old masters used to work to the memory of images', referring to written cue sheets that were created upon the spotting session and that allowed composers to compose their scores without seeing the film again.

Not only has digital editing meant that the edit keeps changing. Digital editing also encroaches on the realm of production: Actors' performances can be transformed or wholly constructed during editing. Film editor and author Karen Pearlman (2009, p. 129) concedes that 'in the cutting of emotional rhythms, editors make decisions about the extent to which they manipulate and alter a performance or leave its rhythms intact'. Further study is required to determine whether the reliance of post-production manipulation of actors' performance means that actors have to act less. This would compound Walter Benjamin's (1936, p. 21) suspicion of film stripping actors' performances of their aura. Organic narrative film music proves increasingly incompatible with an overly technical, inorganic product. At the same time, if editing interprets and mediates the on-screen action – functions traditionally left in part to the score – music is potentially prevented from fulfilling similar functions.

Sadoff (2006, pp. 179–180) suggests that 'because editing stations allow picture editors to cut the film effortlessly and endlessly, it is difficult to lock the picture. Even though all of the elements have been assembled, including the recorded score'. Spanish composer Javier Navarrete has suffered the frustrating effects of a repeatedly revised picture edit: He candidly shares anecdotes about his experience of scoring *Wrath of the Titans* (2012). A second round of scoring sessions took place *after* the film's supposedly final dub (4-6 February 2012, Air Studios, London).[63] These sessions had become necessary due to numerous changes to the picture edit and the producers' shifting

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[62] Gabriel Yared at a 'BAFTA Masterclass: Composing for Film' at the BFI Southbank on 26 June 2013
[63] On 7 February 2012, Javier Navarrete visited the Royal College of Music for an informal Q&A with students on the Composition for Screen programme.

opinion about the music supplied thus far. Navarrete explained there is a tendency with recent Hollywood studio films to keep the film 'open', meaning there is no longer a reliably locked picture a composer can work to. *Wrath* required several rounds of so-called additional photography to fix problems identified during initial test screenings. Navarrete compared the situation to that of *Gladiator* (2000), which according to him also spent 'nearly a year in the cutting room before it turned into what now looks like an accomplished film'. Navarrete had to alter his scoring strategy to adapt to *Wrath*'s requirements. He had devised a 16-track MIDI draft using the virtual instrument Symphobia and admitted that 'the only way to save my music was my MIDI programmer'. Based on Navarrete's musical sketches, the programmer would create more elaborate demos with specific instrumentations, added layers and textures, ethnic sounds, etc. Meanwhile, to prepare the actual recording sessions, an orchestrator would also work from the original 16-track MIDI draft. The orchestrator's work then had to be edited and re-edited to an ever-changing picture cut: 'Every week, we were conforming to a new cut – I couldn't even look at the orchestrations,' says Navarrete. To help prepare for the final scoring sessions, two additional programmers were hired to provide new percussion parts and revise many cues previously recorded. Navarrete laments that composers are increasingly losing control over their own work, saying 'there's no freedom in film music at all'. More precisely, he was perhaps frustrated with the prevailing lack of musical integrity in Hollywood film scores. He compared his compositional approach for *Wrath* to that of an unnamed music editor-turned-composer who scores films for Ridley Scott. Waiting with music placement until late in the editing process, that editor would record musical snippets and create a 'menu' of sorts, a collection of 'vertical and horizontal structures' he could later place wherever suitable. In a similar fashion, during the *Wrath* recording sessions, Navarrete recorded not only sections but also numerous ostinati that ended up in the music editor's hands, a total of 48 (!) variations that could be freely placed throughout the film. Addressing the obvious question who, then, was in charge of musical decisions or quality control, Navarrete remains evasive but admitted that his work on Wrath was 'miles away from art'. It transpired that the aim more often than not was the filmmakers' approval ('that'll do') or achieving a scoring solution that was 'good enough'. Composer Thomas Newman shares Navarrate's frustration: 'One of the notions of the job of writing music is - this scene is not working, can you help us? Can you give it a sense of more urgency, more excitement? And sometimes we're forced to do that beyond the realm of our own

taste - you say, "Well, I don't want to have to sell something that doesn't exist". And yet sometimes that's the nature of the job.'[64]

Composers find different ways of coping with a picture edit that keeps changing. Some composers more than others seem at ease with evolving working methods. Hans Zimmer explains, with the example of *Batman Begins* (2005) that for him…

> …picture changes aren't a problem. On *Batman Begins*, for instance, which James [Newton Howard] and I did together, I knew we were going to have a car chase, but I knew it wasn't going to be the stereotypical car chase, absolutely no way. But Chris [Nolan] hadn't really attacked that scene yet, and hadn't really figured it out. So I wrote the car chase music as a kind of Lego set, since I knew he was going to move the picture around like crazy. And it's a car chase, so we're not really concerned with the integrity of a beautiful melody here! In fact, if there's anything more boring to write than a car chase, I can't think of it right now. So it just became this Lego set, and as Chris was moving chunks of car chase around, it was very easy to adjust.[65]

Whether as a result of changing edits a composer has to revise significant portions of his score (Navarrete) or is able to modify his compositional approach to anticipate and accommodate frequent changes (Zimmer), the resulting workflow in both cases differs from the more autonomous and linear approach composers were able to take in the past. And if, as Zimmer proposes, the most effective scoring strategy now is for composers to take a modular approach (whereby elements can be freely layered and re-combined), this certainly precludes expressive and developmental possibilities inherent in traditional scores. It is not surprising, then, that scores such as *Batman Begins*, whilst seemingly busy and continually moving forward, are in fact remarkably static, musically.

Digital editing poses challenges for film composers when it comes to fitting music to picture. Conversely, increased flexibility during the edit has given rise to new possibilities of fitting picture to music. Whilst the latter approach may not always be apparent in the final film, one obvious example can be found in *TRON: Legacy*. Sam Flynn arrives in a completely silent armoury (27:00) where he is to be equipped with a uniform and identity disc to compete in the games. Four beautiful, cyber-angelic women appear, wrapped in white latex. Like a *Vogue* fashion ad come to life, they approach

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[64] In The Motion Picture Editors Guild (1996).

[65] 'Breaking the Rules with Hanz Zimmer' interview by Dan Goldwasser, published 09/2006, http://www.soundtrack.net/content/article/?id=205 [Accessed 16 July 2013].

Sam, stepping in sync with a smooth, timbrally sensual music cue.[66] The clicking heels form a percussive part in the score and draw attention to the music. In that this short scene is so overtly constructed, Kosinski's experience in advertising is evident: It makes no narrative sense for the four women to step in time with the non-diegetic underscore. In fact, this constitutes a clear break with filmic convention. When listened to on the soundtrack album, where clicking heels are omitted, the track 'Armoury' has a decidedly less rhythmic and elegant feel. In the film, the effect of four women cat-walking in close-sync with the music synergistically heightens the fetishistic appeal of the moment. The sexual tension here is undeniable and clearly is not lost on Sam. Once he is fully equipped with armour, he is sent towards a bright light and instructed to survive. The synchronisation of music and the footsteps in this segment is too perfect to be accidental. Seeing that the music is in a steady tempo, for the four actresses to walk in sync with the music, they will have had to be guided in some fashion during the shoot. If the Daft Punk track 'Armoury' was not composed prior to shooting, the actresses may have walked to a click track. Either way, there was a high level of planning for the connection between music and visuals in this scene.

Later on in the same film (1:08:27) Sam seeks out club owner Zuse (Michael Sheen) who supposedly can help him reach a portal back to the real world. He enters the End of Line club, where loud dance music plays.[67] Leading Sam to a back room, Zuse addresses the DJs: 'I'm stepping away for a moment, boys. Change the scheme. Alter the mood. Electrify the boys and girls if you'd be so kind.' They nod and put on a more aggressive track.[68] On a cut to the outside, as a crew of Clu's soldiers parachute into the End of Line club, the volume of the diegetic club music is raised significantly, which defies narrative sense. From high above the music should not be audible at all. The resulting effect is one of raised tension, providing a vectorial trajectory that delivers the squad into the club. On the cut back inside the club, the level of the music remains unaltered. When the intruders hit the dancefloor, they land on a final downbeat, which adds a sense of gravity to the arrival. The DJs are shown nodding at each other as if agreeing which track to play next. A sensible reaction would be to run for cover, as does much of the crowd. Instead, they put on a new track (cue 'Derezzed'), as lightsabers are

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[66] The track 'Armoury' on the soundtrack album.
[67] The track 'End of Line' on the soundtrack album. Daft Punk make a cameo appearance as DJs and dressed in a variant of their signature attire (motorcycle helmets and robot gloves).
[68] Not featured on the soundtrack album.

unfolded. The track's hook (Figure 12) commences precisely as Sam jumps to meet his opponents and a thumping beat kicks in as Quorra arrives to help him.

Figure 8: 'Derezzed '(loop)

Given the high tempo of 'Derezzed', numerous accidental sync points are likely to occur in a high-action setting. Nevertheless, it is striking how many hits and strikes coincide with beats, more often than not downbeats. As a result, the fighting has a controlled, staged and dance-like feel about it.[69] The fighting looks like a stylised ritual in which the elegance of execution seems as important as who wins. Several times Zuse is seen dancing in mocking *can-can* fashion, breaking up the visual flow of this segment. Everything grinds to a sudden halt (again on a downbeat) when Kevin Flynn arrives and with his *Zen* aura commands the fighting to stop. The segment offers added viewing pleasure from the highly stylised musico-visual coincidence, akin to a dance number. That the music in itself is a most repetitive, albeit high-energy, dance track – the entire track based on a looped two-bar hook – only adds to the heightened aesthetic of the moment. It seems likely that for the purpose of effective storytelling a constructive dialogue took place between the composers, the director, the editor(s), sound designer and dubbing mixer in order to edit some segments to music and collaboratively plan moments of close synchronisation between music and image. The collaborative link between composers and other members of the creative team will be addressed in more detail in Chapter 4.

The visual pace of digitally edited films has increased at baffling rates as a direct result of digital technology being used. Christopher Sharrett (2001, p. 320) notes that in films as recently as the 1990s we 'saw a panicked predicament for narrative, as traditional notions of storytelling disappeared in the hyperactive montage of a new cinema that is essentially visual entertainment, the eye candy of image culture where the referent vanishes amid a whirlwind of spectacular editing.' Bordwell (2002, pp. 21–23) explains that…

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[69] Not dissimilar to the iconic fighting segments in *The Matrix*.

> …fast cutting was encouraged by [video] tape-based editing in the early 1980s
> […] and then by the arrival of digital editing systems. Cutting very brief shots
> on celluloid is labor-intensive and complicated, since trims only a few frames
> long can easily go astray. By cutting on computer, filmmakers can easily shave
> shots frame by frame, […] one reason [why] some action sequences don't read
> well on the big screen. After cutting the car chase from *The Rock* [1996] on
> computer, Michael Bay saw it projected, decided that it went by too fast, and
> had to 'de-cut' it.

Bordwell has dissected a large number of Hollywood films, determining the average shot length (ASL) for each film. Counting the number of shots and observing ASLs offers fascinating insights into recent Hollywood films' editing pace:

> In the 1980s [… most] ordinary films had ASLs between five and seven
> seconds, and many films (e.g. *Raiders of the Lost Ark*, 1981; *Lethal Weapon*, 1987;
> *Who Framed Roger Rabbit?,* 1988) averaged between four and five seconds. We
> also find several ASLs in the three-to-four second range, mostly in movies
> influenced by music videos and in action pictures, such as *Pink Floyd: The Wall*
> (1982), *Streets of Fire* (1984), *Highlander* (1986), and *Top Gun* (1986). At the close
> of the 1980s, many films boasted 1,500 shots or more. There soon followed
> movies containing 2,000-3,000 shots, such as *JFK* (1991) and *The Last Boy Scout*
> (1991). By century's end, the 3,000-4,000 shot movie had arrived (*Armageddon*,
> 1998; *Any Given Sunday*, 1999). Many average shot lengths became astonishingly
> low. *The Crow* (1994), *U-Turn* (1997), and *Sleepy Hollow* (1999) came in at 2.7
> seconds; *El Mariachi* (1993), *Armageddon*, and *South Park* (1999) at 2.3 seconds;
> and *Dark City* (1998), the fastest-cut Hollywood film I've found, at 1.8 seconds.
> (ibid., p. 17)

Martin Scorsese (quoted in Bordwell, 2006, p. 152) remarked in 1990: 'I guess the main thing that's happened in the past ten years is that the scenes [shots] have to be quicker and shorter. [*GoodFellas* (1990)] is sort of my version of MTV… but even that's old-fashioned.' Bordwell (ibid., p. 123) points out that the trend towards shorter ASLs is not unique to action-packed movies: Even family-friendly animated films such as *Finding Nemo* (2003) feature remarkably short ASLs. In recent years, 'only Woody Allen and M. Night Shyamalan have consistently chosen to build movies out of extended shots'. Bordwell (ibid., pp. 181–182) adds that 'rapid editing obliges the viewer to assemble many discrete pieces of information, and it sets a commanding pace: look away, and you might miss a key point'. This results in 'hyperactive action sequences verging on visual chaos: [for example] *Matrix Revolutions* (2003)'. Believing that a movie could be made in the cutting room, directors started overshooting, further fuelling the temptation to shape the film during post-production. Frequent cutting results in a highly fragmented visual style that has wider implications not only for music but also picture composition. Shorter ASLs have profound impact on the interrelation of sound, music and visuals,

especially sync points. As the visual pace of films increases, more and more information is compressed and conflated in ever-shorter segments.

This is problematic for the planning and fitting of music to picture. The concept of musical close-scoring in a traditional sense has been outmoded – in fact prevented – by prevalent editing and filming practice. Where close-sync is desired, composers may opt for a fast rhythmic texture, whose short subdivisions ensures that the music is more likely to hit cuts by mere coincidence, or to super-impose hits to match visuals after the fact. For example, for *Demolition Man* (1993), music editor Eric Reasoner was asked to re-cut the finished score to add more hits matching the visuals of the dystopian opening sequence of burning Los Angeles.[70] Composers have to find new strategies to contribute to fast-paced footage. In a talk at the 'Sundance in London' festival on 29 April 2012, composer Harry Gregson-Williams outlined his approach to the cue 'The Stanton Curve' in *Unstoppable* (2010). In a particularly frantic segment late in the film, a runaway train threatens to derail from an unstable elevated rail track. The visual language of *Unstoppable* comprises helicopter shots, dynamic camera swerves, and the intercutting of long shots and close-ups of the racing train. A busy sound effects track contributes to a visceral viewing experience. Asked to help further escalate the segment's impact, Gregson-Williams resorted to a collection of stackable loops: fast semiquaver percussion patterns, harsh and scratchy semiquaver string figurations, and a synthesizer bass groove. These loops could be freely re-combined as the train races towards the town. Superimposed hits were used to accentuate particular cuts for emphasis. With its busy rhythmic texture, the resulting score is remarkably static and expressionless. Music is called upon to match and compound the visceral sound design in timbre and impact, which at times makes for onomatopoeic redundancy. Nevertheless, in combination with the visuals and sound effects track, the music undoubtedly adds to *Unstoppable*'s break-neck pace and sonic overload. One could perhaps argue that the abovementioned decline of extended melodies in favour of rhythmically driven textures in recent Hollywood film music is directly linked with faster editing speeds.

Whilst ever-shortened ASLs in recent Hollywood films can be readily observed, more subtle stylistic shifts are perhaps less obvious to the casual viewer. Hollywood cinema

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[70] Reasoner showed this film clip and his Pro Tools session of the edited Goldenthal score to a class of Berklee Film Scoring students in February 2001.

has traditionally tried to hide its technical apparatus, relying on an invisibility-of-style editing process. Isaacs (2008, p. 19) has discussed continuity editing, and Bordwell (et al., 1985, p. 55) have catalogued and analysed conventions in classical Hollywood cinema. Identifying more recent developments, Bordwell (2006, p. 54) describes 'intensified continuity' as a key attribute of Hollywood films: The use of quick cuts (suggesting nervousness), a handheld camera circling the action (conveying a sense of chaos), a floating camera homing in steadily on the actors (evoking lyricism), more so-called singles, closer views, and wide-ranging camera movements. *Salt* (2010) is a prime example of intensified continuity at work. For the sake of entertainment, a generally confusing plot seems secondary in this action thriller. The film relies on a highly fragmented visual style that by use of close-ups and fast cutting amplifies the audience impact of prolonged chase sequences and violence on screen. In between these segments, Angelina Jolie's looks are exploited through the gratuitous visual privileging of her face in extreme close-ups. There is a distinct lack of long shots that might help the viewer gauge context and environment. Instead, the focus remains with agent Salt most of the time. The claustrophobic immediacy that results makes for a seemingly intimate, raw and honest mode of storytelling.

In some respects, the calculated nature of the film's visual style renders music superfluous. What other filmic elements provide, music does not need to. James Newton Howard's score is reduced to rhythmic percussion patterns for added tension and ambiguous pads and drones. Motivational ambivalence and emotional ambiguity are of course part of Salt's character in that she does not reveal her true identity for much of the film. At no point does the music empathise with Salt's predicament. The score serves mere utilitarian functions, contributing little more than ancillary fillers and complementary padding. Ironically, 'utilitarian is the new sexy' is one of the film's more memorable lines of dialogue, said by Ted Winter (Liev Schreiber) to Salt early in the film. Perhaps the visual style of recent films that draw on intensified continuity constitutes a more comprehensively affective filmic language that is more engaging and impactful. In recent films such as *Salt* and *Jack Reacher* (2012) music is reduced to an expressive minimum.[71] For practitioners, an interesting exercise would be to try and re-score selected passages with more high-profile, emotive, musically developed cues.

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[71] Stylistic similarities between the two films aside, Tom Cruise was originally supposed to play Salt. See http://www.investigatemagazine.co.nz/Investigate/531/tom-cruise-was-supposed-to-be-salt-but-angelina-jolie-proved-to-be-just-as-tough/ [Accessed 24 August 2013].

Almost certainly, the result tips the aesthetic balance of intensified continuity plus high-profile scoring towards the overly obvious and intrusive.

The use of special effects has a longstanding tradition in Hollywood film. In pursuit of convincing make-believe and engrossing spectacle, stunts, trick shots, and green screens have been used for decades. In the 1970s, filmmakers started taking an interest in computer technology's ability to generate visual effects. Computer-generated imagery (CGI) was used in Hollywood films as early as 1973 in *Westworld* and more extensively in *TRON* (1982). Filmmakers were attracted to CGI for both creative and aesthetic reasons. On the one hand, CGI could visualise even the most fantastic settings and characters. At the same time, the use of CGI lent films a certain cutting-edge appeal. Labour-intensive, expensive, and in its early days quite limited in scope, it probably was not before *Jurassic Park* (1993) and the fully computer-animated *Toy Story* (1995) that Hollywood widely accepted that CGI could contribute to, or indeed be responsible for, films' mass appeal. Hollywood's recent interest in CGI for its visual potential is attested to by a wave of CGI-heavy remakes and sequels, for example, *Star Wars: Episode I - The Phantom Menace* (1999).

In what ways film composers approach CGI largely depends on the filmmakers' intentions for and confidence in their CGI visuals. To help further the digital illusion, music may indiscriminately treat CGI elements as part of the diegesis. Sound design, too, contributes greatly to anchoring CGI objects in the narrative, as does characters' response to these objects. In the case of *TRON*, Carlos opted for a partly synthetic score to mirror the film's digital aesthetic and surreal virtual setting. The so-called *spyders* in *Minority Report* (2002) are underscored as a physical threat, and Jar Jar Bings in *Star Wars I* is treated as though he were a live-action buffoon. In Peter Jackson's remake of *King Kong* (2005) CGI was so seamlessly integrated in the film that music could trace Kong as a nuanced, emotionally complex character. One might compare this to the original *King Kong* (1933), analysed in Gorbman (1987), and notice how much more the earlier film relied on music to help render Kong believable. While CGI may be measured by its perceived level of realism, visual verisimilitude is unhinged by the super-natural, physically impossible acts computer-generated objects and characters are routinely made to perform. Recent CGI-heavy films such as Michael Bay's *Transfomers* (2007) prove that in Hollywood cinema spectacle ultimately wins over realism. The T-

Rex in *Jurassic Park* famously is first announced by its thundering footsteps that send ripples through a glass of water. When the T-Rex finally appears on screen, it is rendered so convincingly, both visually and sonically, that Spielberg confidently leaves this first encounter un-scored. Film music can rest where other filmic elements succeed in achieving a sense of completeness and create a captivating moment.

CGI has become an indispensable tool in Hollywood film production. Many sci-fi and action films rely on CGI for delivery of their core appeal. However, CGI permeates Hollywood films across all genres, as a look at any end credit roll will confirm. Whether subtle and ancillary, or overt and extensive, the vast majority of Hollywood films now feature at least some CGI. The effect need not always be gratuitously spectacular. Narratively motivated uses of CGI include the morphing effect in *Terminator 2: Judgment Day*, or Brad Pitt's reverse-aging in *The Curious Case of Benjamin Button*. Whereas special effects such as painted backdrops, rigged sets, and explosions are filmed on set, CGI is always added in post-production. Therefore, these visuals are often not available to the composer when he or she starts composing. This must naturally affect the relationship between music and picture, as it is not possible to musically address visual intricacies. Working on *Harry Potter and the Goblet of Fire* (2005), Patrick Doyle composed to work prints with visual placeholders where CGI would later provide the visuals for the Triwizard Tournament.[72] Steve Jablonsky provided up-front library tracks for some passages in the highly CGI-reliant *Transformers: Dark of the Moon* (2011).[73] Relinquishing some creative control over his music, Jablonsky allowed the editor and director to cut and adapt his music to fit the assembled picture. The extent to which composers thus increasingly disengage from the image, their musical contribution is potentially disconnected from the film's visuals. Admittedly, composers in the past were similarly removed from the image, scoring to timing notes. However, the key difference between then and now is that timing notes were a detailed verbal representation of the final edited film whereas nowadays CGI may significantly alter the footage at hand. Music editor Graham Sutton explains that today visual effects teams have a great deal of influence over the shape of the final film.[74] The inner and outer timings of a finished CGI sequence can differ significantly from what the composer may originally have been told, meaning that completed music cues occasionally need to be edited (for example

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[72] I was myself present at the recording sessions at Air Lyndhurst in 2005.
[73] This information was shared by Nathan Stornetta, who works with Remote Control Productions.
[74] In conversation with my colleague Samuel Pegg in early June 2012.

time-stretched) in the dubbing theatre to fit the scene as intended. While composers are finding new approaches to negotiate these shifts in post-production practice, film music is now fundamentally less attached to visual detail than has traditionally been the case. It would be interesting to explore how much composers alter their approach to film music composition when scoring films whose CGI sequences are not completed at the time the score is being composed.

TRON: Legacy offers an example of interesting interaction between CGI footage and music. In a huge crowd-filled stadium ready to witness gladiatorial carnage, the score reaches a new level of dynamic impact with loud digitally distorted percussion. Throughout an initial series of disc-throwing exercises, the score subtly sits within a texture of powerful visuals and intricate sound design. Swooshes, digital pings, clinks, and crashes convincingly render the tactile fabric for this environment. Tension rises as the cyber-gladiator Rinzler enters, accompanied by down-sampled tribal drumbeats (33:25, cue 'Rinzler'). The ensuing dance music track mashes Sam and Rinzler into a *pas de deux* of non-equals. Sam rises to the challenge but shows little initiative. It is quickly established that killing someone ('derezzing') is without moral implication as there is no physical consequence to deleting a computer programme. Therefore, one wonders whether Sam is truly fighting for survival. Indeed, as soon as he is physically cut, shedding a drop of blood, all fighting is suspended. Exposed as a so-called user, he receives special treatment. For the rest of the film, Sam won't suffer so much as a bruise. Clu challenges Sam to a lightcycle race, and Sam readily accepts.[75] Clu's lightcycle's formation in slow-motion is a celebration of cutting-edge CGI.[76] As Sam launches his lightcycle, he is shown from the side in a medium long shot, his movements slowed and framed with the visual aesthetic of a sportswear commercial.[77] A new cue commences (Figure 17) and the quaver ostinato carries through the entire lightcycle race.

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[75] To himself: 'Now this I can do.' (41:45)

[76] This lightcycle race is directly lifted from the original film and was featured in the *TRON: Legacy teaser* several years prior to the film's release.

[77] Adidas later released a *TRON: Legacy* collection.

Figure 9: 'The Game Has Changed' (loop)

The captivating sound design and high-resolution visuals provide a plenitude of audio-visual stimuli. The balance of music and sound effects shifts throughout, often favouring the latter. Ten competing lightcycles enter into a carefully choreographed dance, digital exhaust traces of blue and orange intertwining and one-by-one eliminating competitors. Visual cuts are repeatedly synchronised with downbeats in the music, conveniently marking two- and four-bar phrases. The music remains steady in tempo and symmetrical phrases and it seems likely this segment was planned, programmed and edited to the music. Yet another case whereby the collaborative planning of a film sequence can make for a more compelling combined result. The circular nature of the music here resounds with the inconsequentiality of all Sam's actions. He is effectively playing a computer game. Indeed, at one point, the lightcycles on the grid resemble balls in a pinball machine, the scoring of points announced with light flickers and gratifying sound effects (43:23).

Developments in camera technology, digitial non-linear editing and CGI have profoundly altered post-production processes and narrative strategies in Hollywood storytelling. The ways music is implemented in film on a technical level and called upon narratively have changed accordingly. Ever-changing picture cuts have rendered obsolete traditional, linear scoring methods. Accelerated editing speeds prevent meaningful synchronicity between music and visuals beyond occasional sync points. Increasingly sophisticated CGI no longer requires aestheticising through music. The first two parts of this chapter have focused on changes in Hollywood storytelling from the point of view of the writer, producer, editor and director. The third part of this chapter focuses on the influence of television on Hollywood films and film music. It posits that television's profound influence on films is founded in commercial considerations but also in audience conditioning.

Part 3: Changing viewing habits and the influence of television

There are obvious and well-documented parallels and overlaps between Hollywood film and U.S. television production. Besides commercial synergies, addressed below, there are overlaps in logistics, creative personnel, production and post-production practices. Links in terms of aesthetic outlook, narrative strategies and socio-cultural aspects are also well understood. U.S. television content is distributed internationally and offers compelling snapshots of American popular culture, which it at the same time helps construct. As a widespread cultural commodity, television has a significant influence on its audience and in turn on creative practices in competing commercial media, notably cinema. Changes in television's aural sphere have implications for cinema audience conditioning. Fiske (2010, p.1) has described television as 'a cultural agent, a provoker and circulator of meanings'. With television content consumption at an all-time high (see below), viewers are more exposed than ever to trends in television. This exposure naturally conditions viewer tastes and expectations. Content creators who wish to attract a mainstream audience to media other than television, including feature film, cannot ignore television. Overlaps and synergies between television and film in creative, technical, and business terms have been conclusively addressed elsewhere and will be summarily highlighted in this chapter because they also have implications for film music composition.

The Nielsen Company's *Three Screen Report* from the first quarter of 2010 shows that American viewers were on average consuming more than five hours of television per day.

> As of Q1 2010 the 292 million people in the U.S. with TVs spend on average 158 hours, 25 minutes each month tuning into television. Q1 2010 data shows that 134 million people watching video on the Internet spent on average 3 hours, 10 minutes during the month doing so. As of Q10 the 20.3 million people who watch mobile video in the U.S. spend on average 3 hrs, 37 minutes each month watching video on a mobile phone.[78]

The overall amount of time spent watching television is staggering. Viewers on average consume – or are exposed to – significantly more television content than cinema

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[78] The Nielsen Company (2010 p. 4) [PDF downloaded 20 July 2012].

content.[79] In all of 2010, 1,339 million cinema tickets were sold at the U.S. domestic box office,[80] or an average of 4.58 tickets per Nielsen-rated television viewer. In other words, for every 1,825 hours of television viewing, the average U.S. viewer saw fewer than five films in the cinema. It follows firstly that audience tastes, expectations, and viewing habits may be significantly more affected and shaped by television than by the cinema. Secondly, television can serve as a content distribution outlet: Hollywood studios have a strong business interest in catering to the television market as a secondary outlet of cinema releases, as well as a cross-promotional platform. Thirdly, because of the business and distribution link between the two media, post-production practices no longer exist in isolation. Creative personnel move between television and cinema and are aware of and respond to respective trends in filmmaking and television production to serve customers and to compete for box office returns, television market shares and advertising revenue. There has always been a direct commercial link between U.S. television and Hollywood cinema. Early on, colour television was considered a threat to cinema in that it distracted viewers from the big screen and generally caused a change in viewer demographics. Richard Caves (2000, p. 202) observes that one 'effect of TV's rise was to transform the audience for cinema films from families to teenagers on their own. The effective innovation of the heavily promoted blockbuster "action" film would likely not have succeeded without this shift in demand.' Harris (2009, p. 267) points out that 'by the end of 1966 run-away production costs, colour TV […] and the influence of European directors and filmmakers' posed serious threats to Hollywood cinema'. In response, film studios initially 'fought back by producing large epic films in the new CinemaScope and Technicolour processes',[81] 'special effects and grander stories […]. Into the late 1950s the filmmakers were either hired from television or encouraged to make films that television could not possibly encompass.'[82] Through fierce competition, television therefore directly affected Hollywood filmmaking. Bolstered film budgets and raised production values may have been beneficial to film music composition at the time.

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[79] These figures do not indicate the quality of TV consumption, i.e. the percentage of hours spent with focused viewing, as oppose to viewers running the TV set whilst undertaking other tasks.
[80] Source: http://boxofficemojo.com/yearly/?view2=domestic&view=releasedate&p=.htm
Box Office Mojo [Accessed 20 July 2012].
[81] Rodman (2010, p. 21).
[82] Pye & Myles (1984, p. 23).

Instead of passively tolerating television as a free-to-view competitor, Hollywood studios eventually bought into television programming to maximise commercial synergies between film and television, both in terms of production and post-production facilities and of distribution. Rodman (op. cit., p. 105) notes that as 'the film studios appropriated television programming, they poured money, equipment, and studio space into television productions. As a result, many television programs began to look more and more like miniature movies.' Hollywood films and television grew closer in production methods and shared resources, facilities, and personnel. Although television continued to attract growing audiences and market share, it transitioned from being a competitor to being an ally to cinema. 'In the early 1970s, TV licensing emerge[d] as a lucrative revenue stream, in times of declining cinema ticket sales.'[83] Mitchell (2010, p. 196) remarks that 'ironically television has become the film industry's golden goose'. Neale (1998, p. 131) confirms a 'growing reciprocity' of film and television as evidenced by the pre-selling of films to television networks for broadcasting after the films' primary cinema, home video, and digital video disc (DVD) runs. Advertising-financed free-to-view television thus became a third outlet for Hollywood feature film content and in turn also helped finance film production. Reversely, feature films have not been immune to the influences of television, with TV content feeding back into feature film through the filmic adaptation of popular television series. These include the *Star Trek* franchise or the recent *The Simpsons Movie* (2007). Considering the cross-fertilisation of narrative formats in visual media, Glen Creeber (2004, p. 3) notes that cinema has also adopted television formats, for example the serialisation of *Star Wars* or *Kill Bill* (2003).

Theodor Adorno (2001, p. 166) accused television of 'handling the audience', supposedly manipulating and determining its passive viewers' responses through 'psychoanalysis in reverse'. Ron Rodman (2010, p. 42) disagrees with Adorno's notion of the passive viewer, suggesting that while 'the text helps shepherd the viewer to select the preferred meaning, it is up to the viewer to pull these correlations from the text and interpret the text'. Rodman sees television as a communication process that requires active audience participation to fill in narrative detail omitted in the televisual text.[84] Fiske (1990, pp. 64–84) agrees that television consumption 'requires interpreters' knowledge of "the world" (social knowledge); "knowledge of the medium and the genre" (textual knowledge); and the relationship between the two (modality judgments)'.

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[83] Pye & Myles (1984, p. 42).
[84] Paraphrased from Rodman (2010, p. 22).

Music in television enters into 'an interpretative network model of correlation' that, drawing on the viewer's textual knowledge, 'contributes to facilitating meaning in television'.[85] Effective television music must speak to the target audience in being of a cultural realm accessible to a programme's viewers. The lines between cause and effect are blurred: A television programme may employ music that stems from a suitable cultural sphere, thus providing easy access. Or a programme may find novel ways of employing music, drawing upon the resulting synergistic meaning. An example for the former might be *Magnum, P.I.* (1980-1988) whose guitar-laden rock score ideally spoke to the programme's target audience. An example of the latter would be HBO's *The Sopranos* (1999-2007) where an eclectic range of songs and pieces sourced from rock, pop, and opera contextually contribute to the programme's socio-cultural meaning and appeal. Composed television scores often require a contemporary edge to appeal to s young target audience and to maintain a novelty factor. Composer Bear McCreary describes how for *Battlestar Galactica* (2004-2009) despite obvious similarities with *Star Wars* or *Star Trek*, he purposely avoided a 'bombastic' and 'old' orchestral sound. He aimed instead for a 'really minimalist sound that was very different'.[86]

As far back as 1977, Prendergast (1977, p. 287) pointed out that television traditionally served as a 'lucrative training ground' for film composers and it continues to provide employment opportunities for individuals new to the field. Burlingame (1996, p. 38) refers to film composers' formative television days and lists John Williams as an example. Inexperienced composers may be entrusted with scoring television episodes because the commercial stakes are generally lower than in film. If television was and is considered a 'training ground' and experience gained therein 'formative', then it is implied that composers can suitably apply this experience when scoring feature films. A case is thereby made for the influence of television scoring on feature film scoring. For the purpose of this thesis, 'influence' may refer to stylistic choices and musico-narrative approach, but also working methods and collaborative ties. Television music is generally composed and produced on far smaller budgets than its cinematic counterpart. Weekly schedules demand of the composer efficiency and resourcefulness. According to Faulkner (1983, p. 93), 'the secret of writing for weekly television is knowing what *not* to

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[85] Rodman (2010, pp. 41–43).
[86] Interviewed in Hoover (2010, pp. 138-139).

write'. Ramin Djawadi, who continues to compose music for both television programmes and feature films, confirms that…

> …the turnaround in TV is much, much faster, and the involvement in the feature is much different. There are many more changes [in feature film production], and the scenes are more analyzed. It's interesting that the process for the feature is longer, even though I try to treat [the television series] *Prison Break* [2005-2009] as if it were a regular feature. I wrote themes for the characters and for plotlines, and I'm actually trying to carry that through the show.[87]

Established film composers will not normally work in television because of these budgetary constraints, time pressures, lack of prestige and revenue prospects. When for the *Young Indiana Jones Chronicles* [1992-1996] John Williams 'could not be expected […] to return to episodic television',[88] the less known Laurence Rosenthal wrote the music. Danny Elfman composed the theme for *The Simpsons* but left the in-episode underscore to Alf Clausen (who in turn has never scored a feature film). Elfman also wrote the theme for *Desperate Housewives* (2004-2012) but handed the scoring of the episodes to Steve Jablonsky. Thomas Newman composed only the theme to *Six Feet Under* (2001-2005), whereas Richard Marvin scored the episodes. There are, however, examples of composers that frequently traverse both media. Composer Michael Kamen scored *Band of Brothers* (2001), an ambitious HBO WWII mini series. Hans Zimmer scored *The Pacific* (2010) as well as *The Bible* (2013) in collaboration with composer Lorne Balfe. Michael Giacchino has scored numerous projects under director J. J. Abrams, including the consecutive box office successes *Star Trek* (2009)*, Super 8* (2011), and *Mission Impossible – Ghost Protocol* (2011) but also the television series *Lost* (2004-2010), *Alias* (2001-2006) and *Fringe* (2008-2013).

Deliberately thematic scores, whereby themes are established and developed as the narrative unfolds, have proven effective across different genres, including cinematic genres. In episodic television scoring, composers, besides the show-runner, may be a rare authorial constant where other key personnel, including writers and directors, change from week to week. Ramin Djawadi draws a parallel between his approach to television and feature film scoring:

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[87] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.
[88] Burlingamen (1996, p. 225).

> I've always approached television as if I was doing a giant movie over twenty episodes. […] *Prison Break* [2005-2009]*, FlashForward* [2009-2010], these shows that I've done, the first thing I always said to my producers and directors [is] 'I would love to approach this like a movie. So we need themes. We need an overall arch of the show. We need to have themes for characters or themes for plot.' So I really tried hard to keep that consistent. And it was always well received. They were always very happy with it. Of course, what makes it hard is that the turnaround in television is just so fast – and we'd have a couple of days for one episode.[89]

Fragmentation is an underlying problem in all free-to-view U.S. television.[90] Internally, incidental musical cues are fragmented and lack coherence. Episodes are broken up by advertising (so-called commercials), about six minutes in a 30-minute programme and eleven minutes in a 60-minute programme. Adverts portion televisual narratives into short segments that never require viewers' focused attention for more than a few minutes. At the macro level, television consumption, too, is fragmented by viewing habits. Many television viewers do not pay undivided attention to the programme at hand, distracted instead by concurrent activities such as household chores, checking emails, browsing the internet, etc. For example, according to Nielsen research published in October 2011, 40% of tablet and smartphone owners used them while watching television.[91] Commenting on FOX's hit series *Glee* (2009-present), Colin Crummy (2012, p. 13) notes that '*Glee*'s target teen audience are like drunken butterflies from all that online multitasking and sexting [sic], which may explain the hyper pace'. To the uninitiated viewer, free-to-view U.S. television is remarkably fast-paced and frequently interrupted by adverts and previews. The latter prevent viewers from concentrating on the moment, deferring focused engagement to, and demanding investment in, future programmes.

The fragmented nature of television and the short attention span required for and entrained by its consumption is mirrored in some recent Hollywood films' spectacular antics and vastly increased editing speeds. As David Chase (quoted in Rucker, 2000, p. 133) laments: 'I saw television take over cinema. […] I saw the pandering, cheerleading, family entertainment shit dominate everything. Low attention span stuff. It all came

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[89] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.
[90] Free-to-view as opposed to pay TV such as HBO, which has no commercials. More recent pay-TV stations such as AMC, however, show commercials even though they already charge customers for their content.
[91] http://blog.nielsen.com/nielsenwire/online_mobile/40-of-tablet-and-smartphone-owners-use-them-while-watching-tv/ [Accessed 23 July 2012].

from TV. TV ruined the movies.' Recent comedy programmes such as *Desperate Housewives*, *Ugly Betty* (2006-2010) and *The Mindy Project* (2012-present) contain composed in-episode music that is highly incidental, often overly reactive to keep up with the programmes' disjointed narrative style. These three shows in fact feature very similar music in terms of style and instrumentation, relying on incessant pizzicato strings and mallet instruments, presumably to underline the slapstick narrative tone. I agree with Rodman (2010, p. 109) when he remarks that at 'its worst, television music is overly ephemeral and banal with little sense of expression or development'. However, it is worth bearing in mind that composers know highly incidental, moment-to-moment scoring to be the most effective in serving free-to-view television's fleeting narratives and to engage an easily distracted audience.[92]

Rodman (2010, p. 107) notes that 'early television composers wrote music cues much as they did for narrative film: music was used to signal transitions in the narrative, to signify emotion, and to identify characters through musical leitmotifs'. Whereas earlier television scoring had therefore resided close to its cinematic counterpart in terms of familiar style, idiom and, using live scoring orchestras, 'two composers revolutionized the sound of television scoring, both, initially, for cop and detective shows: Mike Post, starting with *The Rockford Files* (1974-1980); and later Jan Hammer, with *Miami Vice* (1984-1989). Post was the first major composer to bring a pop music sensibility into weekly television, while Hammer's all-electronic approach was hailed as a stylish breakthrough at the time.'[93] Mitchell (2010, p.179) points out that television 'continued to influence musical tastes by becoming a showcase for new talents from the work of popular music, introducing emerging trends to the vast and growing TV audience'. It is not surprising that concurrently to a rise of pop music in television scoring there was a similar surge in pop-infused feature film scores. If there were 'strong pop influences in TV',[94] fuelled by a rise in the use of modern music technology, including synthesizers, and if film composers formed and continue to form in TV,[95] then a plausible case is made for television music impacting on the musical language of features films both per audience conditioning and composer training. Orchestrator Jeff Atmajian puts this in context:

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[92] I have elsewhere (2013) written about effective screen music composition strategies in less than teleologically connected narratives, with the example of recent *Doctor Who* (which is a British television programme, of course, but appeals to a large U.S. audience).

[93] Burlingame (1996, p. 60).

[94] Burlingame, (1996, p. 47).

[95] Compare ibid., p. 48.

> Hollywood is all about youth. And films being focus-grouped to young people: the things people often relate to is pop music. […] I would like to think that orchestral music is going to stay in films, if for no other reason than that it exposes people to orchestral music. But ultimately I can't argue for it because if the product that's being put out there, if the ultimate goal is to relate to society, then you have to do what does that. – What saddens me is this attrition of experience; that the vehicle could still be put forth out there in a way where it still was of a high caliber and still could be a popular commodity, but it isn't because you get people that are completely ignorant coming in that only have very singular knowledge, [who will] throw out stuff that needn't be lost, thinking that a film can only survive if it has this much nudity in it, or violence, or only pop songs.[96]

The scores by Post, Hammer and others in their popular idiom and rock combo medium employ a musical language markedly removed from earlier, orchestral television scoring. These scores evoke pop-cultural connotations that at the time were clearly quite effective in engaging audiences. Pop scoring is on the whole less intricate and favours broad brushstrokes to construct stylised, future-nostalgic settings. A recent example for pop scoring in film is Ramin Djawadi's score for *Iron Man*. He explains the mixture of pre-existing rock songs and newly composed score (a mélange similar to *Top Gun*). The film 'opens with AC/DC, [which] lay the groundwork for the style [of the score] because we tried to continue that rock and roll vibe' (interviewed in Hoover, 2010, p. 91).

Even with their groove-driven edge, early pop scores were often melodic, with memorable themes played by electric guitars or synthesizers. Television shows such as *Magnum, P.I.* (1980-1988), *Knight Rider* (1982-1986), and *Airwolf* (1984-1987) feature catchy, singable main title themes. In later years, such theme tunes would gradually vanish. Altman has noted that television music in general, but opening titles in particular, among other functions serve 'a pragmatic function that has been called "hailing"',[97] i.e. drawing viewers' attention to the programme at hand, away from other domestic distractions. Besides serving as signposts that signal the beginning of a programme, television main title themes also act as sonic logos than anchor viewer identification and, alongside title cards and weekly recurring visuals, prime the audience stylistically and emotionally for the programme to come. Numerous TV themes are widely familiar and have entered into the popular culture domain. Many viewers will

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[96] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.
[97] Gorbman quoted in Sadoff (2004, p. 65).

recall the sleek neo-Americana introduction for *Dallas* (1978-1991), or the 'heraldic fanfare to announce the Enterprise' at the start of *Star Trek – The Next Generation* (1987-1994),[98] and the funky and heart-warming theme for *Alf* (1986-1990). With the growing popularity of digital video recorders (DVRs) and online streaming so-called hailing has perhaps become less important. Viewers can choose to make the programme wait for them.

In recent years, television themes have suffered a significant decline. In 1996, Burlingame (1996, p. 199) noticed a 'shortening of TV themes to just a few seconds, a trend somewhat halted after the success of the *Friends* song' (1994-2004). By 2010, Halfyard (2010, p. 126) observed the complete 'disappearance of the TV theme'. The popular comedy *Scrubs* (2001-2010) uses only a short out-of-context phrase from a longer song as its opening theme. *Ugly Betty* (2006-2010), otherwise plastered with wall-to-wall music, employs only a short musical signature and brief visual as a title. The phenomenally successful *Glee* (2009-2014) only features a single sung chord on a title card that shows for less than three seconds. Perhaps excessively repeated weeklong previews ensure that today's audiences need less priming for programmes they have committed to up front. If so, the title theme is perhaps no longer needed to alert or hook the viewers. Pressured broadcasting schedules may require shows to cut down content duration to make time for more advertising. For its fifth season, each episode of *Mad Men* (2007-present) was supposed to be cut from 47 minutes to 45 minutes 'to allow for more commercial time'.[99] This would explain why the themes for the network television shows *The Simpsons* (1989-present) and *Desperate Housewives* (2004-2012) were shortened after the early episodes, whereas ad-free pay-TV shows including *The Sopranos* (1999-2007) and *Six Feet Under* (2001-2005) held on to their themes for the duration of their run.

Besides robbing composers of the prominent placement of their music, the disappearance of the TV theme has also eliminated one of the last opportunities for television audiences to encounter a musical composition of structural integrity and that last longer than just a few seconds. In eliminating TV themes, it seems as though U.S.

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[98] Burlingame (1996, p. 117).

[99] http://www.variety.com/article/VR1118042991?categoryid=14&cs=1&cmpid=RSS|News|LatestNews [Accessed 22 July 2012].

television has exorcised any and all musical moments, sacrificing a potent tool for audience engagement in favour of more adverts. On the other hand, one could argue that TV themes used to distance the audience from the respective programme, reminding them that they are watching a constructed piece of fiction. And the weekly repetition of lengthy TV themes may have felt redundant. Perhaps it is in pursuit of immediacy that extended TV themes have had to give way to short musical idents. Television themes by many decades outlived the main titles or overtures that introduced Hollywood films into the 1960s (see above). It may be no coincidence that in parallel to a disappearance of television main title themes there has been a marked drop in the number of recent Hollywood films that feature a main title sequences.[100]

Whereas changes in television scoring seem to have affected the style and placement of composed Hollywood film music, Hollywood films have also been observed to cater to their tertiary television outlet in visual terms. It could be argued that his, too, has in turn affected music. Neale (1998, p. 131) describes the visual post-editing that is undertaken to alter feature films to suit television, including the 'pan and scan' cropping of widescreen footage as well as letterboxing. He states that the relatively recent surge in popularity of widescreen television sets and high definition television sets is 'in itself a sign of synergy between television and cinema.'[101] Bordwell (2006, p. 147) blames institutional circumstances when observing that Hollywood film's visual style has moved towards that of television, suggesting that 'viewers trained on television, videogames, and the Internet can absorb rapidly cut movies more easily than earlier generations could'. Dixon (2001, p. 366) complains that 'all films are now "composed" for television screens rather than cinema screens, leading to a barrage of flat, uninvolving visuals'. Ultra-tight, television-friendly close-ups respect a 'television "safe action area" within the 1.85 wide-screen frame', and 'the visual language[s] of movies and TV are overlapping and developing hybrids'.[102] While close-ups and medium shots read well on TV, they impose a proximity to characters on the cinema screen that precludes an engagement with these characters in the context of their diegetic environment. Whilst every nuance in facial expression is collaterally emphasised and heightened, such detailed immediacy prevents any critical distance – or pause for lyrical reflection – on part of the viewer. Set to these visuals, traditional Hollywood film music that thrived on

[100] See Chapter 1.
[101] Neale (1998, p. 130).
[102] Bordwell (2006, p. 147).

grandeur, larger-than-life pomp and melodrama would seem embarrassingly overblown and pathetic. Confronted with a newly emerged visual language, film composers must avoid tipping the emotional or aesthetic balance of a film towards the overtly manipulated or manipulative. It is as though one has been locked in a small room and told to keep one's voice down.

While a televisionalisation of cinema can be readily observed, there is also a continuing trend towards so-called cinematic television. Recent television drama is where the proximity of Hollywood film and television is most evident. In 1997, HBO's promotional slogan boldly claimed 'It's not TV. It's HBO.'[103] It is widely accepted that the quality of U.S. television drama improved markedly in the late 1990s, when pay-TV providers in particular began pushing boundaries with original content. Cinematic TV shuns clichés and the banal and breaks with television conventions. It places an assured and mature emphasis on emotional realism and is understated in ways seldom seen in U.S. free-to-view television.[104] Donnelly (2005, p. 155) observes that '"serious" television largely avoids music as aesthetization'. Emotional realism dictates restraint in all narrative vehicles that could be perceived as mitigating or, worse, manipulating. When *The Sopranos* featured virtually no composed underscore, this was seen as highly effective and influenced a whole wave of new shows with similarly restrained soundtracks. And yet, where underscore is used, particularly in recent period dramas, the scope and scale can rival that of feature films. Ramin Djawadi notes:

> I mean definitely the sound has gotten a lot bigger and I know Marco Beltrami is doing this show *V* [2009-2011], for example, and Michael Giacchino doing *Lost*. And so I think that back in the day you were only doing television or you only did features. But I think now – and you see it with actors too –there is a crossover that is much more open. And I think it's actually nice. And you see big feature directors doing TV shows. That's actually how I came about with *FlashForward*: because of my relationship with David Goyer [dir. *FlashForward* – Djawadi worked with him on *Blade 3* (2003) and *The Unborn* (2009)] and that's how I actually got attached to the show. And so, same thing, we just treated this like we were doing a giant movie. So, yeah, I think there's a great crossover now.[105]

Some composers may enjoy the opportunity to work in serialised cinematic television, which some have suggested offers filmmakers, and in turn composers, better scope for

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[103] HBO's original content production and marketing tactics are described and analysed in Leverette et al. (2007).

[104] Thompson (1997) assesses the concept of 'quality TV'.

[105] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

narrative and musico-narrative development. Weekly episodic free-to-view television such as sitcoms may lack the durational capacity to develop narrative in ways that feature films can. Serialised cinematic television, on the other hand, whose storylines span across several episodes, can actually have more narrative potential than feature film. Creeber (2004, p. 7) observes that 'examples like *[…] Band of Brothers* [2001] certainly suggest that in terms of history the broad sweep of the television serial offers a narrative potential that the feature film and the single play can never quite achieve'. These long-form television narratives have been compared to opera: '"Operatic" was […] an operative word for *Game of Thrones* [2011-present]. Though the show airs week-to-week, [composer] Djawadi starts every season with a rough cut of the whole order, watching all 10 episodes at once and then spotting them one per week with the larger narrative already in mind.'[106] Composer Jeff Beal similarly remembers his work on *Rome* (2005-2007): 'My attraction to the material was that it was obviously going to be scripted in a very longform way. […] I know a lot of the enjoyment I had in doing *Rome* was due to the operatic scale, where the story is constantly evolving in a very linear way.'[107]

The field of television scoring remains stylistically diverse and unsettled. Many recent popular shows use music only sparingly. For example, early episodes of *Mad Men* (2007-) contained hardly any underscore, and *The Wire* (2002-2008) used non-diegetic music even more sparsely, drawing on pre-existing popular music only to accompany end-of-season montage sequences. At the opposite end of the spectrum, the hit show *Glee* is an all-singing, all-dancing episodic quasi-musical that relies on re-arrangements of pop hits, some original songs, and a few snippets of recurring library music (singing, humming, finger-snapping). Other TV shows use a mixture of licensed songs, while some (such as the aforementioned *Ugly Betty*) are covered in excessive wall-to-wall underscore. Seeing that U.S. television is now at its most prolific and diverse ever, it is not surprising that no single approach to TV scoring prevails. A noticeable development in recent TV, particularly in comedy sitcoms, is the use of sound effects to bridge scene transitions, a function previously ascribed to music. This is a trend that perhaps started with *Home Improvement* (1991-1999) whose score combined musical instruments with the sound of tools and DIY work. However, more recent shows including *Malcolm in the Middle* (2000-

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[106] http://variety.com/2013/tv/awards/tv-music-changed-by-binge-viewing-1200490922/ [Accessed 8 September 2013].

[107] http://variety.com/2013/tv/awards/tv-music-changed-by-binge-viewing-1200490922/ [Accessed 8 September 2013].

2006), *Scrubs* (2001-2010, and *The Big Bang Theory* (2007-) have stripped scene transitions of all musical elements. Where music might previously have felt appropriate, swooshes on wipe-cuts, dings and bangs on hard cuts now provide an effective added layer of slapstick. Although some recent television programmes may have reached a new qualitative high, now may not be the time to encounter well-conceived, emotionally or narratively engaging television music. At the same time, premium pay-TV content has offered composers scope for large-scale orchestral scores previously only heard in feature films. These high-budget, high-quality programmes have attracted some top-level Hollywood composers and are further evidence of overlaps between television and feature film production.

Chapter 4 – Collaborative aspects of film music creation

> 'It must be kept in mind that the planning of the music can be effective only if it is not separated from the planning of the picture; the two aspects must be in productive interrelation. If the composer is faced with given sequences and told to contribute thirty seconds of music at one place and two minutes at another place, his planning is confined to the very bureaucratic function from which he should be freed. Such a planning is founded on the mechanical and administrative division of competence, not on the inherent conditions of the work. Free planning signifies combined planning, which could often lead to fitting the picture to the music, instead of the usual inverse procedure. This would of course presuppose genuine collective work in the motion-picture industry.'[1]

In two parts, this chapter focuses on the collaborative working relationships between composers and directors, executives and other creative personnel, which remain problematic nearly 60 years since Adorno and Eisler advocated 'genuine collective work'. There are concentric layers of collaboration in filmmaking: ever-growing teams of creative professionals contribute to Hollywood films. Hierarchies, responsibilities and individuals' expertise have shifted over the years. For example, with the relatively recent advent of CGI and more sophisticated post-production and sound re-production, staff numbers in these areas have grown significantly. Because of tight schedules, Hollywood composers have always employed assistants for a range of tasks. Today more than ever they rely on teams of assistants whose output they oversee and control.[2] In turn, composers answer to directors, producers and executives, which is the collaborative sphere the first part of this chapter focuses on. I give examples for different ways in which composers work with filmmakers, citing a range of modes and models of communication and creative collaboration. The genesis of a film score can be detrimentally affected if filmmakers and executives do not understand the process of music composition and production. If they do not fully appreciate the narrative and emotive potential of film music or if they communicate poorly with composers, this, too, can negatively impact on the film score. I highlight two lasting partnerships, respectively between Carter Burwell and the Coen brothers and between John Williams and Steven Spielberg, to discuss how established collaborative teams can take a different approach to the joint creation of a film and the music that accompanies it.

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1 Adorno & Eisler (1947, p. 101).

2 See for example Hans Zimmer (Chapter 2) or Nicholas Hooper on the necessity to have orchestrators in Mera (2009, p. 88).

In the second part of this chapter, I focus on collaborative aspects and resulting attributes of the film soundtrack that affect the role and placement of film music in amongst dialogue and sound design. I also describe technological advances that have facilitated changes in the way soundtracks are conceived and produced. A key concern is on what terms sound effects, dialogue and music can coexist in advanced, digital soundtracks whose greater dynamic and frequency ranges offer enhanced sonic clarity and increased expressive scope but also results in greater than ever sonic competition, technically and conceptually.

Part 1: Directors and composers

When filmmakers feel that newly composed music is required, they generally expect to be part of – or be in control of – the score's creation. As Faulkner (1983, p. 98) points out, 'filmmakers are in control [of the music]; they own the project being worked on'. Filmmakers may have strong opinions about the style, role and placement of music. James Newton Howard (quoted in Reynolds & Brill, 2010, p. 325) remembers how in making *The Sixth Sense* (1999), director M. Night Shyamalan initially did not want any music at all, saying 'I don't need any help here.' In this particular case, the composer persevered. Contrarily, composers might be asked to help a scene that is felt to be lacking something or to transform a scene into something it is not. Music may be required to help compensate for poor acting, awkward editing or to add texture or tension. Whilst a strong-minded director's input and demands may be counter to the musical sensibilities of the composer, ultimately what matters is whether the resulting film score meets the filmmakers' requirements and in turn audience expectations. Composer Bruce Broughton (quoted in Schelle 2000, p. 99) laments:

> Often, you are the guy who comes in at the end. They are very suspicious of you because they have already had the marketing blitz – they have their numbers and they don't want you to screw it up. You know, "We need music, just don't do too much. We've got this fifty-million-dollar investment, don't blow it…don't do this, don't do that…don't be too emotionally big, don't change the emotions here, don't say too much there, don't be too overt, don't be too mysterious, don't be too energetic…" It's not like it was even a few years ago.

Faulkner (1983, p. 94) observes that for composers working in Hollywood constitutes 'moral education in the politics of fear and conformity'. They must comply with the demands placed on them and their music but their role in the creative process and their

status in the storytelling team is never fixed. Filmmakers and executives generally understand that music can have significant impact on a film's tone, feel and appeal, but how this impact is best channelled and focused is cause for great uncertainty. Composer Fred Steiner explained back in 1983 (in Faulkner, 1983, p. 1):

> Few producers and directors engaged in filmmaking processes are knowledgeable about music, its properties, and the problems involved in its creation [...]. Most are not aware of its infinite expressive possibilities, and have only a hazy notion about how it fulfils its functions in cinema. […] Filmmakers without musical training were ordinarily more comfortable with someone like a music director, someone who (it was supposed) could talk their language.

Many filmmakers have an irrational fear of music, born out of trepidation of the unknown. This stands in stark contrast to their confident knowledge of film repertoire, specialist film terminology, and a sophisticated appreciation of past filmmaking practice. It has been widely acknowledged that filmmakers lack an understanding of music.[3] Their ability to conceptualise complex narrative structures and technical setups, paired with the leadership skills to oversee large teams of contributors, frequently falls flat when it comes to discussing music. Back in 1975, Bazelon (1975, p. 7) noted: 'I have been amazed and distressed by the large number of film people I have encountered who are unable to engage a composer at the most elementary level of musical communication.' Depending on their cultural and educational background, filmmakers may never have been exposed to much music. Consequently, they may not have developed the understanding or acquired the terminology that would facilitate a meaningful, constructive dialogue about the use of music in film. For these leaders in their field it must be unsettling to have their authority undermined by something as elusive as music.

Hollywood composers and orchestrators readily share their views on filmmakers' fear of music. Referring to filmmakers on the topic of pacing and a sense of aural space in film, Marco Beltrami remarked: 'People today are so afraid of giving music or themes space to breathe and play out. Compare Hitchcock or Leone: There is so much space (for music).'[4] Orchestrator Jeff Atmajian agrees:

> Well, I think it's because the appreciation for the music as a character in a film has altered - in terms of style of filmmaking. I think filmmakers don't know so much how to let it be a voice in a film. The director as auteur – you know, where everything comes from them. Obviously, they often finish their films and

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[3] See, for example, Karlin & Wright (2004), Kompanek (2004), Phillips (2002), Lack (1997), Previn (1993).
[4] During a masterclass at the Transatlantyk International Film Festival on 8 August 2013.

don't consider leaving space for music. If you think of somebody like Hitchcock or Sergio Leone, the way they would shoot long scenes [...] where they knew music would be the only thing that would make that really work. They left that space for it. […] Directors don't have the imagination anymore. Dare I say, even some composers don't. So unless they hear something, they don't know if they're gonna like it or not. So it's what I said [in my seminar] about the two vanilla ice creams: if a director said, 'I absolutely only want vanilla.' But what they're not saying is, 'It has to be bland vanilla.' – It has to be vanilla but you and I both know there are many flavours of vanilla. So if you can give them a vanilla that's really amazing, but it's still vanilla … and I don't mean 'vanilla' as a pejorative term. – I think part of the reason why a lot of things are being lost is because nobody knows there is a middle ground. And in some ways melody has unfairly been thrown out, when I think there was probably a middle ground where it could be kept a bit more but still not be considered old-fashioned or conventional. […] They're not even familiar with the sound of the orchestra, let alone melodic material. That's sadly something that's not going to be changing in a while. If a language [dies] because there's nobody around who understands it when it's spoken, then as the ones who are trying to write in that language are the ones having to adapt. […] A lot of directors and producers only know pop music; and as you know a lot of pop music doesn't have a lot of melody in the last thirty years. – I hear older rock and pop guys when they talk even about the demise of melodic stuff.[5]

The absence of a frame of reference lessens filmmakers' confidence in music as a valuable storytelling tool. They may not decode a music cue's connotative meaning and emotive attributes in the way experienced musicians or even audiences might. The incongruence between their intentions with (and their perception of) music has worrying implications for the planning of the score. Hubbert (2003, p. 182) notes that directors are unaware of film music's potential but at the same time ponders whether film music as a result might not have been positively pressured 'towards a better-suited idiom for film music' (ibid., p. 183). Composer Marco Beltrami concedes that 'if you work with a director who's smart and sensible, collaborating on the score can actually push it to a higher level.'[6]

Filmmakers do not normally lack clarity of intent in other spheres of their projects. However, according to composer Rachel Portman 'many directors are actually quite bad at giving good direction to composers'.[7] Directors can certainly identify music that suits their intentions, but from the composers' point of view this hit-and-miss approach can be wasteful. An extreme example is Nicholas Hooper writing fourteen hours of music for *Harry Potter and the Order of the Phoenix* (2007), most of which was rejected by the

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[5] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.
[6] During a masterclass at the Transatlantyk International Film Festival on 8 August 2013.
[7] Composer Rachel Portman in a Q&A at the Royal Albert Hall on 9 May 2012.

director or executives.[8] Remembering how the score for *Batman* (1989) evolved, composer Danny Elfman (quoted in Larson, 2011, p. 447) describes sitting in his studio with director Tim Burton and producer John Peters. He found the tune for the triumphant 'Batman' march when both Burton and Peters suddenly liked something he improvised. Elfman explains that working on *Dick Tracey* (1990) he presented director Warren Beatty with numerous different options for the 'Tess' theme until Beatty liked something (ibid., p. 448). Ramin Djawadi recalls working with director John Favreau on *Iron Man* (2008): 'I would just grab my guitar, and I would just play and jam riffs and show him "how about this, how about that?" – And he would say "yeah, I like that," and "that's cool." That's how we then started out. I was enjoying that process.'[9] Mera's description of the collaboration between director Ang Lee and composer Mychael Danna on *The Ice Storm* (1997) evidences a lack of musical vocabulary at Lee's disposal. Mera (2007, p. 108) shares an anecdote whereby Lee responded positively to a cue in the Dorian mode but was unable to articulate what it was he liked about it, giving instead instructions such as 'I don't feel anything' until a suitable solution was found. On *Iron Man*, Ramin Djawadi worked with director John Favreau in similar fashion:

> John and I, we would constantly talk. And I actually have to give him credit for the use of guitars, because from day one he said 'you know, Iron Man, he's a rock'n'roll guy, he's a rock star. And I want guitars.' – And his idea was also to make it different than *Batman* and different than *Spider-Man*. So he said 'I wanna go quite different.' He really set the tone of what he wanted and then it was up to me to figure that out, to make that speak. And that's how we started. So I would start writing, in the beginning not even to picture. I would just start writing themes and motifs and he would come over and listen and point out things he liked and what he didn't and that's how we started the process.[10]

For some filmmakers, music does not become a priority until well into the post-production stage. The statement that well-conceived narrative film music should be music that furthers the narrative may seem tautological. Sadly, in the mainstream Hollywood realm, many filmmakers continue to treat music as a condiment that can be added to taste at the end, as seasoning rather than a main ingredient. Some composers feel that a good strategy to maximise the potential for experimentation and an open dialogue with the director is to get involved in a project as early as possible. Ramin Djawadi describes his approach to *Iron Man* with director John Favreau:

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[8] See interview in Mera (2009).

[9] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

[10] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

> I got involved pretty early. I want to say maybe five months before release. Yeah, it was really early. And when Jon Favreau and I started talking […] – and this is something I learned from Hans [Zimmer] too: Hans always says let's just get involved early because you can start experimenting and you evolve with the movie. So the movie doesn't always have to be in a final locked stage, with final effects and everything. You just want to get involved early.[11]

Klaus Badelt demonstrates a similar sentiment:

> I have a specific separate mobile study to move wherever the director is. If he's editing at Warner Brothers, let me move in there too, have my studio next to the cutting room. So I can hang with them, sit next to them, not talk about music at all maybe. Just get a feel for what's important, how the director feels. I go to the set if I can. How does he direct his actors? What's important to him? And nothing can replace that feel. […] Music is part of the process. I play them early stuff and I love to make mistakes and to learn from them. I might often be more critical than the director. – I had this once, where they were happy with what I played to them. And [it was only when I played my music to them] that I stopped before it was finished [and asked] 'please let me make changes.'

Hans Zimmer explains that he likes to work from ideas, the script and reference images such as, for example, the image of a pope for *The Da Vinci Code* (2006).[13] He will often ask the director to tell him the story of the film at hand in their own words. Knowing what the director has in mind helps Zimmer to avoid problems down the line. According to Zimmer, engaging in a dialogue early on means composer and director can 'stay out of each other's world' during production, but also share material and deliberate along the way. For director Chris Nolan, Zimmer composes so-called suites that comprise all the ideas he intends to use in a particular film score. Half the music for *Inception* was written while Nolan was still shooting the film. When filming was finished, Zimmer asked for a rough-cut of the film, but Nolan refused to send it, saying Zimmer should finish writing the score first. This highly unusual re-ordering of the post-production workflow allowed the music to grow more organically before then conforming to the timings of the final picture cut.

Teddy Castellucci (quoted in DesJardins 2006, p. 40) gives another reason why composers should get involved in a film early: The film's working edit can be temped with bespoke cue demos: 'The advantage of being on a film very early is that your

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[11] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.
[13] In a talk at the Royal College of Music on 4 October 2013.

demos go into the temp screenings, and if you're fortunate, the screenings go well and the film seems to be working and everybody is happy.'

And yet, depending on the film and individuals involved, getting involved early may not necessarily ensure an *efficient* or even constructive workflow for the composer. Thomas Newman, speaking about working on *WALL-E* (2005), recalls that…

> …it was a conceit that (writer and director) Andrew Stanton and I had, which was, if I started early on the film, I had thought it would be a way to break through procedural barriers with how it would function and how it functions in the procedure of things. So I started early with high hopes of really being able to do something different. I'm not sure that that was so effective because, of the nature of animation being so schedule dependent. Maybe had I been working with Andrew when he was writing the script I could have had more of an effect? I think we really started getting someplace when I started looking to picture, but I started real early. I bet it was meaningful on a certain level, but it certainly didn't place it where I thought it would.[14]

Temporary music placed on films during the editing process – so-called temp tracks – have long been a tool to help filmmakers get a feel for their material and make editorial decisions. Temp tracks are also used for test screenings of films that take place before the original score is ready. Temp tracks may be used by an editor who likes to cut to music. Temp tracks are usually sourced from existing material such as film soundtracks, concert music and popular music. Music supervisor and head of Air Edel Maggie Rodford acknowledges that temp tracks are the 'bane of composers'.[15] Brown (1994, pp. 241–242) notes that 'nonmusically [sic] trained directors, rather than depending upon their composers' intuitions and sensibilities to come up with an appropriate sound for their films, can now actually lay down a scratch (or temp) music track.' Temp music has implications for the effect of the film and the creation of the film score: As post-production progresses, everyone involved gets used to seeing and hearing the edit-in-progress with temp music over and over again. It is understandable that the team may grow attached to the temp music, what Rodford calls 'temp love'. For reasons of copyright and licensing cost, temp tracks often cannot remain in the final film so that an original score is required as a replacement.

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[14] Interviewed in Anon (2008).
[15] Maggie Rodford in a masterclass on music supervision on 7 August 2013 at the Transatlantyk International Film Festival, Poznan, Poland.

126

Problems then naturally arise in such situations, when the composer's contribution is measured against templates and placeholders imposed on them. When filmmakers insist that the temp score must be emulated, the composer finds their creativity restricted. In the worst case, if whoever best emulates a temp score is seen to be doing a good job, the individual voice of the composer is rendered irrelevant. Composer Mychael Danna (quoted in DesJardins, 2006, p. 55) is strongly opposed to temp tracks: 'There's this whole new and destructive element of the temp score. It kind of screws up the whole composing process because a lot of your choices seem to be made before you even come on to the film, and half of your work as a film-score composer is getting people to stop listening to the temp score.' Asked whether it would be better if filmmakers were to refrain from using temp tracks, composer Teddy Castellucci (quoted in DesJardins, 2006, p. 39) responds that this would be nice. However, 'because test screenings have an enormous impact on the while process of making a film, filmmakers certainly want the best test-screenings results that they can get. If you're testing a thriller and you're using thriller music from several films that have been successful in the last five years, that music could have a subliminal effect on audience members, who might subliminally think, "Oh, this is familiar to me, so it is good."'

Temp tracks can preclude a meaningful and rewarding creative collaboration between directors and composers. Composer Basil Poledouris (quoted in DesJardins, 2006, pp. 178–179) feels that temp tracks are 'a crutch. I think it's an unnecessary tool that's used too early in the making of the motion picture. It doesn't allow the film to develop its own life.' Composer Daniel Licht (*Dexter*, 2006-2013) has complained about the limitations he often encounters in having to emulate temp scores (in Schelle, 2000, pp. 224-225). Danny Elfman fell out with director Sam Raimi over *Spider-Man 2* (2004), frustrated by having to repeatedly re-score temp cues comprising his own music from the previous *Spider-Man* (2002) film.[16] Marco Beltrami on the other hand recalls temp tracks being helpful when working on *Terminator 3: Rise of the Machines* (2003) with director Jonathan Mostow: The working edit was 'about seventy percent temped with [his] music' (quoted in DesJardins, 2006, p. 22). Parts of John Williams's score to the

[16] See http://blogs.indiewire.com/theplaylist/danny_elfman_makes_peace_with_sam_raimi_to_score_oz_the_great_and_powerful [Accessed 16 March 2012].

Star Wars: Episode IV - A New Hope (1977) clearly echo their Holst temp track.[17] Holst's music may also have served as a template for *Gladiator* (2000), although it is not clear whether it was used as actual temp tracks or whether Zimmer merely drew inspiration from Holst.[18]

In the worst case, the use of temp tracks and filmmakers' attachment to them result in the regurgitation of familiar material. Film composers and their scores are often accused of being derivative, but in assessing recent Hollywood film music it is important to keep in mind that this music has had to pass filmmakers' judgment. This is often influenced by temp tracks the original score is asked to replace. Composer Bruce Broughton (interviewed in Hoover, 2010, p. 102) corroborates this notion when he speculates that derivative film music in high-budget features is likely the result of an imitation of the temp track being insisted upon by the filmmakers.

Nevertheless, despite widespread scepticism among composers, in a collaborative setting, temp tracks can prove useful in establishing filmmakers' aims for a film's tone and style. Composer Jan A. P. Kaczmarek (quoted in DesJardins, 2006, p. 148) concedes that temp music 'helps communication' between filmmakers and composers. Director John Amiel (in DesJardins, 2006, pp. 336–337) stresses that temp tracks are an 'essential tool' for communication and that 'provided that the director enfranchises the composer to take the intention of the music rather than the notes of the music', the common scenario of everyone growing enamored with an arbitrary temp score can be avoided. Trent Reznor describes his collaboration with Atticus Ross and director David Fincher on *The Social Network* (2010). Fincher temp-tracked parts of the film with pieces from *Ghost*, an instrumental concept album by Reznor's industrial rock project Nine Inch Nails.[19] Reznor's account of the experimental nature of the team's collaboration gives rare insight into a process in which the composer(s) helped shape the final score and were given creative space to augment and alter the director's vision:

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[17] 'Mars: The Bringer of War' from 'The Planets Suite.' – Anecdotal evidence suggests that Holst's music was used to temp track *Star Wars* and that Williams originally was hired to adapt the score, rather than to compose original music.

[18] He was sued for infringement of copyright of the movement 'Mars: The Brigner of War' by the Holst Foundation and the publishers J. Curwen and Sons in 2006. http://www.filmmusicmag.com/?p=638 [Accessed 21 September 2013]. For musical reference see also http://www.youtube.com/watch?v=cFswFI7fqxU&feature=related [Accessed 16 March 2012].

[19] See http://ghosts.nin.com/main/home [Accessed 13 March 2012].

We did quite a bit of talking. When I officially took this on, late winter, he had shot the film and was in the process of putting together a rough edit. I'd read the script a couple of times and then saw the first 40 minutes to get a rough idea of the look and the pacing […] to get a sense of the vibe. We talked at length, to try to get inside his head to find out what he wanted from me, why did he want me on this project. David isn't the kind of guy who just wings it. He can tell you a very clear idea of what he thinks you should be like. So, he suggested let's avoid an orchestra, let's keep things somewhat synthetic. He threw out names like Tangerine Dream and Vangelis. He set-up some parameters, and gave me a phase one of spending two weeks generating […] sketches, and then said if anything resonates, I'll go down that path. In my mind it wasn't so much scene specific things but tones and tonal ranges. Now that Atticus Ross and I have been working on the last couple of projects together, we're kind of at the point where we can finish each other's sentences. We know our goals, we went in quite focused on what we wanted to create. […] With that 40 minutes of material he had created, he used the *Ghosts* material. From that I thought I could tell what he wanted us to do. I could also see that for a movie that is primarily people talking in a room, how important the emotion and tempo of the music could drive the film. After the very first break up scene, those opening shots were so powerful with [Mark Zuckerberg (Jesse Eisenberg)] running across campus and the credits coming up but the first cut I saw had some college-rock, I can't remember what it was […] I just remember some jangly college rock, a sort of "everything's alright, let's all have a beer" sort of track. The film then sort of became some sort of John Hughes-esque, kids at college, light life. Which is not what the film should be. […] The jangly guitars didn't work and it really made the film feel different off the bat, with this afternoon movie vibe. I think we all felt that. We generated these things and David responded very positively and respectfully. I went to a screening a few days later at Sony. We showed up to a room full of people and that scene I was mentioning earlier with him running across the street, felt so much different. It felt like a much darker and more brooding movie. It was great for all of us to get over that first hurdle and realise we had gotten the tone and emotion of the film right.[20]

In the case of *The Social Network*, Reznor was evidently pleased with the way the creative process developed. But his work was ultimately evaluated in a test screening by executives who have considerations other than music in mind and would not hesitate to demand changes if their expectations are not met. Directors can and will be overruled by executives, which threatens to undermine any fruitful rapport the composer may have build with the director. As Kalinak (1992, p. 76) points out, 'control over music [is] most directly felt in the influence wielded by studio production chiefs and line producers'. Marco Beltrami recalls working on half a dozen films where directors had been taken off the project and the creative team continuing to work under executive supervision only.[21] On high-budget Hollywood films, the experience for the composer is

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[20] Trent Reznor in "Trent Reznor discusses The Social Network soundtrack," interview by S. Adams, online forum post, October 11, 2010, http://drownedinsound.com/in_depth/4141283-interview--trent-reznor-discusses-the-social-network-soundtrack. [Accessed 13 March 2012].

[21] During a masterclass at the Transatlantyk International Film Festival on 8 August 2013.

certainly not always creatively rewarding. Composer John Debney (in DesJardins 2006, p.76) remembers working on *The Scorpion King* (2002): 'It was a huge movie, and it's a franchise movie with Universal. Therefore, we had a tremendous number of, shall we say, cooks in the kitchen, […] a couple of schools of thought.' Orchestrator Jeff Atmajian has a rather philosophical outlook on what could be considered anything but true collaboration. He is concerned that Hollywood creatives like to say that…

> …'everything is very collaborative', when there is a lot of input coming in. The problem is the input is coming from people who don't understand how it's being done. The creation of a score is adulterated by people, who have agendas that are different, or who lack of knowledge but think they have knowledge. I'm certainly not sitting here and saying the filmmakers are stupid, the composers are stupid… it's just that there's so many more people that are creating this thing, for various reasons, and they don't know how to or don't have time to or aren't willing to listen to each other enough. I think that's a problem in relationships in general in society. It's actually a miracle we do all these things as well as we do all the time.[22]

Although directors will surely claim they work on each film with sincere artistic intentions and integrity, Hollywood executives may prioritise differently. Every aspect of the production-flow must point towards a coherent, marketable product of which music can be a part so long as it sits with this product in a manner that finds the approval of those in charge of production. Composers may approach a score with best intentions but find their music compromised by conditions inherent in the film production and scoring process. Although the Hollywood film production and post-production process may at times be speculative, the product rarely is. The following anecdote by composer Carter Burwell highlights just how involved studio executives can get in the scoring process. He is addressing his experience with a particular cue for *Twilight* (2008), the first film in a highly commercially successful franchise. It is remarkable how different this experience is to Burwell's relationship with the Coen brothers, addressed below.

> This was a case where the studio wanted to sign off on everything. It's not actually typical that studios will hear all of the composer's sketches before we record, but I notice that more and more, the smaller studios feel they have a fiduciary responsibility to have heard everything before it's recorded. [Director] Catherine [Hardwicke] arranged to play the stuff for the executives. This was after we had been living with the music for a month, and had used it to score the whole film, really. We played it for them, and in the end, one executive said,

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[22] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.

'What's that first note?' – 'B flat.' – 'It sounds off.' – 'Yes, it's a dissonance. It's a B flat over an A minor chord.' – 'Well, can we fix that?' – It's the first note of a melody, and it immediately resolves to a consonance, but that's the tension that starts the melody and gets it going. No amount of musicological stuff I could say would change the fact that it was annoying him. And it continued to. I thought, 'Well, that's fine, he's annoyed.' Never for a moment did I dream I would have to pay attention to what he was saying, because I've never had to before. But he would call me and then other people would call me. Finally, he called at one point and said, "You know I'm not going to sign off on that.' Which meant: we're not going to record it. At this point they'd had the music for five or six weeks, and I felt it was too late; I was going to spend a couple weeks with my family because I'd been working on the movie nonstop for six weeks. I actually got on a plane that day. Before I did, I said, 'I completely understand if you want to hire someone else.' The whole time flying across the country, I was thinking, 'Was it worth trying to somehow get on the good side of these people?' By the time I landed on the East Coast, I thought, 'It would be a shame if all this good work I'd done was thrown out, and maybe there's some way, as they say, to throw them a bone.' I spent a day trying to come up with some variations that person would like. There would still be the B flat, but there would be some variations that would temper that feeling. In the end I heard from Catherine that this executive bought one of the variations. I just put that in different places in the film and kept the B flat in different places too. It's a classic Hollywood story: the executive doesn't like this dissonance and you have to remove it. André Previn wrote a whole book on it called 'No Minor Chords' based on a joke from one of the old moguls who didn't want any minor chords in their scores.[23]

Films on a smaller budget that are not affiliated to a major studio can offer composers more creative freedom and flexibility. Composer Marco Beltrami recounts how director Kathryn Bigelow initially only wanted one single cue for *The Hurt Locker* (2009). He 'had some ideas', however, and played demos to Bigelow who liked the ideas and then asked him to score additional scenes. Beltrami points out how he and the director were able to change course more freely without the oversight of studio executives.[24]

Some Hollywood composers identify a lack of communication as the single biggest obstacle in the way of a fruitful collaboration. Mychael Danna (in DesJardins, 2006, p. 55) stresses that the 'most important thing is to take a lot of time to think and talk to the director before you write a single note. It's really important to come up with a concept. […] Watch the film, talk to the director, and try to understand the underlying themes, or what is required by the film, and also what the director is trying to say so that you can help through music.' Composer Gabriel Yared claims that whereas 'in Europe, the

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[23] 'Behind the Music – Composer Carter Burwell on his creative process and his favorite scores' by David Schwartz, posted December 28, 2009. http://www.movingimagesource.us/articles/behind-the-music-20091228 [Accessed 10 July 2013]. See also Previn (1993) which is full of amusing anecdotes of studio executive making unreasonable requests out of ignorance of music.

[24] During a masterclass at the Transatlantyk International Film Festival on 8 August 2013.

composer is a co-author', this tends not to be the case in Hollywood. He laments that 'directors have no culture in music' and therefore feels strongly that 'composers must try to instil a sense in directors; what power can music bring to images. Experiment, try different music against film, spend more time with the director.'[25] Yared conceives of film and music as conversation: 'In a spoken conversation, if one person speaks, the other is silent. Give music space and room. Invite music to elevate film.' Atmajian reckons that…

> …most film composers are frustrated because they aren't allowed to be as inventive as they like to be. Even Gabriel Yared was saying to me [after the recording sessions for *In the Land of Blood and Honey* (2012, dir. Angelina Jolie)] 'Oh, I can't write anything but pigeon eggs.' – but thankfully even Angelina said 'Oh, I know Gabriel found it hard 'cause I asked him to write more minimally - cause he has so much music in him.' - She could tell how amazing a composer he was. [...] So for composers - they have a voice and they want to express this, but we're more reined in than we used to be.'[26]

Assessing the state of collaborative practice in Hollywood back in the 1960s and 70s, Faulkner (1983) flags up semantic problems that stand in the way of constructive and productive communication between filmmakers and composers. These problems persist into contemporary practice. He points out that in collaboratively working towards a film score, beyond specialist terminology, 'congruency between talk and realization is crucial' (ibid., p. 129). Faulkner's list of euphemisms filmmakers employ remains as applicable today as it was thirty years ago:

> [when they say] 'something new',
>
> [they actually mean] 'imitate and follow the "now" style';
>
> [when they say] 'let yourself go', [they mean] 'repeat yourself';
>
> 'not concerned about money' means 'must make a profit';
>
> 'do something creative' means 'not *too* creative';
>
> 'do as you please' = 'act as you must'[27]

Realising that creative control ultimately is never theirs, some composers 'feel their creativity is placed in a collective straitjacket',[29] an attitude that cannot be conducive to a rewarding creative process. Laporte (2011, p. 49) describes producer and Dreamworks

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[25] Gabriel Yared in a 'BAFTA Masterclass: Composing for Film' at the BFI Southbank on 26 June 2013.
[26] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.
[27] Ibid., p. 140.
[29] Ibid., p. 158.

SKG co-founder Jeffrey Katzenberg as a micromanager who gets involved in minute details of all aspects of filmmaking, including music. Lacking any musical training or practical experience, his views on music must be based on extra-musical experience and knowledge. One anecdote describes how Katzenberg and fellow Dreamworks co-founder David Geffen directly interfered with the score to *Mousehunt* (1997), in less than constructive terms demanding that director Gore Verbinski should re-consider what they called 'crazy oompah music'.[30] Composer Hans Zimmer explains how he tries to reconcile feedback and the need to make changes to his scores-in-progress:

> Well, they say that film is a collaborative medium... That's the cliché, and it's the right thing to say, but at the same time [reality] goes beyond that. We're all trying to make as good a movie as we possibly can, and while there are many bad movies out there, including some that I've worked on, nobody sets out to make a bad movie, it's just that sometimes things get derailed. So the conversation about the movie is important, and even if the director doesn't like something you've written, he's not saying, 'You're an untalented composer,' he's talking about how to serve the movie best. And at that point it's not 'his' movie, it's 'the movie' or 'our' movie, and at that moment we're trying to solve something together.[31]

Maggie Rodford points out that, at least in Europe, a music supervisor can act as a facilitator of communication between composer, director and executives to help soften the language and interpret intended meaning.[32] Composers who are open to experimentation and take a flexible approach to their work might best succeed in this collaborative environment. Composer John Frizzell demonstrates an open-mindedness and experimental attitude that facilitates a more productive and constructive approach on the part of the composer in serving the film's and the director's requirements, even when this may be seen to be detrimental to the musical quality of the resulting score:

> You never really know what you're going to get. I think that one of the positive ways to create something is to do some things you know are going to work and then take some chances where 'this might work, this might not'. And you gotta be a little creative. It's a lot like cooking. A good chef might go in and say 'well okay, I'm going to wing it a little here. I know that this will work and I'm going to try something a little experimental here. And if it works, it's cool. If not, I got something to fall back on. So I think you have to be both controlled and also know where to improvise.[33]

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[30] Ibid, p. 137.

[31] Breaking the Rules with Hans Zimmer – interview by Dan Goldwasser, published 10/2006, http://www.soundtrack.net/content/article/?id=206 [Accessed 16 July 2013].

[32] In a masterclass on music supervision on 7 August 2013 at the Transatlantyk International Film Festival, Poznan, Poland)

[33] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.

Sound engineer Michael Semanick describes the scoring process for *There Will Be Blood* (2007), scored by Jonny Greenwood of the band Radiohead:

> Jonny gives music editor Paul Rabjohns his stuff and then he'll take this part and move it here. Then he might trim the pitch or change a cue altogether. They send him a palette of stuff and it's 'Oh that's great! And parts of this are great; what if I put these two things together and this together…' etc. The tone is set and P. T. [Anderson] pretty much guides it all the way; lets you run with it and then pulls you back in.[34]

Lorne Balfe 'insists there's no one ideal arrangement for a particular scoring project, [but stresses the importance of] having a series of dialogues and give-and-takes with directors and editors "It's purely a team effort, and if you're a composer who likes sitting by yourself with a piano this isn't your gig. Because it's everyday communication with editors. It [is] a constant process of replacing things, and you have to keep stepping back and looking at the bigger picture.'[35]

The creation of the score for *TRON: Legacy* (2010) was a collaborative effort that commenced even before the script was finalised. Director Joseph Kosinksi (in Lee, 2012b) remembers that 'what evolved over that first year was the ratio. The original thinking was more electronic music with classical orchestral lines in it. As the process evolved, when they got down to writing the final cues, it became much more orchestral than any of us initially anticipated. I couldn't be happier with how it turned out.' Kosinski explains why he chose Daft Punk for *TRON: Legacy*:

> 'I was a big fan of Daft Punk. […] It was also very clear to me that these guys were more than just dance music guys. There was something about their music and the way that it was produced and put together, […] especially with the "Discovery" album, I think it showed a level of musicianship and songwriting that it was clear that these guys were working on another level.'[36]

Whilst Daft Punk had enjoyed commercial success and critical acclaim since their formation in 1994, this was their first feature film score. To best serve the film, Daft Punk wanted to depart from their retro pop dance music style and instead blend electronica with acoustic orchestral elements. In an interview music supervisor Jason Bentley marvels:

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[34] (Semanick and Scarabosio 2008) [Accessed 11 September 2012].

[35] http://variety.com/2013/tv/awards/tv-music-changed-by-binge-viewing-1200490922/ [Accessed 8 September 2013]

[36] Kosinski (2010) [Accessed 29 Septemnber 20120].

> They're such huge fans of popular culture. [...] The score that they set out to make was one that could stand with *Star Wars* or *Superman*. They weren't shooting for a Daft Punk record. They wanted to create a full-bodied, timeless score.[37]

Not musically trained and lacking knowledge and experience in traditional orchestration, Daft Punk hired music arranger and orchestrator Joseph Trapanese to translate and realise their ideas for a symphonic orchestra:

> They provided him with extensive electronic sketches – synthesizer approximations of orchestral music and iTunes playlists running the gamut of 20th century film composers that were indicative of the "timeless" vibe they wanted. They had this very clear and distinct idea of what the orchestra should sound like,' Trapanese said. 'They gave me an overall tone to work in. Maybe they couldn't physically transcribe what music for, say, a cello. But they know how a cello sounds and how to translate ideas to it.[38]

Trapanese's candour may surprise and raises questions as to Daft Punk's musical input. At the same time, it is common knowledge that virtually all film composers to varying degrees rely on orchestrators to complete their scores. Daft Punk may have drawn more than just inspiration from their contemporaries.

As part of the collaborative process, it has become common for composers to provide demos of every cue prior to recording. Filmmakers will often suggest or demand changes upon hearing these demos. Composers aim to anticipate directors' responses by offering alternative versions of the same cue, or composing more than one demo for the same film scene. Anecdotes of directors expressing preference for one demo over the other when they have in fact been played the same identical demo twice (a composers' in-joke) serve as evidence for filmmakers' hidden insecurities when it comes to music. How many times a composer has to re-draft a demo depends entirely on the filmmakers involved. Once demos are approved, the composer can proceed to planning scoring sessions, the culmination of weeks spent working on a score, and perhaps the most rewarding part of the process. It is common for changes to be made to the score during the scoring session, with the composer, orchestrator(s), the conductor, and copyists scrambling to adjust score and parts while the orchestra, choir, etc. are sitting idle. Changes made on the scoring stage can be substantial. This is understandable because

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[37] Ditzian (2010) [Accessed 29 September 2012].
[38] Lee (2012b).

the recording session is the first time the filmmakers hear the score in its true, orchestral rendition. As sophisticated as sequenced demos have become, they still do not truly capture the orchestral palette in all its nuances and expressive range. Jeff Atmajian remembers how director Angelina Jolie was taken aback by the sound of the orchestra when she attended the scoring session for her directorial debut *In the Land of Blood and Honey* (2011).[39] No matter how elaborate the score demos may have been, they had not made Jolie aware of the full range of depth and subtlety she then encountered – in this case to her delight – at the recording session. Even after the scoring session, composers are often faced with unnerving uncertainty over the film's editorial path. There is now a trend towards recording so-called stems to maximise potential for music editing during the later post-production stages, notably the dub. Orchestral sections are recorded separately to facilitate mixing and editing of the score. I will elaborate on scoring sessions and the dub in Part 2 of this chapter.

Composers' contracts invariably contain a clause that specifies the extent to which they will alter their score as per filmmakers' request. Most of the time, cues are approved once 'reasonable adjustments' have been made. Occasionally, however, scores do not meet filmmakers' demands even after changes have been made. Ultimately, this can result in a change of personnel. Anecdotes of composers being taken off projects abound, and film composers themselves candidly acknowledge that everyone gets fired once in a while.[40] Hubai (2012) has written an entire volume about the phenomenon. When all channels of communication fail and the scoring process trips over irreconcilable differences, composers are 'let go', to use a common euphemism. Alan Silvestri's score to *Pirates of the Caribbean: The Curse of the Black Pearl* (2003) was rejected and then replaced with a score by Hans Zimmer-protégé Klaus Badelt. A YouTube search reveals what appears to be a demo of Silvestri's score, which evokes a ghostly, colourful, family-friendly adventure that resounds with the spirit of the Disney theme park ride on which the film is based.[41] It may seem surprising that veteran composer Silvestri was replaced by a then relatively unknown newcomer, but the choice of replacement makes sense: Firstly, Hans Zimmer had long-standing ties with producer Jerry Bruckheimer. Secondly, in stark contrast to Silvestri's music, Badelt's score sounds

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[39] On 14 June 2011, Atmajian gave a talk at the Royal College of Music to students on the Masters Programme in Composition for Screen, having concluded scoring sessions the day prior.
[40] See, for example, a series of interviews in Schelle (2000).
[41] http://www.youtube.com/watch?v=3ggG0UKBS5E [Accessed 14 March 2012].

far more assertive and masculine, which may have been the tone the filmmakers sought. Composer Gabriel Yared has openly spoken about his traumatising experience of being fired from *Troy* (2004),[42] as the result of his too historically authentic approach to a film that ultimately aimed for blockbuster appeal. Fans and industry professionals alike were surprised when Howard Shore abandoned *King Kong* (2005), leaving his replacement only a few weeks to compose a new score. The move was surprising considering Shore's Oscar-winning contributions to Jackson's *Lord of the Rings* (2001-2003) trilogy, which should have ensured a lasting, mutually appreciative creative partnership.[43] Although it is not unusual *per se* for collaborative partnerships to fall apart, it is remarkable with what consistency composers are replaced for perceived shortcomings or failings in the score when they themselves would surely be capable of making the desired changes. On the one hand there may presumably come a point when some composers find themselves unable or unwilling to continue to adapt to filmmakers' needs. This may have been the case with Howard Shore's departure from *King Kong*, where considerable re-edits resulted in a much-altered film long after the scoring process had commenced. On the other hand, filmmakers hold a common misconception against composers whereby if a score is not working for the film one must not only change the score but also the composer. Recounting his experience on *Wrath of the Titans* (2012), composer Javier Navarrete reveals that he felt his position was most at risk when the film was deemed to not be 'working'.[44] Test screenings in mid-January 2012 were 'disastrous' but pushed against a release date in late March 2012 it was too late for 'yet another round of additional photography'. Director and producers grew increasingly unhappy with the score, Navarrete feels music became a scapegoat because there was nothing else they could constructively 'be angry with', i.e. nothing else could be changed. This then placed undue demands on the music, which in Navarrete's view is 'when many composers get fired'.

Those composers who remain on the job can hope to reap the benefits of a successful collaboration. Once channels and means of communication have been tried and tested, it is comforting for filmmakers to continue working with the same composer. Faulkner

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[42] At a talk at SoundTrack_Cologne 4.0, November 2008.

[43] *The Lord of the Rings: The Fellowship of the Ring, The Lord of the Rings: The Two Towers, The Lord of the Rings: The Return of the King*. Academy Awards for Best Score for *The Fellowship of the Ring* and *The Return of the King*; Best Song for 'Into the West' (*The Return of the King*), shared with Fran Walsh and Annie Lennox.

[44] Quotes from a talk Navarrete gave at the Royal College of Music on 7 February 2012, one day after scoring sessions had finished.

(1983, p. 50) quotes an unnamed film composer as saying: 'The greatest award in Hollywood is to be asked back again.' Some fascinating facts emerge if we look at the collaborative links between composers in the sample (see Chapter 1) and the number of lasting composer-director relationships therein. It is useful to establish first of all that there are far more directors in the sample than composers, over 600 or nearly twice as many. At the same time, the distribution of workload among directors is far more even than we saw with composers in Chapter 2. The busiest director was Stephen Spielberg with 21 films, compared to the busiest composer, which was Alan Silvestri with 49 films (compare Chapter 2). As Figure 1 illustrates, workload is distributed rather more evenly among Hollywood directors in the sample than among composers. Figure 1, a word cloud, shows the names of all directors in the sample in a size proportionate to the number of films they directed.

Figure 1: Names of directors in the sample sized proportionately to number of films directed.

Figure 2 graphs the number of collaborations (within the sample) between directors and composers. Shown here are collaborative partnerships that have resulted in four or more collaborations. Edelman and Reitman up to Rubinstein and Badham have collaborated on four films in the sample (possibly more outside of the sample). Edelman and Cohen up to Conti and Avildsen have collaborated five times. Horner and Howard six times, Elfman and Burton ten times, Silvestri and Zemeckis thirteen times and Williams and Spielberg twenty times. Clint Eastwood has scored seven films he himself directed. This obviously does not constitute a collaborative partnership, strictly

speaking. Note that of the twenty-one films in the sample Steven Spielberg has directed, he collaborated with John Williams on twenty. Of the 49 films in the sample that Silvestri has scored, he collaborated with Ron Howard on only thirteen but this is nevertheless the second most prolific partnership in the sample.
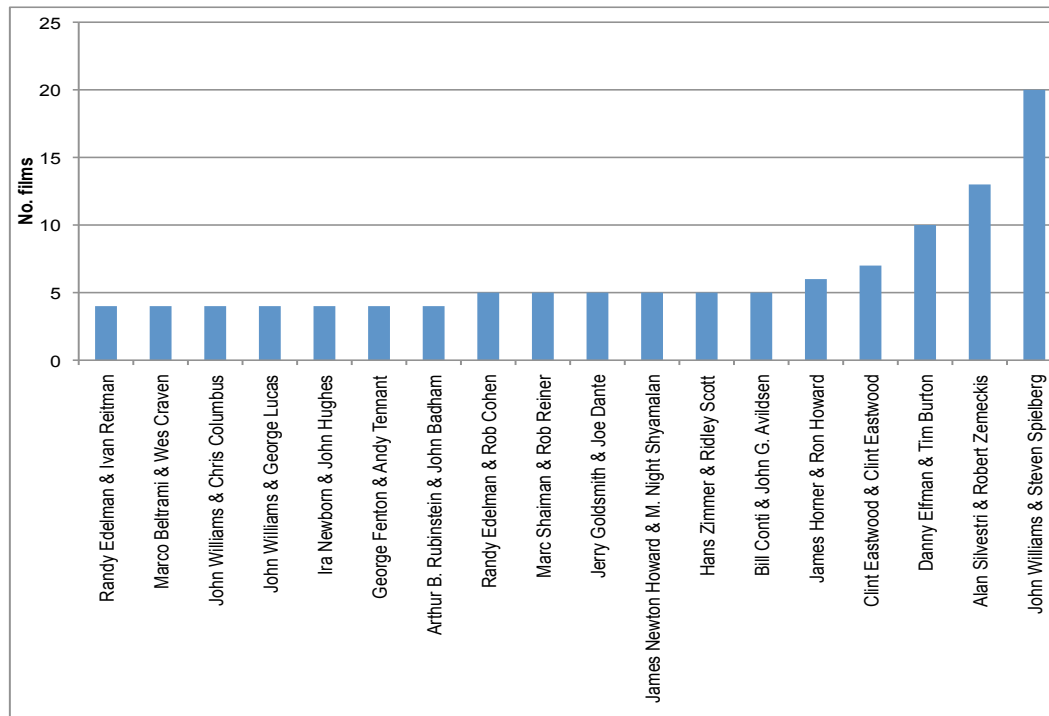
Figure 2: Lasting collaborative partnerships between directors and composers

Figure 3 charts the number of recurring collaborative partners by composer (those with whom composers collaborated on more than one film, i.e. were hired back) in descending order against the total number of films scored by that composer.

It transpires that productivity does not directly correlate with lasting collaborative partnerships. Alan Silvestri scored 49 films in the sample and collaborated on more than one film with ten different directors. John Williams scored 45 films but collaborated more than once with only six different directors. Jerry Goldsmith scored 40 films but worked with only 5 different directors more than once. Bill Conti scored 21 films and worked repeatedly with just two directors. Remarkably, Marco Beltrami scored twelve films with at least four different directors (those with whom he worked just once are not captured here). Graeme Revell scored fourteen films and Christopher Young scored ten, but within the sample neither of them worked with the same director more than once.
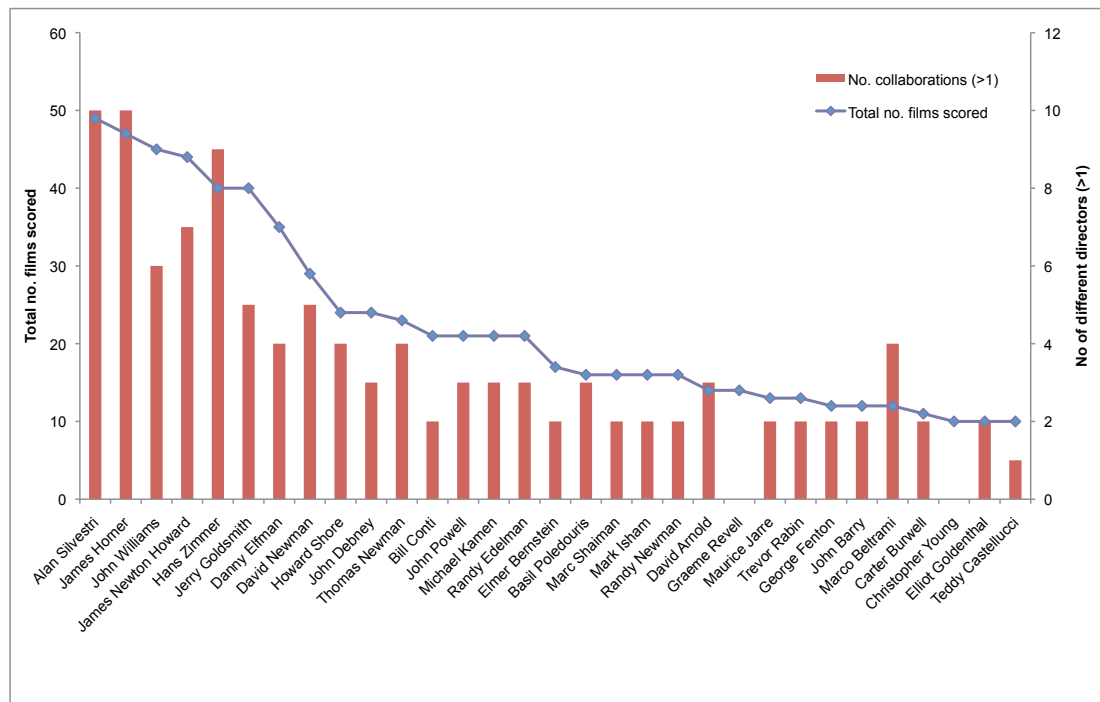
Figure 3: Number of films scored by composers charted over number of collaborative partnerships with more than one film.

Several examples may serve to highlight the tangible benefits that come with lasting collaborative partnerships and who reaps them. Speaking about his work on *WALL-E* (2008) with directors Lee Unkrich and Andrew Stanton at Pixar, Thomas Newman describes the increased level of trust between him and them following the success of *Finding Nemo* (2003):

> I think that he was more sophisticated in his process and probably had a higher sense of expectation. We enjoyed working together on *Nemo*. I want to involve the director in the choices that I make. I figure there's going to be a moment where a director decides what he thinks of the music I have written. If I can get a director in early enough, then I can avoid the pain of having to make changes or having a director not think I have made some right choices. Andrew was exposed to that really for the first time and I think he really appreciated that on *Finding Nemo*. On *WALL-E* it was just an expectation so it was a lot of hard work. I don't think it was a repeat experience. Obviously there is the comfort of a successful experience that has gone before, but it doesn't make anyone more relaxed, Andrew is still going to need what he is going to need from me and he's really not going to stop until he gets it. It's just kind of the nature of his sense of expertise.[45]

Marco Beltrami points out that music is an abstract language and that it takes time to develop an effective dialogue, a shorthand and comfort level. He gives the examples of

[45] Quoted from 'ScoreKeeper Chats With Composer Thomas Newman', published 17 September 2008, http://www.aintitcool.com/node/38356. [Accessed 9 September 2013].

the successive projects with director James Mangold on *3:10 to Yuma* (2007) and *The Wolverine* (2013).[46] Teddy Castellucci (in DesJardins, 2006, p. 40) finds reassurance in having a reliable rapport with filmmakers: 'A great relationship with a filmmakers seems to be very productive, because it allows the composer to free up the "what ifs."'

Asked to identify his favourite working relationship, Carter Burwell answers: 'My work with [writers and directors] Joel and Ethan Coen has been strikingly enjoyable, partly because they're entertaining, but mostly because they don't presuppose what music can accomplish in their films. Also, they never seem to be put off by my not knowing what I'm doing.'[47] The Coen brothers have repeatedly surprised with quirky, at times disturbing, often funny films with broad appeal, resulting in considerable commercial success for what might at first glance appear to be independent film material. The Coens rose to wide public awareness with *The Big Lebowski* (1998). They had previously released a string of films to critical acclaim, notably the multi-award-winning *Fargo* (1996). They maintain a lasting relationship with Burwell, a Harvard graduate with an eclectic musical and professional background in computer music and science. On their early collaborations Burwell (in Morgan, 2000, p. 59) comments 'none of us knew how to approach a film score. I paid no attention to what other film composers were doing.' Elsewhere, Burwell (2003, p. 196) has claimed: 'I like to try to put as little music as I can in the films that I work on, and convince the directors of that.' Over the years, Burwell's music has been as varied as the Coens' material, spanning a broad range of styles and using an eclectic variety of acoustic and electronic ensembles.[48]

In terms of the placement and contribution of music, *Fargo* is an interesting example. It is a poignant parable on man's greed and the ultimate futility of crime. Set in a freezing U.S. Midwest winter, the film lovingly paints endearing characters, particularly the police chief Marge Gunderson (Frances McDormand). The Coens walk a thin line between comedy and tragedy, injecting this gruesome crime drama with a healthy dose of humour. Burwell's score is crucial in helping strike this balance. Drawing on the limited

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[46] During a masterclass at the Transatlantyk International Film Festival on 8 August 2013.

[47] Carter Burwell interviewed by Dan Goldwasser in 'Being Carter Burwell', published 12/1999 http://www.soundtrack.net/content/article/?id=48 [Accessed 16 July 2013.]

[48] Collaborations between the Coen brothers and Burwell include *Blood Simple* (1984), *Raising Arizona* (1987), *Miller's Crossing* (1990), *Barton Fink* (1991), *The Hudsucker Proxy* (1994), *Fargo* (1996), *The Big Lebowski* (1998), *O Brother, Where Art Thou?* (2000), *The Man Who Wasn't There* (2001), *Intolerable Cruelty* (2003), *The Ladykillers* (2004), *No Country for Old Men* (2007), *Burn After Reading* (2008), *A Serious Man* (2009), *True Grit* (2010).

set of instrumental colours of a small string ensemble, woodwinds, and percussion, a thematic overture commences under a long shot of a distant car approaching on an otherwise deserted, snow-covered country road. This opening passage effectively sets the film's slow pace. After the opening title, music leaves the soundtrack for nearly 18 minutes. It does not return until two goons hired by Jerry Lundegaard (William H. Macy) to abduct his wife break into the Lundegaards' house (17:40). The score does not announce the intruders, but waits instead until the physical threat of abduction to Jean Lundegaard (Kristin Rudrüd) is imminent. Heavy chords in broad strokes help bring out the surreal, comic aspect of this scene. Jean is characterised as ridiculous and hysterical.[49] Throughout the film, the score helps to smooth over grotesquely graphic shoot-outs and heart-breakingly tragic accidents. For example, when Jean's father is killed in a failed attempt to save her (1:07:00), low drawn-out chords present a neutral surface on which the bloody images can sit. Burwell (quoted in Weinberg, 2009, p. 114) comments: 'I almost never try to make the audience comfortable. I wouldn't want that if I were in the audience.' At the same time, the score also allows Marge Gunderson to shine as a brilliant police officer, despite her clumsy appearance and manner. When she is first introduced (31:50), the previously heard theme returns in a gentler rendition, letting the audience take in this new character and her domestic situation. The fact that Marge is pregnant is underplayed, as are other filmic devices of characterisation. The audience gets to know and like Marge through dialogue with her husband and, a little later, with the state trooper at the crime scene. Building on ingenious characterisations and dialogue writing, the music adds to a complex viewing experience that successfully balances amusement with disgust. Working together closely, the Coens and Burwell have translated their shared creative vision into carefully channelled effect. The creative choices in terms of music apparent in *Fargo* are bold by Hollywood standards and evidence foresight and mutual respect on the part of the directors and the composer.

Burwell and the Coen brothers continue to collaborate to this day. At times, the musical choices may seem odd. For example, in *Burn After Reading* (2008), Burwell almost solely uses frantic *taiko* drums throughout, without any apparent link with the film's subject matter. However, this contradiction creates a provocative subtext that resounds with the film's unsettled and disturbed characters. Burwell took a different approach to *No*

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[49] As a result, the audience is less inclined to care for her eventual death.

Country for Old Men, which features nearly no music, a demonstration of deliberate restraint:

> The film is the quietest I've worked on. Often there is no sound but wind and boots on hard caliche or stocking feet on concrete. Then sporadically there are shootouts involving an unknown number of shooters with shotguns and automatic weapons. It was unclear for a while what kind of score could possibly accompany this film without intruding on this raw quiet. I spoke with the Coens about either an all-percussion score or a mélange of sustained tones which would blend in with the sound effects – seemingly emanating from the landscape. We went with the tones.[50]

In the case of the Coen Brothers and Burwell, an original filmic idea of creative integrity incorporates music as an important narrative and emotive element. Such a score is the result of a mutually understanding professional relationship between the filmmakers and the composer. A high level of understanding and trust allows for a relationship between film and music that expresses more that the sum of its parts.

To the general public, John Williams embodies late 20th-century Hollywood film music unlike any other composer. His themes for *E.T.: The Extra-Terrestrial* (1982), the *Indiana Jones* (1981-2008) franchise and *Star Wars* (1977-present) are widely known and cherished. His compositional style is markedly traditional and almost exclusively symphonic. Williams is exceptional among his peers in that he has carried forth the musical language of early Hollywood melodists. At the same time he has honed his personal take on late 19th-century music, paired with distinct flavours of Americana. His film themes have entered popular culture and attained an extra-filmic life of their own, as evidenced in countless quotations of his music in other contexts. Burlingame (2000, p. ix) notes that 'in the late 1970s and early 1980s, John Williams'[s] majestic scores for *Star Wars*, *Close Encounter of the Third Kind* (1977), and *Superman* (1978) brought the movie soundtrack to a new plateau of public awareness'. Darby and Du Bois (1990, p. 521) state that 'among contemporary film composers John Williams is probably the most traditional in terms of the orchestral forces he employs and the dramatic uses to which he puts music.' They do not, however, question why Williams is the most traditional or why, of all composers, it is he who stands out.

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[50] Burwell (n.d.) [Accessed 15 March 2012].

Whilst Darby and Du Bois correctly locate Williams's work in a creative continuum, they do not ask why his music continues to reside so comfortably and function so well in films that arguably are more modern than their Golden Era predecessors. One plausible explanation emerges when we consider the kind of films Williams has scored: The use of homage, reprise and pastiche of past Hollywood films are of great importance to the core appeal of Lukas's and Spielberg's films (for example, *Star Wars* the sci-fi Western and *Indiana Jones*, the quasi film serial). The films his scores accompany are films that warrant and sustain a traditional approach.

Other reasons why Williams stands out are his musical background and the special relationship with his collaborative partners. Williams is a classically trained pianist-turned-composer whose status in popular culture has bridged the gap into the world of concert music. He led the Boston Pops Orchestra from 1980 to 1995. In times when heavily emotive, melodic scoring and a full orchestral palette are in widespread decline, Williams's music succeeds in defiance of these trends. Williams may have special status among his contemporaries as the result of favourable (box office) circumstances and resulting privileged working conditions. Lack (1997, pp. 336–337) credits Williams with a resurgence of symphonic film scores in the 1970s:

> The bulk of the successful modern American composers are writing large-scale symphonic soundtracks, a rediscovery owed at least in part to the ambitious scores created by [...] John Williams in the early and mid-1970s. That this style has stuck and proved popular with producers is evidence enough that the 'big' score is synonymous in many producers' minds with a high-impact movie.

Williams's symphonic score for *Jaws* (1975) firmly established him as a film composer. This particular score was felt to be so effective that it revived Hollywood's interest in symphonic film scores. The medium soon resurfaced widely. However, whilst Williams's signature style was admired by many and was copied by some, it was never equalled in musical sophistication. Film scoring soon progressed and in the 1980s increasingly favoured synthesizers, electric guitars, and drum loops. All the while, John Williams stuck with his orchestral medium and nostalgic style, to good effect. Williams undeniably has had a long-running association with box office success. Williams's style clearly resounds with a quintessentially captivating, attractive, and commercially viable species of Hollywood film. At the same time, Williams has associated himself with a small select group of directors whose creative vision accommodates the use of traditional, powerful, and high-profile scores, allowing Williams's style to flourish.

Besides the *Star Wars* and *Harry Potter* franchises, Williams has had his greatest successes working with Steven Spielberg. Since *Jaws*, Spielberg remained at the top of Hollywood filmmaking and by cumulative gross box office earnings is the single most commercially successful director to date. His professional background and career trajectory have been covered extensively,[51] as has his affiliation with fellow 'movie brats' Coppola, Lucas, Milius, Scorsese, and DePalma.[52] By 2001, six of the top twenty box office hits of all time had been directed by Steven Spielberg and all six had been scored by John Williams.[53]

It would be fruitless to try to determine whether story, directorial execution, or score were mainly responsible for each respective success. It is more relevant here to note that Spielberg's and Williams's mode of collaboration is exceptional. Spielberg acknowledges (in Friedman & Notbohm, 2000, p. 93): 'The only person that I've had a perfect association with is John Williams. I've never made a feature film without John's score.' Spielberg (in ibid., 2000, p. 50) goes further and reveals: 'Johnny Williams I have very little control over, except we listen to music together and I'll show him my film and try to talk it through and give him a sense of my taste in musical atmosphere. But once Johnny sits down at the piano, it's his movie, it's his score. It's his original overdraft, a super-imposition.' Although it is impossible to know whether Spielberg deliberately creates this myth of Williams's supposed authorial power and unheard of creative independence, this interview quote is corroborated by an anecdote shared by composer Klaus Badelt. He involved Spielberg in music discussions during the scoring of *Gladiator*, on which Spielberg acted as producer:

> [Steven Spielberg] said: 'It's amazing that you let me be part of this process. Let me tell you how this works with Johnny: He comes to me in the cutting room, we watch the movie, it's spotted, we go through it together, and I don't see him for six weeks. Then I go to his house for a dinner and Johnny plays me the themes on the piano.' And then he doesn't see him for another few months and then they see each other on the scoring stage. And that's the way he has done

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[51] See, for example, Baxter (1996), Friedman & Notbohm (2000), Hoberman & Duncan (1988, pp. 157–160), Jackson (2007), Laporte (2011), McBride (1998).

[52] See M. Pye and L. Myles (1984).

[53] See also Tomasulo (2001, p. 115). Collaborations between the Spielberg and Williams include *Jaws* (1975), *Close Encounters of the Third Kind* (1977), *Raiders of the Lost Ark* (1981), *E.T.: The Extra-Terrestrial* (1982), *Indiana Jones and the Last Crusade* (1989), *Hook* (1991), *Schindler's List* (1993), *The Lost World: Jurassic Park* (1997), *Amistad* (1997), *Saving Private Ryan* (1998), *A.I. Artificial Intelligence* (2001), *Minority Report* (2002), *Catch Me If You Can* (2002), *The Terminal* (2004), *War of the Worlds* (2005), *Munich* (2005), *The Adventures of Tintin: The Secret of the Unicorn* (2011), *War Horse* (2011), *Lincoln* (2013).

movies with him. And I find this fascinating, but it would not be possible for me.[54]

If Spielberg indeed gives Williams such a high level of creative freedom, independence, and authority – i.e. if Spielberg relinquishes much of his creative control over music –, this would help explain how Williams was and is able to compose scores of such distinctiveness. Although some have criticised the resulting music as overly sentimental and Spielberg's style as over-determined and patronising,[55] the fact remains that these films resonate with the largest possible audience and have captivated generations of viewers. Team Spielberg/Williams demonstrates a mastery of storytelling that has defined Hollywood filmmaking for decades, an all-encompassing, seamlessly constructed, manipulative make-believe that is moderately conservative and based on clear, family-friendly value-structures. What is all the more remarkable is that Spielberg and Williams have excelled in virtually every mainstream genre, including horror (*Jaws*), fantasy (*Hook*), science-fiction (*Minority Report, A.I. Artificial Intelligence, War of the Worlds*), (historical) drama (*Amistad, Saving Private Ryan, Memoirs of a Geisha, Munich, Lincoln*), animation (*The Adventures of Tintin: The Secret of the Unicorn)*, adventure (the *Indiana Jones* franchise), with the exception of comedy.

The score of *Jaws* serves as a good example of Williams's efficiency and eloquence of style and expression. With ingenious economy, the score announces a deadly predator, preying on unsuspecting holidaymakers. According to Spielberg (in Friedman & Notbohm, 2000), '…there was going to be a shark theme'. It speaks for the score's impact that Williams' *Jaws* motif today is perhaps as widely recognised as Herrmann's *Psycho* string stabs. Rather than resorting to redundant signifiers, *Jaws* actually engages in its understated immediacy. Brown (1994, p.10) illustrates the inventive ways in which the film and score work on subliminal levels.

In the quote that opened this chapter, Adorno and Eisler do not elaborate to what end genuine collective work should be aspired to and who would benefit from it. Hollywood films are the product of a demand economy film composers willingly participate in and Hollywood film music is the mediated product of the industry's inherent hierarchical structures. Film composers get hired to contribute as artisans to a product, not to

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[54] Klaus Badelt interviewed on 10 November 2011 by Skype. For the full transcript see Appendix II.
[55] See for example Schiff (1994).

supply an original, autonomous work of art. Composers operate within the creative space they are allocated by the filmmakers. Composers' job satisfaction, individualist expression or artistic integrity are not necessarily high on filmmakers' agenda. If composers are frustrated with prevalent working conditions, this is understandable on the one hand. On the other hand, the very nature of Hollywood film production requires of composers the selfless surrender of some musical concerns for the benefit of the film at hand. The most successful collaborative partnerships are those based on a mutual understanding and respect. It is also worth noting that, frustrated though they may be sometimes, Hollywood composers have largely remained silent on the issue: Cautious not to bite the proverbial hand that feeds them, composers are all too aware that overt criticism may result in fewer future commissions. In conversation, conductor Richard Kauffmann mentioned composer Bruce Broughton (quoted above, critical of Hollywood filmmakers' approach to music) as an example for a composer who has not found work in a while for being too vocal in voicing is discontent with the industry.[56]

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[56] In conversation in March 2011.

Part 2: Sonic collaboration and competition

Asked whether he ever feels that he has to compete with dialogue in a film, John Frizzell responds:

> Well, I think it's the way you phrase the question. I think if you think of a film composer as [someone] having to compete then yes. But if you think of yourself as part of the storytelling team and you find your place and you know that every piece of music has to contribute in its best possible way to telling the story… now, if that means being invisible, it means being invisible. If it means being in your face, it's in your face. But when you try to compete, it becomes a problem.[57]

When Rodford notes that 'many voices want to be heard during post-production',[58] the pun may be intended. The film soundtrack is where film (visual) and sound (acoustic) meet at the physical level.[59] Experiments on the affective possibilities of the audio-visual coincidence pre-date sound film, but it was only with the advent of synchronised sound that filmmakers were able to plan, structure, and control what sounds accompanied their films. Recorded narrative soundtracks of course had precursors in radio plays.[60] Eisenstein's conceptual studies on montage considered ways of incorporating music in expressive ways closely matched to the image.[61] Whether stored on traditional film stock or in a digital format, the soundtrack (dialogue, sound effects and music) is inseparably and predictably synchronised with the image. As modes of sound film production developed, post-production roles were devolved to increasingly specialised individuals. The creation and composition of soundtracks became highly complex with the contribution of many, but the authoritative control of relatively few.

It may seem surprising that theatres presented films in mono as late as the 1960s. Allen (1998, p.118) reasons that high installation costs meant that few cinemas could justify the switch to stereo sound equipment. Sergi (1998, p. 159) points out that in relying on mono sound, film employed its only three-dimensional phenomenon (sound) in a one-

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[57] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.

[58] At a panel discussion with Anna Laskowska (Sony/ATV), director Jeremy Seifert and myself on 9 August 2013 at the Transatlantyk International Film Festival, Poznań, Poland.

[59] For the purpose of this chapter the term 'soundtrack' refers to the physical sound storage portion on the filmstrip or digital storage medium and/or the audible sound that accompanies filmic visuals. This as oppose to the commercially available 'soundtrack' album, which is usually a compilation of music used in the associated film.

[60] For example, Orson Welles spent his formative years in radio, as did composer Bernard Herrmann. See also Smith (2002).

[61] Described in Eisenstein (1986).

dimensional manner. Blockbuster movies routinely drove the development and implementation of new sound technologies: Dolby A was launched with the relatively low-budget *Star Wars: Episode IV - A New Hope* (1977), the THX standard premiered with *Star Wars: Episode VI - Return of the Jedi* (1983), Sony's SDDS was first used on *Last Action Hero* (1992), and DTS on *Jurassic Park* (1993).[62] The primary aim in introducing these sound formats was the standardisation of sound reproduction and quality control, ensuring cinema sound conditions were equal to those on the dubbing stage. Donnelly (2001, p.167) quotes George Lucas on the 1990s re-release of the *Star Wars*-trilogy, stating that 'the improvement in sound reproduction was the driving force behind his desires to revisit the films released twenty years earlier'.[63] Although each time the implementation costs for theatres were considerable, new sound reproduction standards provided a larger frequency range, better dynamic depth, and exploration of spatial dimensions (stereo/surround), providing 'new pleasures' that allowed sound to 'break through the screen'.[64] Emerging digital sound formats also offered new expressive possibilities to filmmakers, altering filmmaking practices in turn. Mark Kerins (2006, p. 41) notes:

> No one would deny that technological change can have a major impact on cinematic storytelling. Historically, the definitive example of this would be the development of synchronized sound – filmmakers who had previously been forced to rely solely on images and occasional title cards to tell their stories could now shift some of the narrative burden to voices, sound effects, and music. […] the introduction of DSS has had profound implications on virtually all aspects of the filmmaking process. […] DSS technology has sparked new aesthetic trends and, in doing so, has altered the storytelling processes of the cinema.

Dialogue intelligibility was and is of primary importance in Hollywood cinema, which has traditionally been narrative and character-driven. *Singin' in the Rain* (1952) famously portrayed the sound recordists' painstaking efforts to capture actors' voices on set. Automated dialogue replacement (ADR) was introduced to help overdub dialogue where tracks recorded on set proved unusable (perhaps due to low volume levels, poor delivery, noisy location etc.). So long as clarity is ensured, dialogue need not always dominate the soundtrack, nor is its foregrounding necessarily apparent to the casual perceiver. Nevertheless, dialogue intelligibility will often be enforced at the expense of

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[62] The utilisation of digital sound in Hollywood films pre-dated the use of digitally produced or enhanced images by almost 15 years.

[63] Other films such as Wolfgang Petersen's 1982 *Das Boot* (score by Klaus Doldinger) were similarly re-released with all-new sound effects tracks.

[64] Sergi (1998, p. 162).

other soundtrack elements. The audience can understand a couple having a conversation in normal speaking voices even though they stand across the street from the camera. Traffic noises are artificially suppressed and the dialogue is either recorded with lapel microphones or post-synced. A group of friends can converse in normal speaking tone in a nightclub where loud music should realistically drown them out. In these situations, the music is usually post-synced and no music is playing during the shoot. Audiences are accustomed to these conventions and will rarely be asked to strain to understand dialogue. This of course sets film apart from theatre where a more active mode of listening is required if actors' voices are not amplified. *The Social Network* (2010) presents a noticeable break with convention when Mark Zuckerberg (Jesse Eisenberg) and Sean Parker (Justin Timberlake) have to raise their voices to hear each other in a loud nightclub.

Film composers developed strategies to place music under dialogue early on. The assumption is that because dialogue must always remain clear and audible, anything that might get in the way will be lowered in or omitted from the mix.[65] Concerns over intelligibility aside, music may also be felt to be overly intrusive in a commentating sense. In order to serve a film effectively, composers cannot simply leave scenes with dialogue altogether un-scored, although this is an approach frequently taken by Carter Burwell, for example in *True Grit* and *Fargo*.[66] Alternatively, composers may structure cues around and in between lines of dialogue, which can be effective but may result in a score that feels overly reactive and fragmented. Treating the actors' voices like instruments in the score, and avoiding their respective pitch ranges, can prove successful in ensuring the music can remain at a relatively high volume level without obstructing the dialogue. The abovementioned low static drone during the news montage in *TRON: Legacy* is rather high in the overall mix, but it stays out of the way of the newscasters' voices that are centred in the mid-frequency range. Melodic passages do not normally sit well with dialogue because melodies will often be felt to get in the way of the spoken word. The score for the dialogue-driven *The Social Network*, in its ultra-minimalist electronic approach is ingeniously well suited to serve this extremely wordy film.

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[65] In music production jargon, 'to lower something in the mix' means to lower the relative volume of one track against that of another. A sound can be 'high' or 'low' in the mix, meaning it is relatively loud or quiet respectively.

[66] Other considerations on spotting and narrative requirements, including filmmakers' input, also factor in the decision whether or not to score any given scene.

In *American Beauty* (1999), Thomas Newman devises a palette of instrumental colours that allows the music to sit comfortably alongside dialogue. The understated and low-profile nature of his score does not preclude the possibility of close scoring at key moments. Almost exactly halfway through the film, at 59:30, Ricky reveals to Jane 'the most beautiful thing' he has ever filmed. It seems rather poignant that a plastic bag tossed in the wind prompts a teenager to recognise life's beauty and results in a lyric moment of philosophical insight, plastic bags being the quintessential embodiment of Western consumerism and a symbol of the throwaway society, exactly what *American Beauty* is attacking. Ricky's notion of an underlying benevolent force expressed here has inescapable religious connotations that are not displayed elsewhere in the film. If Ricky is trying to impress Jane, he succeeds: At the end of the scene Jane kisses him. The cue 'American Beauty' that accompanies Ricky's monologue consists of musical elements that for once in the film hold distinct clues as to their intended reading (Figure 4 a/b). The cue is written in C-Dorian. A soft synthesizer pad introduces a pedal on C with the perfect fifth above. A fragmented tune in the upper register of the piano is played softly and the microphones are placed close to the strings. The felt dampers audibly drop on and lift off the strings. The melody spans no more than a perfect fifth. The tune rests repeatedly on A, emphasising the melody's Dorian character, a somewhat more optimistic-sounding minor mode. In the way it is played, the tune is calm and soothing, with an air of innocence and fragility:

Figure 4a: Short score transcription of 'American Beauty' (cont. overleaf)

Figure 4b: 'American Beauty' cont.

In this context, the occasionally used acciaccaturas can perhaps be interpreted as adding a child-like, light character. The character of the melody works well with the flowing, effortless movement of the plastic bag, but also resounds with Ricky's monologue on life's beauty. The cue has limited harmonic movement. The piano's left hand plays mostly parallel fifths, mostly in contrary but at times in parallel motion with the melody. These open intervals compound the cue's sense of openness and modality. The intervals are played as quietly as the melody. In that they tend to rise up in stepwise motion and then fall back again and again, their movement mirrors that of the bag in the wind,

aimless, recurring, ephemeral. The synthesizer and strings texture in the middle parts adds a magical, diffused sparkle that captures Jane's infatuation with the moment and with Ricky. The low drone adds a sense of profoundness to Ricky's observations. Unlike some earlier cues, this one is closely shaped to the scene it accompanies. When Ricky states 'Sometimes there is so much beauty in the world...', the musical texture is thinned considerably. The piano melody rests, as does the low drone and much of the rest of the accompaniment, making way for Ricky's statement. The moment of rest has been prepared by a warming uplift in the score to a pedal on F and a superstructure of an $F^{(add2)}$-chord. The pedal falls back to C once Ricky has said 'I feel like I can't take it,' completing a plagal cadence. A similar effect is used at the end of the cue, where the harmony again shifts to $F^{(add2)}$ as Jane leans in to kiss Ricky, only to fall back when she withdraws again. 'American Beauty' gently adds to the overall effect of this scene, helping make plausible Jane's infatuation with Ricky and imbuing the otherwise abstract footage of a plastic bag dancing in the wind with grace and beauty. The way this particular cue is closely tailored to the scene at hand suggests that Newman was able to work to a relatively fixed edit of the scene.

Depending on the film at hand, music may be allowed to overpower dialogue, but this invariably happens for good narrative and dramatic reasons. When in *The Sixth Sense* (1999) Cole (Haley Joel Osment) aggravates his teacher by repeatedly calling him 'Stuttering Stanley', James Newton Howard's orchestral score builds to a rousing dissonant climax that eventually grows louder than Cole's voice. During the nightclub sequence in *Babel* (2006), loud dance music that drowns out all other sounds is intercut with complete silence. This helps the audience empathise with the point-of-view of deaf-mute Chieko Wataya (Rinko Kikuchi). These exceptions aside, it is generally accepted among composers that where music and dialogue are to successfully coincide, music whose pitch range avoids that of the actors' voices, is inconspicuous in timbre, and of a low melodic profile is most likely to succeed: if music leaves room for the dialogue, the dubbing engineer need not lower it in the mix to make room.

Whilst dialogue intelligibility is usually maintained and whilst the audience will likely focus their attention on the spoken words, sound effects work on a subliminal level and rarely enter viewers' conscience. Compiled in post-production, sound effects comprise a

blend of recorded (location) sounds, foley effects, and digitally generated effects.[67] To varying degrees, Hollywood films draw on sound effects for narrative purposes. Striking a balance between verisimilitude and plausible 'rendering',[68] sound designers and foley artists carefully craft sound effects with their affective potential and function in mind. The idyllic chirping of crickets at night is post-synced; stabbing victims meet their fate to the sound of knives slicing water melons (*Psycho*), fists have the amplified impact sound of meat mallets hitting steaks; a cyborg, as he freezes to a standstill, crunches to the sound of a bowl of cereal (*Terminator 2: Judgment Day*). A fresh baguette crumbles deliciously in *Ratatouille* (2007) to help reinforce the main character's love for food. In *The Matrix*, stylised in-motion swooshes are utilised to fetishise and aestheticise extended fight passages.[69] Liberated from the constraints of realism, science fiction films rely perhaps most heavily on sound effects. The sonic icons of Darth Vader's breathing and the hum of drawn light sabres in *Star Wars* are widely familiar. *TRON: Legacy* subtly enhances its rendition of the digital realm by use of digital sound effects. *Jurassic Park* successfully combines revolutionary CGI with elaborate sound effects that help convincingly position those visual effects in the diegesis.

Depending on the film, dozens, even hundreds of sound effects may concurrently claim a place in the soundtrack. Their relative volume levels and placement in the stereo or surround field will depend on decisions made during the sound mix and later the dub. Sound effects may occupy the entire frequency range of human hearing and vary in relative volume and dynamic range. In the presence of increasingly sophisticated sound design, music is under constant threat of being drowned out (volume levels) or crowded out (soundtrack too busy). As early as 1994, Chion (p. 154) remarked upon Hollywood's renewed interest in sound and materiality, noting that 'recent Hollywood has been experimenting with, and is in pursuit of, sensation: of weight, speed, resistance, matter and texture'. He mentions *Die Hard* (1984) and *Indiana Jones and the Last Crusade* (1989) and makes his comment in the context of general observations on the capturing of materiality (or lack thereof) in Hollywood sound. Lack (1997, pp. 342–343) ponders the advent of digital sound and editing technologies, the blurring of boundaries between music and sound effects, which share a common creative and technical workflow. Helen

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[67] For a detailed introduction to film sound effects see Yewdall (2007), including a chapter on foley sound effects (p.402).

[68] For Chion's definition of 'rendering', see Chion (2009, p. 48).

[69] Both Chion and Sonnenschein encourage the use of colourful language to onomatopoeically capture sound, including 'clank', 'swoosh', etc. See Chion (1994); Sonnenschein (2001).

Hanson (2007, p. 38) outlines how a standardisation of mechanisms and practices in Hollywood led to the creation of highly 'manipulated and constructed' soundtracks, in stark contrast to the common misconception of sound as 'innocent of manipulation'. *Cloverfield* (2008), for example, tricks its audience into accepting the film's pseudo-verité style as an engrossing first-person narrative. The film manages entirely without composed underscore. Halfway through the film, during a brief respite from their flight from a Godzilla-like monster, a group of friends take shelter in a subway station. The sound design comprises ominous thuds and rumblings, suggestive of a battle raging overhead above ground. The dull, low-pass filtered sounds contrast the frantic and shrill sound design that has preceded this scene, as well has the harsh sonic environment of the carnage that ensues. Sound design here is entirely sufficient to deliver a captivating viewing experience, seemingly less mediated than is customary for mainstream Hollywood films. In truth, the film compensates for a lack of music (which would be an easily spotted narrative intrusion) by using highly manipulative sound design that the audience is less likely to detect as such.

Ron Sadoff (2006, pp. 179–180) warns that the 'industry's conversions to the digital realm has transformed the post-production environment for image and sound. Songs and score are often created via the same composition software. Surround sound now permits a gnat's wings, beating against a windowpane, to dominate a soundscape.' Short of collaborating with other members of the sound department, composers perhaps need to anticipate conflicts and redundancies in the abstract. As composer Mark Shaiman (quoted in Schelle, 2000, p. 306) puts it, 'you don't want them to call you from the dub stage and say, "We're dropping this whole three-minute cue because that triangle note interferes with the bird-chirp sound effect that you didn't know was going to be put in there."' Such serious problems arise when composers are still being asked by the filmmakers to provide rich, full, complete musical cues where a more complementary approach might suffice. A lack of communication between composer and sound designer can be detrimental to the audibility and effectiveness of the score in the final film. This is particularly problematic when composers such as John Williams work solely from timings notes, away from the image that may give them a better indication as to what sound effects may be placed in the scene at hand.[70] John Corigliano (in Schelle,

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[70] There are comments by disgruntled fans of John Williams's music having found some of his cues for *Star Wars: Episode I* occasionally drowned out by roaring engine sounds or dialogue. For example,

156

2000, p. 171) remembers how in *Altered States* (1980) his music was drowned out by sound effects he did not know to expect.

Ramin Djawadi remembers that for *Iron Man* he 'went out and […] sampled a lot of metals that were placed all over the score. And I used them as part of the percussion. So I literally took big metal plates and just banged on them – and all kinds of crazy stuff. And that became part of my percussion palette. I used it in the score quite a bit. Of course, I had to be careful because I didn't want to get in the way of the sound design […]'[71] Where composers sonically encroach on the terrain of the sound designer and vice versa, problems can arise from an overly crowded soundtrack, which will eventually be settled at the dub. Filmmakers, who should be overseeing all aspects of post-production and are in the best position to judge the progress of each respective team, might be able to prevent conflicts. Thomas Newman illustrates the problem:

> I think the cause of sound effects and music sparring and fighting is a director who may be wanting to hear it all. It's a big issue of subtraction - the best dub you can have is always subtractive - meaning that if you want to hear sound effects, take out the music. If you want to hear music, subdue some of the sound effects. Find the balance, but don't say, 'Well I love the music and I love the sound effects and therefore I want them both in.' If music sometimes is written to be big, with big bass drums and low contra-basses, and suddenly it's subdued, it loses the very essence of its design. And you think, 'Well, why is it there at all?' In some sequences you have an obligation, if a bus explodes there's an obligation for the sound to follow. So if a composer puts a big musical moment on an explosion, well he's not thinking really about what is probably going to happen - unless you're dealing in a much more subjective filmic realm where you're not going to hear the explosion. And that's where it really boils down to the director. If you have a director who doesn't understand what dubbing is, you can be in big trouble. A lot of times, directors are more comfortable with sound effects, I think, because sound effects are more neutral creative elements, whereas a composer can come in with either a good or a bad score and really 'perfume up' something. And that can be scary. We tie a bit of a creative ribbon around the package and sometimes that's a nice thing and sometimes that's not a nice thing. Sometimes it's just not good at all.[72]

Allen (1985, p. 86) points out that 'each mode of production produces its own set of production practices: normative conceptions of how a particular kind of film "should" look and sound'. Ideally, sound designers, foley artists, sound mixers and composers would liaise over their respective concepts and intended contribution to the film. In

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http://www.amazon.com/Star-Wars-Episode-Phantom-Ultimate/product-reviews/B000051VYS [Accessed 27 June 2012].
[71] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.
[72] Interviewed in Anon (2008).

practice, however, this kind of cooperation, let alone collaboration, rarely takes place. Sound and music teams work in separate ways and are usually ignorant of each other's progress. Composers compose their scores, oblivious of what other sonic elements may end up coinciding with their music. For the time being, many Hollywood filmmakers seem keen to exploit the newly found upward expansion of volume and frequency ranges in spectacular fashion. Film music's place in the advanced digital soundtrack is as yet unsettled.

Traditionally, orchestral film scoring sessions served the purpose of recording complete musical cues and constituted the definitive conclusion to the scoring process. Recording engineers would aim to capture the natural balance of the orchestra to the best of their equipment's ability. This linear approach to film scoring has now virtually disappeared. Composer James Newton Howard (in Reynolds & Brill, 2010, p. 338) outlines how he incorporates scoring sessions in his wider creative process:

> [The score is] very produced, high production value, we're very careful about all the synthesizers, all the electronic sounds, we record all the percussion separately, we get it all sounding amazing, then we layer it with the orchestra, get that sounding amazing. So in the end you're bringing to the [dubbing] mix five Pro Tools rigs with a thousand tracks of information. Just massive amounts of stuff, that then has to be mixed. It's not like recording an orchestra live. There's a huge amount of layering, pre-recording, over-dubbing that goes on for months.

To facilitate the sound edit and dub, music needs to be kept malleable. Recording so-called stems means that composers can defer creative decisions until later in the dubbing process.[73] Recording technologies have fascinated and inspired film composers since the early days of film scoring: Film composers many decades ago began taking an interest in enhancing and manipulating the orchestral palette beyond what is physically available from the medium itself. Copland (1987, p. 299) enthusiastically recounts the ability to mix orchestral recordings and the use of so-called over-dubbing on the score for *Of Mice and Men* (1937). Bernard Herrmann recorded a single violinist multiple times on *The Devil and Daniel Webster* (original title *All That Money Can Buy*, 1941) and also experimented with *musique concrète*, recording humming electrical wires outside San Fernando to use for the devil's appearances.[74] An emphasis on recording and

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[73] For example, strings-only, woodwinds-only, percussion-only stems.
[74] See Smith (2002, pp. 86–87). The electrical wire effect may have sounded similar to Hans Zimmer's Joker theme for *The Dark Knight*.

production has perhaps given composers and filmmakers a skewed impression of the orchestra's natural sound and abilities. Large horn sections can be made to blend with single woodwinds, extensive arrays of percussion instruments can be tamed in the mix, augmented strings sections for added richness can be made to sit underneath an amplified harp. Michael Kamen's bold scores for *Robin Hood: Prince of Thieves* and *The Three Musketeers* (1993) boast crisp and clear strings and round sonorous brass with a palatable yet unlikely relative volume balance. The opening titles to Tim Burton's *Batman* boast snare drums that are unnaturally rich and loud in the context of a full symphony orchestra. Nicholas Hooper's score for *Harry Potter and the Order of the Phoenix* is similarly unbalanced: As Harry rides through London on brooms, militaristic snare drums sound too close and too loud compared to the orchestra they are supposed to be a part of.

It is possible that as a result of too much production some filmmakers, film composers, and indeed audiences have forgotten what an actual orchestra sounds like. They have been spoiled by the powerful and overly produced sound of scores that are the result of the increasingly seamless blending of live orchestral recordings with synthesizers and orchestral samples.[75] The extreme, high-impact aesthetic of frequent thuds and bangs employed in many recent trailers and action films means that the sound of a real orchestra may now disappoint. Jeff Atmajian compares recent film music to…

> …people living in a home that isn't built of the same quality, or we have clothes that aren't good quality, but we get used to them. And either you actually begin to prefer them, because they're what you're used to or because it's what everybody has. That saddens me, because I have nothing against what, to say his name, Hans Zimmer might do, but I want to see it done really well. If *Pirates of the Caribbean* is a hybrid of rock and pop and orchestra, that's fine, but I'd like to think that it's orchestrated really well.[76]

It is ironic that the soundtrack recordings cherished by film music lovers are rarely the mixes heard on the film's soundtrack. Recent film score albums are usually mixed especially for the album release and can sound quite different from the dubbed cinema mix. In a collaborative process that even after the recording session requires film composers to leave their scores open to the influence of others, serious questions about the final film score's creative control and authorship are not easily settled. In

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[75] See also Chapter 5.

[76] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.

summarizing his approach to film scoring, Klaus Badelt demonstrates a willingness to submit to constant change that may not always be musically motivated:

> I build my method of writing in such a way that there are no one-way streets and no milestones where I cannot return. There are no transitions into other phases of production: the first moment I sit down and tinker on a piano sound […] it's the same production environment I use at the very end to mix the finished score. That has the benefit that I can always go several steps backwards and make changes. Because film means change. You're constantly re-addressing… You go to the final dub stage and suddenly think 'no, I get it, now I understand'. Even in the finished, mixed cue I can make changes to a synthesizer sound or a melody. […] I don't have to rely on others to cut my music around and I have a lot more creative freedom that way.[77]

Many film composers tend not to attend the final dub, primarily because they resent the potential frustration of being there. Yet composer Richard Bellis (2006, p. 124) strongly advises aspiring composers to 'be there' so as to not leave final decisions over music placement (sync or volume) to the dubbing engineer. Music often needs to give way to sound effects and dialogue by means of lowered volume or re-adjusted balances between the music stems delivered. This practice can significantly alter the way the composer's intentions translate to the final soundtrack. Composer John Frizzell describes his experience and how he tries to pre-empt disappointment: 'Sometimes I find I write a cue that does sound unique and then you get to the [scoring] stage and just the balance of the stems can make it become a little more "same". In other words, the definition gets gobbled up. And one of the things that I'm learning, having written more now, is: Don't try to feature so many things. Try to really have your score focused, and each cue focused so that your intent is clear, whether consciously or subconsciously, to the viewer.'[78] For music to suffer during the dub is not a recent phenomenon: even Aaron Copland (1987, p. 299) describes a similar experience. Filmmakers who are suddenly unsure of their film or otherwise reconsidering their approach may request changes to the music. Studio executives may also weigh in with their opinion. Changes may include anything from adjusting relative volume levels to actual music editing. The dubbing engineer and his team may spend only a few days with each film whereas the composer and others have spent many weeks or months. Yet dubbing engineers have a great deal of influence on balancing the film soundtrack as they see fit. Creative control ultimately lies with the filmmakers, who may not feel technically competent or

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[77] Klaus Badelt interviewed on 10 November 2011 by Skype. For the full transcript see Appendix II.

[78] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.

comfortable to interfere with a highly technical process. Professional dubbing theatres use large intimidating mixing desks operated by several engineers. Composers generally have no control over decisions taken with their music, especially if they are not present at the dub. It is not uncommon for musical cues to be omitted, repeatedly re-mixed (within music stems or relative to sound effects) or even moved to a different point in the film at this final stage of audio post-production. On the dubbing stage, the composed underscore has few champions. Mel Wesson (2008) explains:

> The final dub is open season for sound, but aside from fixes or specific requests my role [as ambient music designer] morphs into more of a 'doctor on call' situation. It's often the first time everything comes together as a whole, so yes… there's usually a few surprises! I don't get too protective about my work though; if something doesn't make it to the cut it's for a reason and I'd sooner hear one sound cut through and have an effect on an audience than have a wall of mush that does nothing. It's the end result that counts, but I still find it quite nerve-wrecking the first time I watch a movie all the way through in the theatre.

Music editors may help prevent alterations and remedy problems that may be perceived as unmusical. Whilst music editors may not normally have direct influence on decisions taken at the dub, they can exercise damage control by helping to mitigate potentially unmusical choices, for example by making sure a cue is cut at a musically suitable point. It seems ironic that in times when, at the technical level, the production and editing of music, dialogue, and sound effects have grown closer than ever, their creation and implementation have nevertheless remained discrete processes. It is unfortunate prevalent working conditions prevent post-production specialists from collaborating in ways that would allow an exploration of expressive synergies between the three soundtrack elements.

And yet there are examples for scores that mesh effectively with sound design, the two elements complementing each other towards a rich and layered whole. In *Terminator 2 – Judgment Day*, sound effects help render visual effects believable and to complete the films diegetic world. Tom Kenny (2000, pp. 26–34) gives a detailed overview of the technical equipment, processes, and personnel involved in creating foley effects, sound effects, sound mix and ADR, illustrating the extent to which this film's sound is a constructed artefact. Sonnenschein (2001, pp. 193–194) explains how so-called sound objects were specially created for *Terminator 2*. For example, dog food sliding out of its can was recorded and played back at a slowed speed to create the T-1000's liquid metal morph sounds. A multi-layered sound mesh was woven with different tape speeds for

the final scene's molten metal pool,[79] which was made to seem larger through a mixture of slowed recordings doubled with real-time playback to maintain sync with the visible bubbles.[80] Sonnenschein also raises an interesting point about the film's high noise levels, pointing out that things constantly get shot at or detonated, and there is little aural respite in the soundtrack. In the age of THX and high-definition sound re-production, such lack of dynamic contrast risks quickly tiring the audience's ears and can be detrimental to perceivers' engagement with the film. The challenge of 'making everything seem loud' without a decline in impact is met by implementing subtle gradations of 'loud', i.e. establishing sonic hierarchies between sound effects.[81] Perhaps the most noticeable example is found just before the Terminator shoots the T-1000 in what must be assumed at this point to be a final, fatal blow (2:04:45): The soundtrack goes completely silent for two seconds before the shot is fired, making the firing of the shot and the crisp, glassy, splintering impact of the bullet sound all the more powerful and destructive. The shattering further supports the impression of destruction, being extended to several seconds, tapering eventually to a high-pitched, distinctly synthetic ring-out. Throughout the film, handheld guns sound as if fired with a silencer – sweet, elegant *phews*, – whereas rifles have a more substantial, reverberant sound. The loading of those rifles has its own, timbrally contrasting mechanical click, which, quite loud in the mix, acts as punctuation between the shots. Sonnenschein even detects sweetness in the sound of the grenade launcher the Terminator uses to destroy police patrol cars.[82]

The film's polished, carefully crafted visual language and frequent use of spectacular stunts and effects is paired with carefully crafted sound design, resulting in a rounded multi-sensory filmic narrative. This raises the question what contribution music might meaningfully make without challenging the aesthetic balance of sound and visuals. Brad Fiedel's score to *Terminator 2* is remarkably atonal in places, drawing on non-functional harmony, cluster chords, jagged percussion and synth stabs. Aside from aforementioned themes, the score is less than memorable and features little melodic material. Instead it provides rich synthetic textures. The music often blends seamlessly with the sound design, but occasionally the score is simply drowned out by sound effect. During extended chase sequences (e.g. the truck chase at 31:20 and the escape from the mental

[79] Sonnenschein (2001, p. 40).
[80] Ibid., p. 163.
[81] Ibid., p. 128.
[82] Ibid., p. 192.

hospital at 1:01:30) the score is rather monotonous, comprising high-tempo drum loops (quarter note kick drum and continuous quaver patterns on toms) interspersed with high-pitched synth stabs. On the whole, the score is most effective (and noticeable) where it aims to create an ominous atmosphere, for example during Sarah's surreal nightmares (20:35 and 1:27:00). Elsewhere the music is cautiously subdued, allowing other elements to be foregrounded. When the T-1000 infiltrates the mental hospital to capture Sarah (50:00), the sterile sonic environment of the near-deserted hospital ward at night heightens the T-1000's stealthy threat. Music is not required to add more than an occasional drone. Similarly, sound effects rather than music help create complex, convincing, and engaging environments, for example in the film's opening war scenes, the shoot-out at Cyberdyne, and particularly the final show-down at the steel plant.

The score is interwoven with sound effects, and at times the two elements are not distinguishable. For example, when the T-1000 violently struggles as he is dissolving in the molten steel pool, a multitude of vocal and sound effects accompany the frantic visuals. Synthetic sounds are thickly layered, many of them distinctly pitched. The mutually reinforcing relationship of music and sound design in these scenes creates sonic environments that support a comprehensively engaging viewing and listening experience. One of the film's key scenes, in the steel plant (2:05:20), shows the T-1000 reforming after having been shot by the Terminator. Pieces of frozen metal are scattered all over. This resurrection comes as a surprise, as the audience has been misled to assume that the T-1000 could not survive the Terminator's fatal shot. As pieces of metal thaw and liquidise, they start gradually merging into puddles. Luscious sound effects of gooey globs, viscous dripping, and metallic bubbles heighten the moment and render the high-gloss visuals convincing. The score at this point provides hazy drones that only on close listening reveal themselves as music. These sounds may be mistaken for belonging to the diegetic environment, machines in the distance. The music here is an early precursor to what Hans Zimmer as recently as 2008 would call ambient music design.[83] Occasional low drumbeats weightily underpin the importance of the moment and notably stay well away from the sound design's register. The division of labour between sound design (sense of realism), and music (the villain lives!) at this point create

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[83] Which Mel Wesson was credited to have provided on *The Dark Knight*. Kassabian (2003, p. 93) spots another example of such music in *The Cell* (2000) and describe it as 'neither music nor not music, but rather a textural use of sound that disregards most, if not all, of the "laws" of classic Hollywood film-scoring technique'.

two simultaneous narrative layers, producing a richer text. However, as a result, the score as autonomous music is most restrained and foregoes any sense of structure or development. It was not possible to reach composer Brad Fiedel or sound designer Gary Rydstrom to obtain more information on their actual collaboration, if any. However, *post hoc* observations on the score indicate that music and sound design in this particular case are interwoven in a way that is suggestive of at least a mutual awareness of both parties' creative aims.

The Dark Knight (2008) is a compelling example of a film that employs music in novel ways. At the expense of musical and structural coherence, the score forms an organic part of the film as a whole and is holistically engaged in the storytelling process. *The Dark Knight* is an unusually ambitious Hollywood film in terms of content and philosophical outlook. Evidently, the creators of music and sound design in *The Dark Knight* were mutually aware of their aims and output – at the technical, narrative, and aesthetic level which unlocked possibilities for more effective, less redundant, soundtrack composition. *The Dark Knight* explores sonic opportunities to a remarkable extent. It is at times impossible to know what is composed music and what are pure, non-musical sound effects. In some scenes that traditionally would warrant underscore (stand-offs, chases, etc.), the score rests altogether, allowing sound effects to take over. In other places, the soundscape gives way to music, for example just before an extended chase sequence halfway through the film. There are also passages where music and sound design are mutually reinforcing: Near the end of the opening segment, a bank safe has been broken into and is being emptied (4:30). The last remaining member of the Joker's gang holds a gun to the Joker's head to pre-empt himself being shot. The composed underscore has ground to a near-halt, suspended only on gong-like tones on D and C, to accompany the brief stylised and grotesque stand-off between two clown masks. Instead of being shot, the gun wielding gang member is killed by a school bus that suddenly crashes through the main entrance.

Figure 5: Bus arrives

The crash of the bus feels extremely loud compared to the relative calm that precedes it and is further accentuated by harsh musical stabs on D (Figure 5). These are deeply embedded in the sonic texture and are barely distinguishable as music from sound effects. The overall impact is shocking and visceral.

Later in the film, the Hong Kong segment is accompanied by continuous underscore, but again the score is at times barely recognisable as music. Hans Zimmer collaborated with Mel Wesson, whom he credited as ambient music designer and who he feels is 'a sound painter rather than a composer'.[84] Although exceedingly subliminal, often barely audible, Wesson's contribution to the score earned him 9% points on the PRS cue sheet, and thus a substantial portion of the performance royalties.[85] The Hong Kong segment is one of the few passages in this film where Batman appears fully in control and successfully accomplishes his mission. Nolan adds interest to the passage by withholding from the audience key components of Batman's plan. Although it is clear he has traveled to Hong Kong to kidnap the corrupt banker Lau, the audience does not yet know how he is going to accomplish his mission. Bruce Wayne has decided to kidnap Lau from his heavily guarded office tower. Lucius Fox (Morgan Freeman) meets Lau under the pretense of a business matter and leaves a mobile phone on his way out. This rigged device will later jam the building's power supplies and security systems. On a stunning helicopter shot of Hong Kong in the morning, Fox arrives at Lau's office. The instrumental palette is distinctly orchestral, comprising regal lines in the basses and brass, accompanied by a semiquaver ostinato in the upper strings. Occasional mellow and seemingly low-pass filtered drum hits mask the elliptical transition from Fox's arrival to him sitting over breakfast with Lau on the office tower's roof terrace. While the two talk, the music changes to a more synthetic, rhythmic pattern that quietly sits underneath the dialogue. The music never stops but is hardly audible during this conversation. The score helps keep up the narrative pace and it is clear that this breakfast conversation is part of Wayne's plan. As Fox soon leaves the building, the phone is planted and the score still continues, but finally comes to a halt when Fox meets Wayne on the street nearby (33:30).

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[84] In personal conversation on 20 August 2013 in his Soho home in London.
[85] See PRS cue sheet Appendix V.

$\downarrow. = $ ca. 135

Figure 6: Bass ostinato

A rich synth drone on D commences on the cut to Hong Kong that evening (34:00). A new rhythmic string ostinato, lighter, more sustained, weaves on top, as a helicopter shot circles around the office tower opposite Lau's. The camera zooms in on Wayne as he puts on the last pieces of his Batman costume. As he starts shooting explosive devices in gel packs across to Lau's windows, the sweet pings of his gel-projectiles dominate the soundtrack as they are being fired off. The score simmers down to low, percussive pulses on a timed delay. The dark, fleeting sound reminds of large wings flapping (a variation on the so-called batflaps effect). The basses start an ostinato in triple metre (Figure 6) that will phase in and out of audibility throughout the ensuing abduction sequence. This forward-driving ostinato helps propel and amplify Batman's moves, suggesting he is in control and has carefully planned every step of this operation. Key events now unfold matter-of-factly. In the lobby of Lau's office tower Fox's phone device springs into action and the power and security systems fail. Lau and his guards panic, and the musical texture simply continues. Then, a dissonant brass swell builds up to Batman jumping off the ledge he has perched on, flying over to Lau's office. Heavy, aggressive drum beats and brass thumps accompany Batman's take-off. These musical gestures manipulate the audience's perception of Batman as a powerful force. A soft undulating textural synthesizer bed accompanies Batman in flight, lending an air of grace to him gliding through the air. At the same time, this becomes a negative aural space upon which the sound of Batman crashing through Lau's windows is even more shattering and impressive. The sound of smashing glass is interesting here, as it sounds light and sparkly, no serious obstacle for a hero of Batman's stature.[86] As Batman one by one overwhelms Lau's armed guards, the score is highly reactive, atonal, a mesh of brass and percussive accents. Between a multitude of impact sounds and breaking furniture, the score is now just one element in a crowded soundtrack. At 36:00 Batman appears to have been shot and briefly disappears out of sight. The aforementioned flapping sound returns as police arrive. Lau frantically looks around to see where the intruder has gone. At 36:30, Batman suddenly reappears and quickly disarms the remaining guards. He

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[86] Elsewhere in the film, for example, when Batman throws the Joker against a window, glass sounds much harder and weightier (in the interrogation room segment).

punches Lau and then drags him by one foot towards the windows. The score has unraveled into chaotic percussion, held together by a hemiola pattern (Fig. 7). When at 37:00 the explosive charges detonate and blow out the corner of Lau's office, the sound is chaotic and overpowering. The pattern from Figure 7 collides with the string ostinato from Figure 6, making for a hazy, confusing polyrhythmic texture. This effectively mirrors Lau's confusion and that of the police officers, who look on helplessly as Batman takes Lau away. Batman sends out a small signaling balloon. As a large plane approaches, strings enter on D above middle C, introducing a new rhythmic motif. Few will have expected the plane to pick up Batman and Lau, and the music here comes as close to sounding triumphant as it ever will in the film. In fact, the combination of controlled percussion, staccato string chords and a short melody harmonised in D-minor, Bb-major and G-minor, is one that will return in similar fashion whenever Batman succeeds.[87]

Figure 7: Percussion pattern

Music and sound design are also closely interlinked in *Star Trek* (2009). Eight sound designers worked on the sonic overhaul of the Enterprise's interior,[88] focused on sufficiently paying homage to tradition while also attracting uninitiated viewers. Composer Michael Giacchino negotiates the challenge of referencing *Star Trek*'s musical heritage (citing the original TV series' main theme by Alexander Courage) while at the same time providing a contemporary score with a dramatic edge. Besides a majestic orchestral main theme, Giacchino employs subtle synthesizer textures that are seamlessly integrated into the soundscape of the Enterprise. During a fleeting romantic encounter between Uhura (Zoe Saldana) and Spock (Zachary Quinto) in a turbo lift, a subtle synthesizer cue enters and exits from underneath the lift's electronic hum, hardly noticeable at first. The music here remains abstract, a calm pad, drawn-out tones. Throughout the film, it is difficult to tell what is purely music and what is purely sound design. Giacchino skilfully combines traditional thematic scoring with a supple approach

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[87] This score segment was also heard in similar fashion at the very end of *Batman Begins*, prior to the end credit titles.
[88] See Stoeckinger (2009) [Accessed 12 May 2012].

to scenes that require it. In its mode of expression, the resulting viewing experience is more comprehensively engaging and less predictable.

Mel Wesson ponders the increasingly blurred boundaries between music and sound effects:

> I wouldn't differentiate between [music and sound design] sonically, but I'd say there's a dividing line in whether you're being figurative or abstract in the way you use sound. The priority for my work is with the score, what I do has to have some musical sensibility, whether it's playing a supportive, colourist role or driving the structure from which a cue is built up. I always work with the sound design team in mind though, you have to be aware of what those guys are up to, and it doesn't help if there's half a dozen things all doing the same job at the dub, you need clarity, and everything has to be focused.[89]

Advances in sound re-production technology have enabled filmmakers to draw on sound and its affective powers in ways previously unavailable. The soundtracks of some recent Hollywood films evidence an evolution of sonic spectacle at the expense of audible music cues. *Unstoppable* (2010) contains scenes where a busy effects track is compounded by rhythmically hectic percussion, resulting in redundancies that at best may be perceived as mutually reinforcing. *Transformers: Dark of the Moon* (2012) is noisy and draws on music that works mostly texturally, complementing already frantic sound design with percussive and mechanistic musical elements. By contrast, a number of other recent films suggest a rising awareness among filmmakers of the expressive potential that lies at the sonic juncture of music and sound design, for example *TRON: Legacy*, *Star Trek Into Darkness* (2013), *Mission: Impossible - Ghost Protocol* (2012), *Prometheus* (2012), and *The Dark Knight Rises* (2012). Sonic experimentation in Hollywood must of course contribute to a film that remains marketable to the mainstream, cater to overarching aesthetic considerations and not upset established (or slow-changing) views on what constitutes acceptable, marketable solutions. Where composers proactively engage with the post-production team, they may have their contribution to the soundtrack considered early on. It is promising to see that some composers are working in this direction (e.g. Badelt, Djawadi, Zimmer, Wesson) and that some recent Hollywood films prove that a more comprehensive approach to soundtrack planning can result in compelling solutions.

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[89] See Wesson (2008) [Accessed 2 November 2012].

Chapter 5 – Developments in music technology and their impact on film music composition and production

The craft of film music composition has been always been deeply technical. Even early pioneers such as Erich Korngold (1897-1957), who when composing shunned the use of conventional timing notes and when conducting did not use click tracks, ultimately submitted to the technical setup of the recording studio.[1] Emerging music technology has facilitated film composers' workflow, has allowed for cost-effective streamlining of scoring processes and has helped composers adhere to increasingly pressured delivery schedules. This chapter highlights areas of music technology and developments therein that have had a significant impact on the compositional process, music production, and the resulting film music. Mera (2007, p. 79) observes in his monograph on Mychael Danna's score for *The Ice Storm*: 'While developers of music hardware and software react quickly to compositional trends and practices, compositional choices can also be affected by the technology available to the composer.' Since this thesis inquires about the context in which Hollywood film composers actually work and the effect of that context on composers' creative practice and the musical outcome, the aim of this chapter is to make a selective evaluation of emerging music technology, its pertinent components, prevalent user practices and musical tendencies that have led to the decline of melodious orchestral film music. Although I do not intend to provide a comprehensive historical overview, I will trace selected aspects of music technology in the historical order they first emerged.

I will begin by addressing the use of electronic instruments and synthesizers in film scores, which occasionally led to a substitution of acoustic instruments with electronic ones, or indeed replaced the familiar orchestral palette with one that is generated entirely electronically. Recent research indicates a clear link between composers' use of synthesizers and the resulting musical language, whereby a rise of synth-based scores tends to coincide with a less elaborate, more minimalist and pattern-based musical language.[2] Turning to the use of sequencers, I will progress from the use of electronic instruments to their automation. I then discuss the MIDI protocol, which governs this automation in electronic sequencers, and I flag limitations of MIDI in terms of musical

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[1] Described in Duchen (1996, p. 152).
[2] See also Chapter 1.

expressivity and tempo flexibility. Before moving on to so-called digital audio workstations, I will illustrate how certain musical solutions are made easier by technology than others. I will also discuss how the emergence of advanced music technology has allowed a wider range of individuals to enter the field of film music composition – a notion supported by a number of sources cited below – and how this in turn has led to new musical trends and a widening of the variety of musical styles in film music. I cite keyboard and guitar bias among contemporary film composers as two possible symptoms of this influx of personnel. I assess the contribution so-called samples can make to the compositional process and its outcomes and address the creation and use of score demos from a technical standpoint. I will close the chapter with a qualitative assessment of technological advances in compositional tools and music production as against their impact on the resulting film music.

The use of electronic instruments in film music dates back to the early days of film scoring.[3] The scores of *Spellbound* (1945) and the *The Day the Earth Stood Still* (1951) featured the theremin, a rudimentary and rather unwieldy instrument whose distinct sound later became a sci-fi scoring staple. Following her 1968 success with the album *Switched-On Bach*, composer Wendy Carlos used the monophonic and monotimbral Moog synthesizer to score *A Clockwork Orange* (1972), adapting music by Beethoven and Rossini. A decade later, she also scored the ground-breaking *TRON* (1981), substituting synthesizers for acoustic instrumental parts in an otherwise traditionally orchestrated score.[4] First manufactured in 1971, the Arp 2600 synthesizer was, alongside the Moog, quickly adopted in popular music. In the late 1970s, the Synclavier System and the Fairlight CMI significantly expanded synthesizers' capabilities.[5] As composers embraced these new instruments, synthesizers began to permeate film music in the 1980s. Prendergast (1977, p. 303) notes as early as 1977: 'As film is a medium that can only be experienced through a reproductive process, the introduction of the synthesizer, from a technological standpoint, was a natural extension of its use in the pop field.' In some early 1980s film scores, the orchestra, and sometimes all acoustic instruments, were cast aside. Film composers' interest in synthesizers may have been motivated in three ways: Firstly, synthesizers' novelty factor lent film music a 'much sought-after contemporary

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[3] A introduction to music synthesis is not the focus of this chapter. An detailed overview is provided in Jenkins (2007).
[4] Discussed in more detail in Moog (1982, pp. 52–57).
[5] The history of synthesizers has been comprehensively documented. See for example Parker (2010), Vail (2000), Zuiderveld & Moog-Koussa (2012).

edge' (Kalinak, 1992, p. 88), in line with emerging popular music of the time. Vangelis's highly influential synthetic scores for *Chariots of Fire* (1981) and *Blade Runner* (1982) consolidated synthesizers' role in film music. Director John Carpenter used synthesizers to help set the dystopian feel of *Escape from New York* (1981), for which he himself composed the score. Harold Faltermeyer's wholly electronic score to *Beverly Hills Cop* (1984) appealed to audiences and filmmakers alike.[6] Secondly, synthesizers allowed for the creation of tone colours, sound palettes, and timbres previously unavailable, allowing for novel modes of expression. The synthesizer score to *Labyrinth* (1986) demonstrates Trevor Jones's experimental attitude at the time.[7] Thomas Newman (interviewed in Schelle, 2000, p. 272) feels that synthesizers offer 'more interesting sounds – they're the thing that give a more unique, dramatic flavor'. Even veteran composer Maurice Jarre began working with synthesizers in the 1980s, for example for Peter Weir's *Witness* (1985) (mentioned in O'Connor, 2009, p. 36). Thirdly, synthesizers brought composers closer to the final score in that they gave them greater direct control over the recorded end result, potentially reducing, or even eliminating, the need for the countless variables involved in a live scoring session. Composer and pianist William Goldstein agrees: '[I can] personalize my music in a way that wouldn't be possible if I were writing a score for an acoustic orchestra.'[8] Daniel Elms confirms that Hans Zimmer also feels that using synthesizers and software instruments (see below), he can more fully control every aspect of his score.[9]

Some theorists and practitioners have voiced concern over the use of synthesizers in film music, perhaps feeling that synthesized scores are somehow less expressive or appropriate than orchestral film scores. Broughton (in Schelle, 2000, p. 101) explains that in his view synthesizers have shortcomings in terms of musical expressivity: 'If I am writing real orchestral music, it doesn't transfer well into synths, especially when it begins to get emotional. When it begins to get emotional, the synths are flatter than a pancake.' Kalinak (2010, p. 77) claims that 'the most innovative use of the synthesizer has been to create sounds that a traditional orchestra cannot make', suggesting a bipolarity of musical media in film music (the orchestra versus electronic instruments).

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[6] James Newton Howard acknowledges Faltermeyer's lasting influence in Reynolds & Brill (2010, p. 335).

[7] During a talk at the Royal College of Music in early 2005, Jones joked that back in the 1970s he and Sting were the first two UK-based Fairlight owners and that he was still paying for his.

[8] At a talk to students on the Masters Programme in Composition for Screen at the Royal College of Music, 5 April 2011.

[9] Daniel Elms was my student at the Royal College and shared the anecdote in conversation on 11 September 2013.

One might argue that in giving film music a contemporary edge, synthesizers do not offer a symphonic score's timeless and transcendental qualities. Arguably, scores such as *Chariots of Fire* have not aged well, perhaps mainly because they so clearly represent a passing fad that was novel and popular at the time.[10] Films such as *TRON* and *Labyrinth* (1986) may to today's viewers seem dated partly due to their synthetic scores. On the other hand, synthesizers can be said to have expanded film music's toolset and expressive possibilities.

Synthesized film scores have precedents in popular music rather than traditional concert music. Their cultural connotations therefore resound with Hollywood's contemporary target audience more so than orchestral scores. Following an experimental and formative period in the 1970s and early 1980s, synthesizers have become firmly established in Hollywood film music and remain an effective asset to the film score.[11] Yet, in the same way that fully synthesized Hollywood scores nowadays are an exception, so too are exclusively orchestral scores. John Frizzell works extensively with synthesizers but tends to blend synthesized sounds with acoustic ones. Rather than considering acoustic and electronic instruments as polar opposites, Frizzell freely combines the two. He explains: 'Nothing I work with is purely derived from an artificial source and very little of the end product is ever derived completely from a natural source. And so everything is sort of a mixture between the real and the unreal – if those are good terms.'[12] Broughton (in DesJardins, 2006, p. 30) weighs the possibilities of using synthesizers in the context of his own experience:

> The synth, as I said, it's basically just another musical instrument, and a really useful one at that. However, to some people, it is thought off as a way of getting cheap and quick scores. To some composers, it is a way of not having to learn how to deal with an orchestra or acoustical [sic] music. The synth gets in my way from time to time because I can always demonstrate what the orchestra is really going to sound like from a synth mockup. I'm a good orchestrator and a more-than-adequate synth player. I can make an orchestra sound very, very specific, but I can't do that with synths. So, when I do a 'synth score,' I often feel limited by fewer aural opportunities. I know some synth-oriented composers feel the opposite. Doing a decent synth-based score is expensive, even if a composer does it himself in his own studio. It's very time-consuming. But he or she doesn't have to pay a great mass of musicians in order to get the

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[10] On 12 June 2012, the BBC's Breakfast programme played the well-known *Chariots* theme during the Olympic torch relay, as a group of runners ran across the beach at West Sands, St. Andrews, the original filming location for the opening sequence of *Chariots*. The resulting effect was rather contrived and awkward.

[11] See also Table 5 – Proportion of scores featuring synthesized elements in Chapter 1.

[12] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.

fat sound that his or her index finger can get by pressing the right key that connects to that specific fat sound on a keyboard. This is essentially what's considered as money-saving. The best synth scores are those that are either integrated into the overall orchestral fabric to produce unique and special sounds or effects, or are produced by people who live, work and think more comfortably in that specifically created environment.

The above-mentioned Daft Punk score for *TRON: Legacy* is a prime example of a score that effectively and seamlessly blends synthesized sounds with live orchestra, flexibly mixing the two media to serve the film. The synthetic component in this particular case meshes well with the film's subject matter of humans trapped in a virtual reality while at the same time lending the overall score a desirable contemporary flavour that speaks to the presumed target audience. Music supervisor Jason Bentley marvels:

> What's amazing is how for the score, they fused the acoustic orchestral layer, the electronic layer – big kick drums or synth lines. [...The cue] 'Solar Sailor' is a really good example of that. [...] It's not an easy task to bring those two worlds together, orchestral and electronic. It can sound really clunky. But for 'Solar Sailor', you can hear the strings coming in, and they fused that with the other layers. (Quoted in Ditzian, 2010) [Accessed 11 May 2012].

Synthesizers have helped update and modernize film music's language and augmented its expressive range. At the same time, synthesizers have significantly altered many composers' outlook on composition and the use of traditional instrumental forces.[13]

Sequencers have long been used to store and play back musical performance parameters. Early precursors of sequencers encompass all automated musical instruments, including the 19th-century music box and pianola. Sequencers can capture (record) and later automatically replicate (play back) a performance by storing performance parameters such as individual note or event entries, their pitch, duration, dynamic, etc. The degree of detail, number of parameters stored and performance accuracy depend on the sequencer used. Analogue electronic sequencers predate digital versions by several decades. They allowed a single performer or composer to remotely control multiple devices including synthesizers and drum machines. Interfaces and input modes varied by manufacturer and purpose.[14] With the advent of the standardised musical instrument digital interface (MIDI) protocol in the early 1980s it became

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[13] See also Chapter 1.

[14] For an overview of development in music technology, see also d' Escriván (2011), Hosken (2010), Braun (2002).

possible to use a single master keyboard or electronic sequencer to control multiple electronic instruments regardless of their manufacturer. Like single letters on the computer keyboard typed in succession to form words, MIDI data is transmitted in serial binary code that can communicate musical performance parameters such as 'note on', 'what note on', 'note off', 'what instrument', 'what dynamic'. MIDI can express 128 discrete numeric values that can be assigned to, for example, dynamic gradations (velocity), pitch bend, expression, etc. These commands are put in order by the electronic sequencer. MIDI can universally express common sequencer data and commands and thus allows for a standardisation of input and editing methods. DesJardins (2006, p. 230) credits composer Jeff Rona for having contributed to the creation of MIDI. By the mid-80s, software sequencers utilising MIDI emerged and quickly replaced hardware sequencers. Software sequencers give access to numerous performance parameters at a detailed level. The user can choose whether to view their music in a so-called editing or arrange window, where MIDI information is collectively displayed as chunks or regions that may hold any number of musical performance parameters. Alternatively, selected regions can be viewed in a more detailed score editor, event list, or so-called piano roll view, where individual notes can be edited. Programmes such as Logic Pro, Cubase, and Digital Performer all offer similar capabilities and user interfaces.[15] By default, music is laid out on tracks (horizontal, akin to staves on score paper) on a timeline that is divided into bars (vertical).

MIDI events can be recorded (played in) in real-time to a click via a MIDI instrument, by step entry via a MIDI instrument (one note or chord at a time), or manually with a mouse. Step and manual entry allow for the programming of even the most ambitious note constellations, including those that would not be playable on a physical instrument.[16] Regardless of input method or interface, all software sequencers by default have note events laid out on a rhythmic grid consisting of bars, beats and subdivisions of beats. Visual interfaces may mask MIDI's serial binary nature, but the fact remains that MIDI resists change. Whereas a static tempo requires only a single command respectively, it takes numerous consecutive MIDI commands to create a seemingly gradual tempo change or a convincing crescendo. The concept of *rubato* runs counter to

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[15] Pro Tools is as yet used less widely for MIDI programming but for many engineers and composers is the software of choice for audio recording and editing.

[16] Daft Punk's *TRON: Legacy* score contains a number of such programmed, impossible-to-play performances, for example permutations of the main synthesizer line in the latter half of the cue 'Derezzed'.

the sequencer's infrastructure. A so-called tempo map governs the speed of a sequenced performance and tempo changes have to be entered consecutively. A truly linear tempo change is not possible, only an approximation expressed by numerous incremental tempo changes. It is therefore not surprising that a composer occasionally will let an assistant create tempo and click maps for cues before he 'writes' even a single note, effectively allowing the click track to dictate the tempo and meter of the music he will write.[17]

If a composer chooses to enable the so-called click, he or she submits to a perfectly rigid digital metronome, potentially precluding the musically interpretative devices of *rubato* and other tempo variations. This can result in a musical performance that is artificially precise. Implemented in the early conceptual stages, such rhythmic rigidity is carried through all the way to the scoring stage where the music-to-picture synchronization the composer has planned must be maintained. For this reason, composers often prefer to use a click when recording. Conductor Alastair King acknowledges that the vast majority of film and television scores are now conducted and recorded to click track.[18] Prendergast (1977, p. 240) noted as far back as 1977 that film composers rely on click tracks not for creative reasons but because they allow for a faster and cheaper process, inadvertently compromising the expressive capabilities of their music. Sequencers furthermore facilitate rhythmic accuracy by offering so-called quantization as a global editing function. Quantization is a process in which note start positions are adjusted to the closest note value on a selected rhythmic grid. For example, following real-time note entry, it is possible to superimpose a semi-quaver grid and thus create a series of perfectly accurate semiquavers. A quantized MIDI performance can feel inhumanly precise and mechanical. In recent years, digital audio editing has advanced to a degree where even the quantizing of recorded audio is possible. In a sequenced performance, the distinction between performance and recording disappears, as does scope for musical interpretation on part of the live performer.

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[17] I worked as a copyist for Trevor Jones for a brief period in 2005 when Jones revealed this. It would make for a fascinating experiment to ask composers to work with a sequencer whose tempo by default is not steady.

[18] In a talk to students of the Masters Programmes in Composition for Screen at the Royal College of Music on 14 January 2014

As processing speeds increased and the cost of storage media decreased, software sequencers started taking on additional features, incorporating multi-channel digital audio recording and editing, virtual effects plug-ins, virtual instruments, and samplers. These comprehensive digital audio workstations (DAWs) are in today's terminology interchangeably referred to as sequencers. DAWs are effectively virtual recording studios that allow the composition, MIDI programming and performance, recording and production of music all within a single software package. With few exceptions – notably John Williams – Hollywood composers and their teams use sequencers to compose, assemble, demo, record and produce their music. DVD making-of featurettes invariably show film composers working at a DAW rig. Composer Javier Navarrete acknowledges that he composes 'straight into the sequencer'. Danny Elfman composes by improvising in real-time into Digital Performer and later has assistants devise tempo maps and bar layouts according to these improvisations. Rachel Portman takes a similar approach except that she improvises at an acoustic piano that she records live, her MIDI templates thus being based on audio recordings.[19] Composers' workflows have been completely transformed by sophisticated music technology. Composer Don Davis (in DesJardins, 2006, p.69) reminisces:

> When I first started working as an orchestrator and then as a film composer [in the 1970s], things were so different that it could almost be mistaken for an entirely different business. We had no sequencers, no synthesizers, no computers, not even video machines – everything was done with a pencil. It's almost incomprehensible that we could work back then without the benefit of seeing the film we were working on in a videocassette player.

At the point of inception, manuscript paper has become largely obsolete and few composers continue to write with pencil and paper. Teddy Castellucci (interviewed in DesJardins, 2006, p. 42) is one of them: 'I start with pencil and paper first. I find that the music comes out the best that way.' Most composers feel compelled to use sequencers because they are comprehensive performance and production tools for cost-effective demos that allow for flexible editing of the score-in-progress. Reay notes that technology makes the scoring process cheaper (2004, p. 23). Although on most big-budget scores live elements will eventually complement or replace a sequenced performance (see below), these live elements are first conceived and demoed at the

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[19] During a BAFTA Q&A in the Royal Albert Hall's Elgar Room on 7 May 2012, Portman played different versions of a cue from *Never Let Me Go* (2010), from her initial piano improvisation to the finished full score.

computer. Sequencers therefore have a considerable influence on the film score, and the notion that they have aided – or even caused – shifts in the nature of Hollywood film music can be reasonably substantiated. James Newton Howard (in Reynolds & Brill, 2010, p. 334) feels that 'complexity is part of what's been set aside as well, that with the technology, somehow intricate writing and moment-to-moment architecture of the scoring has become much less fashionable.'

Whilst today's DAWs offer a wide range of sophisticated music production tools, they at the same time affect the way that music is being conceived, edited, and produced. DAWs offer presets, templates, shortcuts and one-click solutions and it is tempting for the composer-producer to assume the role of an uncritical consumer. Limitations and restrictions inherent in the software seem to meet little conscious resistance among many users. There are ways in which sequencers encourage users to work and that an unimaginative, pressured, or plain lazy composer can fall victim to. Hans Zimmer warns that 'the devil is presets. Musical ideas are fleeting and fragile. It's easy to get distracted by presets.'[20] For example, many virtual drum computers commonly used today, including Logic Pro's Ultrabeat, are modelled after the Roland TR-808 electronic drum computer. Its step-entry interface consists of a 16-step series of on/off buttons that represent 16 subdivisions of bars of music. These may represent quavers, semiquavers, etc. Although it is possible to combine successive varying sets of 16 steps, the TR-808 does not allow for meter changes that add up to uneven step counts. A simple succession of bars, say in 7/8, whose content varies is not easily achievable, if at all. As a result, the sequencer influences and limits musical ideas and can prevent compositions whose concept does not fall within its preset scheme. The literary writing equivalent would be a word processor requiring an author to use only words of a set length or formed from a fixed set of letters. Composer Alan Menken (in Morgan, 2000, p. 92) warns:

> If you use short cuts it can actually affect your writing, and that is something you have to watch for. One can play for the first part of the song and then just go 'repeat', and then you head the second half of the song and yet if you're playing it on the piano, very likely when you come to the second part of the song you would have added something, so there's that difference.

Sequencers encourage musical repetition over development. If recent Hollywood film

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[20] In a talk at the Royal College of Music on 4 October 2013.

music tends to be cyclical, repetitive, pattern- and loop-based, this tendency is facilitated and compounded by sequencers. A chunk of MIDI data (or similarly digital audio) once created can be copied, pasted, and repeated *ad infinitum*. Logic Pro even offers a self-explanatory 'loop' button that instantly creates unending musical activity. Loops lend film music the benefit of instant rhythmic momentum and convey the illusion of forward propulsion when the music in fact remains static. Loops in this context share only surface similarities with score-based minimalist (concert) music. Film music that relies on sequenced loops draws on the same underlying production technology as contemporary popular music, whose musical characteristics it often resembles and whose audience appeal it shares. Looped rhythmic passages also provide coverage for sync points. With busy semiquaver patterns, the music is bound to hit something. Harry Gregson-Williams's cue 'The Stanton Curve' in *Unstoppable*, Brad Fiedel's drum pattern for the *Terminator* theme, and Hans Zimmer's undulating ostinati in the cue 'Chevaliers De Sangreal' in *The Da Vinci Code* (2006) are just a few examples of loop-based film music. Footage of a 'live' concert of Zimmer's score for *The Dark Knight* reveals just how little real-time input is required for this performance.[21]

An imaginative composer will work around or through default settings and their detrimental impact. Whilst a strictly quantized pattern's cold and robotic effect may occasionally have a desirable effect, the composer can choose to not quantize parts of their sequence in favour of a rhythmically less rigid sequence. As for a freer interpretation of tempo, it is technically possible to clock a *rubato* MIDI performance recorded without click by building a tempo map and click track to fit a free recording.[22] The strictures of bars and beats can be subverted by switching the sequencer's main window timeline to a real-time display mode, showing minutes, seconds, and fractions of seconds instead. Lorne Balfe of Remote Control Productions describes how they use customised input interfaces to help transcend the sequencer's limitations. These include touch pads for expression programming.[23] Other composers, including Joel McNeely (quoted in Schelle, 2000, p. 265), choose to return to traditional working methods: 'I keep my computer turned off! [...] I don't use any of the sequencers. I work at the

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[21] http://www.youtube.com/watch?v=OTmeQv81cwU [Accessed 19 May 2012]. During a seminar on music editing at the SoundTrack_Cologne conference in November 2011, music editor Mike Higham, long-time collaborator of Danny Elfman, says that one should blame Hans Zimmer for the prevalence of loop-based scoring in recent Hollywood film music

[22] A method used by Danny Elfman and Rachel Portman (see above).

[23] Lorne Balfe described these touch pads in a meeting with a student from the Composition for Screen course on 10 May 2012.

piano and come up with tunes and harmonies; I improvise, I do a sketch the old-fashioned way.'

The proliferation of advanced music technology has eroded the need for composers to be musically trained or literate.[24] In Mitchell's words (2010, p. 196), music technology has 'facilitated the migration of popular musicians and composers to the world of film music'. Prendergast (1977, p. 304) agrees that 'synthesizers can be made to create sounds by just about anyone […] regardless of their creative gifts or dramatic sense for motion pictures.' He also states that music technology 'increasingly affects the way in which the composer approaches the task.' Academy Award-winning composer and music producer Giorgio Moroder (quoted in Atkinson, 2011) admits 'he is not a good keyboarder but that "with synthesizers, anyway, you have sequencers, so you just push a button", and that he can do that'.[25] Lack (1997, p. 345) notes:

> Probably the most significant impact of electronic technologies is that they allow the composer to create on the same instrument for which he is composing. This largely does away with the need to understand transcription systems and opens up the field to composers with little or no theoretical background in music.

It is worth highlighting who has composed recent Hollywood film music, as this, too, sheds light on reasons for the nature of recent scores. Near the end of his career, veteran composer Jerry Goldsmith complained that 'now is certainly not the greatest time for film music. There's a preponderance of dilettantes and sophomoric people in the business, but filmmaking is a cyclical thing. Those who have talent will grow regardless of the circumstances. And those who don't will ultimately fall by the wayside.'[26] Hollywood has long operated as a demand economy and composer selection was and is a creatively, socially and fiscally informed business decision.[27] The availability of specialist craftspeople to assist composers has meant that composers need not necessarily be skilled or experienced in film scoring. The process of film music composition has been so extensively devolved that for a non-musician to be credited as 'composer' requires little if any change in assistants' working methods. Anecdotal

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[24] This notion is supported by several eminent film composers in Mermelstein (1997).

[25] Originally published in the American Film Journal (7, no. 10, September 1982, pp. 67-71).

[26] Quoted in Mermelstein (1997) [Accessed 10 July 2012].

[27] Only in its Golden Era did Hollywood take a more structured approach to music department staffing, whereby experienced composers were installed as studio music directors.

evidence for ghost-writers abounds and the job description of the so-called orchestrator is extremely flexible. As a result, Walsh (2011) regrets that there is now 'a dearth of great film composers to compare to the likes of John Barry, John Williams, Ennio Morricone, Vangelis and Danny Elfman. In the main, most of the scores and songs for most film genres – be they action, romantic, thriller, indie, comedy or horror – seem so completely unmemorable.' Walsh's suggestion that film music should be memorable is of course in itself questionable. However, his remark suggests that the quality and integrity of film music has declined under musically less than trained or accomplished composers. Broughton (in Lack, 1997, p. 346) feels that…

> …many film scores sound as though they are mostly just chords. This is to my mind a result of an unintentional collaboration with studio marketing (temp tracks), nervous film makers making talky, effects-laden films and keyboard players thrust suddenly into the role as hot composer with their cool and unusual synth sounds. The orchestral writing, when it exists, is generally a transcription from a composer's keyboard doodling, improvised whilst viewing the video version of his work print. The synth tracks are prepared and the orchestra is laid on top. Like any method, of itself it is a benign process and not necessarily indicative of a lack of creativity. But in the hands of composers who rely not on musical ideas but on musical sounds, the process takes on a certain musical sameness or familiarity.

Advanced music technology can mask and compound a lack of musical inventiveness in individuals who are not necessarily trained musicians and experienced as film composers. A technologically enabled group of composers, often with popular music sensibilities, has veered away from the lush symphonic idiom traditionally associated with Hollywood film. When *The Amazing Spider-Man 2* (2014) was scored collaboratively by R&B singer Pharrell and Hans Zimmer, few would have expect a traditional film score. Atmajian confirms that…

> …pop stars have often been drawn to films or brought in on films. […] They come with the kind of limited knowledge of the kind of music they want to write. It starts to breed out the experience and depth of knowledge in film scoring. […] I think a whole film done with just synthesizers is fine too. If they're not just out of the box, 'I held down this note, because I don't know how…' That's why I was saying to the students, learn your craft and hone your skills because then when you work, you come at it from a higher place. Also I think the reasons why so many [of these skills are being lost] is that the tools, the 'keys to the kingdom', are available to anybody. So an idiot can fly the airplane.'[28]

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[28] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.

Atmajian reckons that 'there's probably great film composers who have never seen *The Magic Flute*.'[29] Traditionalists may struggle to feel at ease with the new musical landscape. Composer Joel McNeely, who scored *Young Indiana Jones* with a large music budget and had been recommended for the job by John Williams, reminisces about Romantic orchestral scores (in Schelle, 2000, p. 256): 'I have to admit that I really love that style of scoring [...] I get very frustrated by what goes on now, by what passes for dramatic music. And I worry sometimes that I have become sort of antiquated in my tastes. My tastes don't jibe with what people seem to want now – those rock-and-roll, orchestral-synth drones, and patterns that people don't seem to notice.' Composer John Scott (interviewed in Thomas, 1997, p. 307) summarizes the situation:

> The film business has changed a great deal with the advent of computers and synthesizers. This has brought a new group of composers, some with very little musical ability. The orchestrator has always been one of the most important elements in film scoring but he is even more important for those who compose by humming or playing something by ear on a synthesizer and relying on a computer to print it out. In that sense it's easier to be a composer than it was before. If such a composer is lucky enough to write for a successful picture, then he, too, is a success. But success on those terms is not really what music composition is all about. Also, so much of filmmaking today, every aspect of it, is done by committee decision – and nothing is worse for music than a committee decision.[30]

With little remaining sense of tradition or historic precedent, film music has remained open to the influx and contribution of non-specialists whose prior professional background has lain outside the realm of film music as it was previously practised.[31] These musicians and non-musicians approach film music with different sensibilities and frames of reference, which can lead to refreshing and compelling scores. This over time has contributed to, or indeed has caused, stylistic diversification. This diversification of musical backgrounds in itself acts as an agent of change in musical styles and idioms of recent Hollywood film music. Hollywood film composers today are a diverse array of individuals and specialists hailing from the most varied backgrounds, including:

- television,
    - Angelo Badalamenti (*Twin Peaks*)

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[29] Ibid.

[30] On a related note, Sadoff describes composing by corporate committee in (Sadoff, 2004)

[31] Compare Kalinak (2010, p. 92), who states that contemporary '[f]ilm composers hail from all walks of musical life: the concert hall, [...] Broadway, [...] television, [...], and rock music'. Schneider (1990, p. 56) lists six categories for film composers' musical and professional backgrounds.

- Robert Folk (*The Fresh Prince of Bel Air*, *Falcon Crest*)
- Bear McCreary (*Battlestar Galactica*, *Walking Dead*, *S.H.I.E.L.D.*)

- (famous) pop musician,[32]
  - Phil Collins (*Brother Bear* with Mark Mancina, *Tarzan*)
  - Elton John (*Gnomeo & Juliet*)
  - Jay Z (*The Great Gatsby*)
  - Jack White (*The Lone Ranger*)[33]

- producer or arranger of pop music,
  - Atticus Ross (*The Social Network*)
  - Brian Eno (*The Lovely Bones*)
  - Gabriel Yared (*The English Patient*, *The Talented Mr. Ripley)*
  - Daft Punk (*TRON: Legacy*)

- members of rock bands,
  - Howard Shore (*The Lord of the Rings*)
  - James Newton Howard (*Signs, King Kong*)
  - Stewart Copeland (*Wall Street*)
  - Hans Zimmer (*Inception, Crimson Tide, The Lion King*)
  - Danny Elfman (*Edward Scissorhands, Batman, Milk*)
  - Mark Mothersbaugh (*The Royal Tenenbaums*)[34]
  - Johnny Greenwood (*There Will Be Blood*)
  - Trent Reznor (*The Girl With the Dragon Tattoo, The Social Network*)

- film directors.
  - John Carpenter (e.g. *Halloween, The Fog, Escape from New York*)
  - Clint Eastwood (*Mystic River, Flags of Our Fathers, J. Edgar*).[35]

Industry professionals have mixed views on the arrival of composers in the realm of Hollywood film scoring whose musical background is not grounded in formal training or have previously focused on other idioms and media. Atmajian, from an orchestrator's viewpoint, relies on some of these emerging composers for work:

> What's hard is when you work as an orchestrator for someone who might have got a job because they were good with technology or they knew someone… they've got all this gear in their studio but they don't really know how to use it except for pressing buttons. And yet they still want an orchestra. Sometimes I

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[32] It is important to make the distinction here between pop stars having their songs placed in a film and those actually being credited as composers. Sting, for example, has had his songs placed in over 160 productions (http://www.imdb.com/name/nm0001776/#Composer [Accessed 16 July 2012]). Godfrey (2012) collates a list of prominent rock and pop artists who in recent years have composed music for films in [Accessed 25 May 2012]. Toop (1995, p. 77) observes that 'for musicians, a composer credit on a movie conferred validation. This was as near as most rock stars would ever come to being a "proper" composer.'

[33] White dropped out of the project. http://consequenceofsound.net/2012/12/jack-white-drops-out-of-lone-ranger-soundtrack/ [Accessed 4 August 2013].

[34] Mothersbaugh is mentioned as an example for pop musicians scoring feature films in Kim (2009) [Accessed 10 July 2012].

[35] See also Burnand & Mera(2004, pp. 49–56).

wonder why they still want an orchestra. And then I have to adapt to it and make it work, have to deal with the fact that they don't realize that woodwinds and brass have to breathe or that you can't get certain sound when everybody is playing quietly – which is why sometimes we have to record separately, so you can then just turn it up later. Or that string parts the more you divide them, the less strength you get out of them [with a sampler, the more notes you play, the richer the sound gets]. And the balances they can create with their equipment in their home studio are completely unrealistic compared to what a real orchestra is like. Which is another reason why more and more things are being recorded separately. Then you can go back to creating unrealistic balances.[36]

On the other hand, composer John Frizzell welcomes the fact that music technology has widened access to the field of film music composition:

Before the printing press just simply having the power and the devices to create a book you had to have the monks and expensive ink and very expensive paper. So the church ended up manipulating and controlling everything that was written. But the printing press freed the world and allowed more and more people to express things, and then cheaper paper and cheaper pens allowed more and more people to write. The other thing is: When less people can create something simply because of a monetary stature, their talent is equated with and decided by that monetary stature rather than their talent. And so by leveling the playing field and giving everybody a paper and pen, so to speak, you've essentially leveled the playing field where the talent will rise.[37]

Goldsmith (quoted in Mermelstein, 1997), lamented: 'I blame it on all the high-tech stuff we have: the synthesizer and MIDI and computers […] Some guy puts three knuckles together and thinks it sounds like film music. It's sad that mediocrity is so readily accepted today.' The instruments and interfaces composers use to conceive of their scores may play an important role in shaping the resulting music. When programming music at the sequencer, MIDI input keyboards are by far the most common interfaces as they allow for speedy and easy note entry and require only minimal instrumental skills from the composer. Mera (2007, p. 3) recounts that composer Mychael Danna had a serious accident as a teenager that left his left hand permanently damage: 'Even though Danna's pianistic skills were now somewhat limited, he had not abandoned the idea of playing in a rock band and "luckily synthesizers in those days were monophonic. The left hand really only had to twiddle knobs."' Nicholas Hooper (in Mera, 2009, p. 93) admits that he is a guitarist by training and that his keyboard skills are limited, claiming 'my keyboard skills, while rubbish for reading, are pretty good for composing.' It seems obvious to state that the user interface may

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[36] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II
[37] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.

affect the musical outcome including textural implications. One could argue that the keyboard-ness of Danny Elfman's scores is the result of his compositional method, notably his reliance on a MIDI keyboard for real-time improvisation.[38] A closer look at the theme tunes for *The Simpsons* and *Desperate Housewives* reveals that they comprise musical fragments that are layered and superimposed into a musical collage. Such additive layering might be encouraged, certainly facilitated, by a keyboard-based sequencing approach. Of course, keyboard bias in film music can be similarly observed in the works of composers who compose at an acoustic piano, for example Rachel Portman and Dave Grusin (particularly his score for *The Firm*, 2009). Perjrolo and DeRosa (2007, pp. 24-25) describe the 'hazards of writing at the piano', listing a skewed impression of instrumental timbre, no concept of players' breathing, instrumental parts' technical difficulty, and misleading use of sustain pedal. If the composer is tempted to write only what sounds good or is easily playable on the piano, the resulting music will naturally be determined at least in part by the instrument. In the context of sequencing and the use of advanced music technology, composers' reliance on a keyboard interface has wider implications. Composer Marco Beltrami demonstrates awareness for the potential strictures posed by composing at piano or MIDI keyboard: Speaking of *World War Z* (2013), he muses that 'ideas are in your head: you can get them out using little keyboards et cetera, but you need musicians to really bring it to life. The best part about my work is to work with musicians in the studio who have spent all their life training.'[39]

Keyboard bias in Hollywood scoring is paralleled by guitar bias among other film composers. The scores for *Brokeback Mountain* (2005) and *Babel* (2006) by guitarist and producer Gustavo Santaolalla were by his own account conceived on the guitar,[40] as was Ramin Djawadi's score for *Iron Man*.[41] The resulting scores are guitar-laden and where not performed on guitar remain distinctly chordal and riff-based. What music might result if the interface were different? For Peter Weir's *Witness* (1985), Maurice Jarre used a precursor to AKAI's Electronic Wind Instrument (EWI), which is effectively a MIDI breath-controller played like a woodwind instrument. The resulting score has a markedly different, organic quality, despite its wholly synthesized medium. Berklee Film Scoring

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[38] One of Elfman's music editors, Berklee alumn Shie Rozow, outlined Elfman's compositional method during a talk at Berklee in April 2003.

[39] Marco Beltrami during a masterclass at the Transatlantyk International Film Festival on 8 August 2013.

[40] In conversation at the Berlinale Talent Campus's Volkswagen Score Competition in February 2008, where Santaolalla was my composition mentor.

[41] Ramin Djawadi in an interview on 3 August 2010. For the full transcript see Appendix II.

184

Professor Jon Klein in a recent conversation hailed wind controllers as a useful tool to programme more musically expressive sequences.[42]

When composers use modern DAWs, they have a range of sound sources at their disposal. So-called virtual instruments began complementing abovementioned synthesizers in the late 1990s. Increasing computer processing speeds soon also allowed for audio samples to be made available via software samplers, which supplanted costly outboard samplers. Samples are short snippets of digital audio than can be loaded into a sampler and then triggered (played back) via MIDI.[43] Vienna Symphonic Orchestra, Miroslav Philharmonik, Garritan Personal Orchestra, Spitfire Albion and the EastWest Symphonic Orchestra are just a few of the commercially available sample libraries that over several software generations have grown significantly more capable and affordable. Samples are invariably measured by the degree to which they can realistically and convincingly render actual acoustic instruments. The use of samples has greatly enhanced the composer's sound palette at the conceptual stage and allows for the demoing of orchestral or otherwise acoustic instruments and voices. At the same time, the quality of samples at the respective composer's disposal can directly affect what they compose. The nature of MIDI-triggered samplers means that membranophones and idiophones sample well because their sound in an actual performance remains unaltered once initiated. Strings, woodwinds and brass sample less convincingly because a note's sound can be manipulated in countless ways once started. Many techniques and articulations, such as even a simple legato phrase, pose considerable problems for sampling. The number of dynamic gradations sampled, ensemble size, breathing, tuning etc. imposes further limitations. In short, in order to replicate a rich, expressive, musical performance one would require an impossibly large number of samples. Mark Isham (quoted in Morgan, 2000, p. 9) ponders the limitations of using samples: 'You start to write to the limits of those samples. If all you've got are mezzo forte bowings. Then you just end up writing only that. [...] You can tell sometimes with certain composers that they write from electronic samples because there's a certain one-dimensionality to their orchestral writing...' John Frizzell, too, worries that samples may have begun to narrow the sound palette composers use because they tend to rely on those samples that sound

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[42] In conversation in Boston, 9 November 2012.

[43] For the purpose of this chapter, I am not referring to sampling in the wider-reaching sense of 'musical borrowing' [see M. Katz (2004, p.139)], as this would require an extended discussion in its own right. A study of musical borrowing in film music would surely prove fascinating.

best. He notes that 'it's very strange what's happened in the last few years: It seems like the sound palette has become more restricted. There is very little use of woodwinds and brass right now. And the technology has dictated a lot of repetitive note using because of all the libraries out there that do repetition so well.'[44] Atmajian recalls an unnamed composer who never used the oboe in his demos because he disliked his oboe sample.[45] Mera (2007, p. 80) describes the dilemma thus:

> Because certain textures and instruments are easier to mock-up than others, it could be argued that the instrumentation and orchestration of contemporary film scores have been profoundly affected by technical resources available to composers. The avoidance of contrapuntal textures and the prevalence of homophonic scoring (especially in string writing) is a possible consequence of some of these technical factors and may eventually be understood as a specific feature of post-1990s film scoring practice.

One particular problem with orchestral samples is that they can distort the impression of a real orchestra's sound palette and performance capabilities. For example, if the composer loads a sound patch of 14 violins, each MIDI note within the sampled range will trigger a sample of 14 violins playing. If the composer triggers two notes simultaneously, 28 violins play; three notes, 42 violins, four notes 56 violins etc. At the touch of just two hands on the MIDI keyboard, the composer can trigger a huge strings section. If a demo thus programmed is to be prepared for a live recording session, the orchestrator faces the thankless, if not impossible, task of trying to achieve the same rich sonorities with a much smaller ensemble: not only will 14 live violins always be 14 violins. Every *divisi* halves the number of instruments playing the same note rather than doubling it. Although sampling technology continues to advance, it is unlikely that sampling technology will ever be able to truly and intuitively emulate actual instruments.

That said, many Hollywood composers use commercially available sample libraries only as a starting point. Jeff Rona says he believes in the uniqueness of each film score, which is why, schedules permitting, he devises new sound sets for each film.[46] Klaus Badelt describes how he takes a flexible approach to balancing his own strings samples and recorded, real performances:

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[44] John Frizzell interviewed 5 August 2011 by Skype. For the full transcript see Appendix II.
[45] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.
[46] In a talk at the Soundtrack_Cologne conference in Cologne, Germany, on 6 November 2011.

> I don't use my strings samples (which I worked on very hard and long to make them sound good) to replace the real players. At the end, for example, my samples are often part of the final production, because I often do a blend of the real recording and my 'preview', just because I like the sound. […] I always create new sounds for each film. Often I create them before I start writing so I can use them to inspire my writing. Sometimes there are sounds that stay with you for several projects and you go back to them. […] Sometimes I have just the orchestra left.[47]

Hans Zimmer and his team spend much time and money on creating their own sample libraries to complement commercially available packages. In conversation, my former student Nathan Stornetta, now Zimmer's London-based full-time composer assistant, explained that Zimmer regularly hires full orchestras to record new samples. On one of my visits in late August, Zimmer had just recorded a comprehensive set of solo cello samples, including the standard articulations (legato, con vibrato, senza vibrato, staccato, marcato, semitone trill, whole tone trill, spiccato, pizzicato, harmonics) as well as a wide range of dynamic layers and changes (five velocity layers of different dynamics as well as crescendo and decrescendo). Using a custom-built software sampler called SAM, these articulations and dynamic layers were accessible by use of key switches and continuous controllers (modulation wheel). In similar fashion, Zimmer has amassed substantial libraries of full orchestral sections. He also has a range of software synthesizers, which according to Stornetta he painstakingly programmes. On my most recent visit to Hans Zimmer's private apartment in London,[48] I got a first-hand glimpse of the extensive setup he maintains. Mounted into three large flight cases are:

- One dedicated MacPro for Cubase 6.5 host sequencer which runs a 350-track (!) template,
- one dedicated MacPro for video playback, synced to Cubase vie MIDI timepiece,
- one dedicated machine for ProTools software (to record bounces),
- one dedicated PC to run A3-sized touch-screen interface to remotely trigger continuous MIDI controllers in Cubase,
- two Digidesign 96 I/O digital audio interfaces,
- four PCs to host custom-built SAM samplers,
- one PC to host Vienna Ensemble Pro software and samples,

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[47] Klaus Badelt in an interview on 10 November 2011. For the full transcript see Appendix II.
[48] On 10 September 2013.

- several backup battery systems to boost the power supply.

This adds up to no fewer than nine computers, and this is a home studio setup in Zimmer's living room. Zimmer can access this setup remotely from Los Angeles and employs a full-time assistant to look after the machines when he is not in London. He has two identical setups in the Remote Control compound in Los Angeles and a further 28 identical systems for his full-time composers, in so-called writing rooms. At the time of this writing, he was building twelve further writing rooms for his new Bleeding Fingers Inc. Company.

The 'Remote Control' setup serves to create scoring demos that closely resemble the final scores. Composer James Newton Howard notes that scoring processes are now 'so demo-dependent, which most people are now.'[49] There is an undeniable need for demos because producers and directors cannot imagine what they want (or whether the composer will give them what they think it is they have requested) until they hear the demo. Those funding the film often will not approve financing for the recording sessions until they have heard demos they believe show that the score is acceptable. For the composer and their team, this creates the difficult challenge of convincing their employers with a mock-up that at the same time has to sound as convincing and polished as possible. Evidence suggests that A-list composers and their teams have mastered the demo process to such a degree that their demos are nearly indistinguishable from the final score recording. Indeed, Zimmer's suites for *The Dark Knight Rises*, which were released as part of a deluxe package of the soundtrack album, are an impressive demonstration of the high production quality of score demos. Klaus Badelt agrees that in his view synthesizers' and samples' primary function is not to replace real instruments:

> I don't think a 'produced' sound goes against the pure sound of an orchestra. First of all, it's all about what the film needs. But also, [the music] is there to serve the film and not to stand on its own. […] I never do […] a synth-oriented score which is aimed at replacing original instruments.[50]

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[49] James Newton Howard in Reynolds & Brill (2010, p. 331).
[50] Klaus Badelt interviewed on 10 November 2011 by Skype. For the full transcript see Appendix II.

John Williams is perhaps the last remaining Hollywood composer who does not need to provide demos at all.[51] Other composers rely on teams of programmers to help produce demos. The risk and temptation may be to compose and demo only what sequences and samples well. Composer Ramin Djawadi admits that because there are 'certain things you just can't express with samples', he will make musical decisions that help make his demo 'sound good, rather than going "okay, this is going to sound not as great as the demo – but it's going to sound good when we go live"'.[52] Sequenced performances naturally lack some of the inflections and expressive intentions of a human performance. Composers may resort to stock phrases and gestures that have been previously recorded live. Obviously, this approach means sacrificing originality in order to guarantee a convincing sound by regurgitating old material. Emerging sample packages such as Symphobia and Albion cover a middle ground whereby orchestral sections have been sampled in layers and can be programmed in pre-set groups. A rich brass chord, properly voiced, balanced, and appropriately positioned in the stereo spread is available by playing a single chord on the MIDI keyboard. These sample bundles offer composers the illusion of a rich orchestral palette when their music may conceptually be nowhere near. The resulting sound may convince and/or impress directors and producers but at the same time be far removed from a real, acoustic, physically feasible performance, or worse, beyond the scoring session budget. If upon approval of the demo an orchestral recording session is to take place, orchestrators sometimes have to make considerable adjustments to the orchestration and arrangement of the music. Asked how much creative license he gives his orchestrator, Javier Navarrete admits 'Oh, loads!'[53] Atmajian addresses the problem:[54]

> Everybody gets used to [the demo] and they think the demo has things in it that it doesn't. A lot of times I've heard composers say, "Just listen to my demo." And I think, 'It falls way short there.' – 'Oh, in my demo, the brass were doing this,' and I say 'No they weren't.' – and then they listen to it again and realise [they were wrong]. They believe something was happening. And so sometimes I might have a struggle with a composer because they think in their demo the music was doing this, this, and this, and I don't know why they're hearing it that way. […] The composer generally doesn't have the time or the skills, or even the fact that the demo process and the tools he uses aren't the same as the orchestrator's. They can't get the same structure and nuance out of it. So once they get approval and everybody's gotten so used to it, they've limited the final performance, the orchestra, before they've even walked in the room.

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[51] See also Chapter 4.
[52] Ramin Djawadi in an interview on 3 August 2010. Full the full transcript see Appendix II.
[53] Javier Navarrete in conversation on 7 February 2012.
[54] Jeff Atmajian interviewed on 14 June 2011 in person. For the full transcript see Appendix II.

Although composers virtually always use sequencers to create demos, for the final score they to varying degrees replace sequenced, sampled and synthesized elements with real instruments. Composer Rolfe Kent (interviewed in DesJardins, 2006, p. 153) professes: 'I do demos and my demos are done synthetically, but I don't intend them to end up in the film. They are always replaced with a real live orchestra or band.' It is worth keeping mind, however, that Kent's scores generally rely on small eclectic ensembles, for example *Sideways* (2004) and *Up In the Air* (2009). To help imbue sequenced music with an added sense of realism and human expressivity, composers may call on soloists to record and replace selected parts.[55] Remote Control Productions frequently bring in soloists at an early stage to record musical fragments that are then incorporated in the score demo and the final recording. Cellist Martin Tillman has contributed to numerous film scores, and provided some of the many sonic layers of the Joker motif in *The Dark Knight*.[56] In conversation, Stornetta points out that Zimmer 'always' doubles strings samples with synthesizer tones and that these synth doublings will usually remain in the final score, even if the strings have been replaced by live orchestra. This may help explain why Zimmer's scores for *The Dark Knight Rises* (2012) and also *Man of Steel* (2013) in some passages lacked definition and sounded what might best be described as woolly.[57] A violist of the London Symphony Orchestra, who has asked to remain anonymous, shared an anecdote with Daniel Elms about one of the frequent scoring sessions with Hans Zimmer: According to her, the printed strings parts have numerous dynamic markings, including painstakingly detailed dynamics across gradual crescendos, in order for the players to match as closely as possible the dynamics of the sample-based demo.[58] The LSO is thus forced to try and emulate the sampled demo, simply in order to ensure the live recordings blend well with the samples. Wesson recalls a similar scenario during the scoring sessions for *Batman Begins*:[59]

> I do remember the first time we ever did the ostinatos on the Batman trilogy, on *Batman Begins*; it was pure hell. We had all these poor guys sitting in there. I don't know how many strings we had in there – 80 players or whatever and they tried all day long to get it as tight as the samples and it was difficult, but they got there. They worked hard. They pushed hard. And then everybody was waiting

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[55] See also Pejrolo & DeRosa (2007, p. 91).
[56] See http://www.imdb.com/name/nm0863415/ [Accessed 7 June 2012].
[57] I discussed this impression at some length with Alex Heffes's assistant Dan Elms and also Nathan Stornetta, who both agreed with my assessment.
[58] Elms in turn shared this anecdote with me on 11 September 2013.
[59] During his visit to the Royal College of Music on 13 November.

> for cabs and everybody's going home and Geoff Foster is the engineer of choice there. Geoff looked around and there was no Hans, and he goes 'come here'. Plays these guys, the guys that were in the hall. And by this time they'd gone into Pro Tools and they'd been quantised. With digital recordings you can edit anything you want. There were thousands of edits. There was some poor music editor, as this stuff was being recorded, chopping it. 'How good can I get it? How good can I get it?' At the end of the day we sat there and we played back, as Geoff Foster pointed out, we have the live orchestra at great expense with the same mics in the same positions, the same players, the same instruments, recorded, put through Pro Tools, quantised there. Or we've got the samples, which are the same players in the same room and they're almost indistinguishable. That was the only time it's got that bad.

Asked whether he feels that music technology influences the way he writes music, Ramin Djawadi responds 'Not really, it shouldn't. The technology […] should only serve the purpose of demoing or give a sense of what the real recording will be like. However, if there's a project that won't allow for real orchestra or for real instrumentation, then I will adjust how I write, just because of how certain instruments sound just with samples. […] But nonetheless I still hope and try to achieve a good score. And it's actually sometimes a good restriction where you find other ways of doing stuff.'[60] Composer Thomas Newman (in Schelle, 2000, p.272) explains how he prefers to conceive his scores from the starting point of electronic sounds:

> Usually, the electronics come first because, to me, they're the more interesting sounds – they're the thing that give a more unique, dramatic flavor. The minute you start putting an orchestra on top, you're kind of doing that movie thing, which, in a way, is a requirement because, to a degree, people want to sit around as they did way back in the old days. Watching their movie while listening to a full symphonic score. […] With electronics, the ear often has no reference to decide if a sound is too loud or too soft because you don't know the source of the sound. Electronics are usually taken at face value. If you hear a loud trumpet, the ear has a reference for what a loud trumpet sounds like. With electronics, that doesn't happen.

Does technology compromise film music? Thomas (1997, p. 26) identifies a dichotomy between aesthetics and mechanics in film composers' use of music technology. He describes how music technology facilitates composers' workflow but also encourages modes of working that compromise good practice. Reynolds and Brill (2010, p. 334) suggest that 'one might compare the rapid evolution of computers and music to the early nineteenth-century development of the piano, and the impact of that development on Beethoven's composition for piano'. Technical advances in music technology

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[60] Ramin Djawadi interviewed on 3 August 2010 by Skype. For the full transcript see Appendix II.

undeniably have helped film composers cope with the challenges of contemporary Hollywood practice. But emerging music technology has at the same time compounded these challenges by affirming them as objectively reasonable. The majority of Hollywood film scores remain predominantly orchestral.[61] Despite relatively lower music budgets and altered modes of production, many Hollywood productions continue to demand large-scale scores that contain orchestral elements. The notion that an orchestral score adds to a film's production value has been addressed elsewhere.[62] Schneider (1990, p. 29) refers to filmmakers' governing attitude as '*Ausstatterdenken*'.[63] Christopher Young describes how when working on *A Nightmare on Elm Street Part 2: Freddy's Revenge* (1985)*,* the film's producers felt that a fully orchestral score would lift the film aesthetically and add value to their product.[64] Young admits the score was underfunded and in his lack of experience at the time he felt he had to cram as many players as possible into a tiny studio, calling in favours from musician friends, only to impress the producers with a big scoring session. *1408* (2007) is a good example for a horror thriller of made-for-TV calibre that in using a high-profile cast and fully orchestral score by Gabriel Yared (performed by the London Symphony Orchestra) achieved the appeal of a blockbuster feature.

Some composers pounced at the opportunity to electronically emulate an orchestral performance when music technology first made this possible. Unreasonable demands resulting from a lack of funding and tight schedules have acted as meta-agents in pressuring composers' use of music technology, which in turn is one of the key agents shaping recent Hollywood film music. To please his commissioners, the composer-come-producer spends most of his time producing, not composing. Badelt admits:

> I'm not a purist when it comes to production. I'm not saying 'you have to do it with an orchestra'. I'm a purist when it comes to the resulting emotion. Whatever it takes to create that emotion is right. I love synthesizers and I love electronics–as long as they don't sound electronic. I always aim to make everything sound organic. I think it's about the organic value. Then, of course, it's about what every film needs, how deep and big you want to make this

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[61] See Chapter 1.

[62] For example Kalinak (1992), Mitchell (2010, p. 177), Cooke (2010, p. 248). Michel Chion (1994) puts forward the notion of added value being gained from the use of film music in.

[63] lit. 'the prop makers thinking': 'Das Orchester wird zur Routineausstattung bei Großproduktionen. Musik hat sich in ihrem Klanggewand aufzuplustern wie ein Pfau.' – 'The orchestra becomes a routine prop in big film productions. Music is expected to display its feathers like a peacock.' (Translation by the author.)

[64] An anecdote shared in conversation at the Transatlantyk Film Festival in Poznan, Poland, in August 2011.

> sound. […] But production is an important part and it is part of my writing process. I love production. And I love working in such a way that production is part of my writing. My technical setup, and it's a *very* technical setup, is aimed to make production part of the process and not [have it be] a separate step. I don't write 'demos' and then produce them later. […] When I produce my 'score previews', I never hide behind [poor production]. I never say to a director 'it doesn't sound really good yet but once they're played I promise it's going to be great.[65]

The retention of samples in many finished scores is symptomatic of budget control and cost cutting. The question of musical integrity and moral concerns is less easily settled. Even at demo stage, if certain aspects of orchestral writing do not demo well, perhaps composers should either suggest an altogether different scoring solution or at least request that no demos are required. If budgets are insufficient to fund a fully orchestral score, why compromise the score by settling for inferior samples? If composers' working conditions dictate adjustments in working methods, why should composers feel compelled to allow music technology to compromise their work? The pragmatic answer is that composers have to choose between accepting prevalent working conditions, and trying to adapt their methods, or to not work at all.

Film music whose creation is enabled and facilitated by advanced music technology may have departed from Hollywood film music's symphonic tradition and elaborate musical language. Composers may have shifted their time and effort to other musical aspects: For film music that speaks a simplified, less developed, reiterative language, production and tone are two factors that may have gained in importance and certainly have significant implications for that music's effectiveness in serving the film it accompanies. Few will deny, for example, that the ultra-minimalist opening cue for *The Social Network* (2010) is highly effective in setting a suitable tone for film. Trent Reznor and Atticus Ross focus on a textural drone comprising intricate inner movement (akin to a steel guitar string tremolo) and a simple 6-note piano motif that repeats identically over and over. The musical idea as such may be miniscule, easily transcribed in two bars. However, the cue's programming and production are highly accomplished and its intra-filmic meaning-making capabilities are potent, instilling in the viewers a foreboding sense of tension and bigger things to come.

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[65] Klaus Badelt interviewed on 10 November 2011 by Skype. For the full transcript see Appendix II.

The cue 'American Beauty', mentioned earlier, is another useful example. The cue comprises a limited set of recurring piano phrases accompanied by synth pads and strings. The piano reduction demonstrates the cue's elegant simplicity. In terms of production, however, the cue is highly sophisticated. In an exercise I set the students in my Advanced Practical Skills class, I ask them to create a so-called sound-alike of this cue. The aim is to recreate the recording as truthfully as possible. To emphasise that the point of this exercise is not merely transcribing the music, I hand the students the piano reduction shown above. They are meant to focus on the textures, timbres and other sonic intricacies present in the recording. Invariably, the students struggle to create a fully convincing sound-alike. Aside from the obvious fact that they do not have sufficient resources available (such as the expensive synthesizers, grand piano, strings section, fancy recording studio at Thomas Newman's disposal), they find it impossible to recreate all the nuances present in the recording. The process of discovery is beneficial nonetheless, for it encourages these aspiring screen composers to grow more attuned to audible details and to investigate how these might be achieved. At the same time, the exercise demonstrates that a cue that may at first listen be lacking in terms of musical inventiveness may in fact be highly achieved in other aspects.

The marked shift in the musical language of recent Hollywood film music can be attributed in part to the use of emerging music technology. Considering the extent to which film music has been affected by advances in music technology, there are key differences from the impact of innovation on other areas. Caves (2000, p. 201) gives the example of the automatic transmission in cars and laser printers as improvements on established products not serving an immediate change in consumer demands (or behaviour) but providing added convenience. He also gives the example of desktop publishing, which was 'to the creative industry of book publishing [...] a process innovation, not a product innovation'. These are technological advances that served a purpose without altering that purpose. In the area of film, Isaacs (2008, p. 105) observes that 'Glorious Technicolor' in *Gone With the Wind* (1939) was a technical innovation towards realism (that catered to an existing demand). The difference can be summarized as innovation driven by a creative vision versus creativity manipulated by innovation. In business, innovation strives for product optimisation, for an improved product that better serves the customer, is more easily replicable, and achieves higher profits.

194

There is no equivalent to such optimisation in film music, where technological innovation has frequently led to impoverished scores that at worst can be repetitive, derivative and homogeneous. To varying degrees, practitioners seem oblivious of the true impact of technology on their work. When Hans Zimmer 'writes' on this elaborate studio setup, his workflow and the resulting music – for example, doubling every sampled line of strings with synthesized sounds for added richness – necessarily produce different results than if he were to write with pencil and paper. Presently, the fact that the craft of film music composition relies heavily on computer-based music technology is at odds with what some composers refer to as desirable good practice. Composers can counteract the potentially detrimental influence of music technology if they remain vigilant and aim to transcend apparent limitations, treating technology as a tool in aid of musical creation. The creative and inventive mind will master music technology's interfaces and capabilities, explore and extend its potential, and continually question and subvert established methods and processes. If put to good creative use, emerging music technology can facilitate novel and compelling film scores.

Conclusion

As has been demonstrated in this thesis, there are conflicting views on the state of current Hollywood film music, depending on the stance of the composer in question. Some industry professionals complain that recent Hollywood film music is in a sorry state.[1] A simplified, perhaps impoverished, musical language in recent Hollywood film music is the result of working conditions that leave little time or creative space for experimentation or musicality. Schedules are tight, music budgets shrinking, picture edits ever-changing. Music may not be given a voice or place in a film and filmmakers may change their minds about the intended use or nature of music halfway through a project. And yet, few have argued that recent Hollywood film music functions less effectively than scores did in the past. Indeed, in many of the examples discussed in this thesis, music serves the filmic narratives it accompanies highly effectively. This raises the question by what standards film music can be measured? Whose standards are they? If certain composers and orchestrators regret an impoverished musical language, are they applying appropriate and reasonable standards or are they defending a self-serving *status quo*?

Every film score is the aggregate of a series of creative decisions. Quality control is essential to any commercial enterprise and crucial in Hollywood practice, which has perfected an all-encompassing, fully engaging entertainment product. An objective qualitative assessment of Hollywood film music is not easily made. Filmmakers constantly make judgment calls, signing off on scores they deem 'good enough' and fit for purpose, but their approval is given on the basis of qualitative judgments the criteria of which are not fixed across the industry. On the one hand, qualitative criteria that should apply to film music composition match those applicable to autonomous music, criteria arguably unavailable to non-experts:[2]

- Evidence of a command over musical language and conventions (including harmony, counterpoint, tonality);
- awareness of musical, cultural, and historic context;
- clarity and consistency of style;

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[1] See, for example, Yared, Broughton, Russ, and Atmajian above.

[2] This list of qualitative criteria is adapted from the Royal College of Music assessment criteria for postgraduate composition and composition for screen students' end-of-year portfolios.

- command over and exploration of chosen medium (ensemble, instrumentation, orchestration, on the part of the composer);
- command over chosen idiom (musical style, on the part of the composer);
- evidence of distinctiveness and originality;
- inventiveness in execution, development, and structural balance;
- balance of contrast and similarity, tension, and release within the composition;
- clarity of intent;
- the composer's individual voice.

Whilst these considerations certainly apply to film music to varying degrees, others apply additionally. The composer's perceived awareness of musical, cultural, and historic context here needs to expand to embrace an awareness of film genre, popular culture, and filmic conventions. Clarity and consistency of style applies to both the score itself but also to the music as attached to the film at hand. The composer's command over the chosen medium extends to the need to be competent in overseeing the recording of the score's performance and thus involves not only instrumentation and orchestration but also computer programming, supervision of the orchestrator, additional programmers, copyists, studio engineers etc. Distinctiveness and originality are not normally required of the film composer. Hollywood filmmakers would never ask for 'something artistic'. Novel ideas and modes of musical expression are welcome, but not at the expense of the film's effectiveness. Film music's often-cited lack of autonomous musical originality is the direct result of a need to create connotative meaning, which requires a commonly understood language. If this verges on pastiche, then the pressured creative process and meaning-making purpose are to blame. Structure and development are restricted within the confines of the film at hand, as are considerations of balance, which need to account for narrative and dramatic needs. For composers to have an individual voice is helpful only in so far as they may be able to find employment on the basis of past work.

A Hollywood film score that is well conceived and crafted, technically adequate, produced to a high standard, dramatically and narratively well suited to the film it accompanies will be deemed to be of sufficient quality and fit for purpose. One qualitative aspect that hardly factors in the evaluation of a piece of autonomous music is suitability of tone. The meaning of the term 'tone' itself is somewhat vague but when applied to music for narrative films, it refers to that music's core appeal, emotional,

timbral and textural characteristics. These need to suit the film at hand in order to best serve that film. Even the most primitive and banal music by autonomous music standards can have the perfect tone for the scene it accompanies. The aforementioned concept of product optimisation, closely linked with quality control in the corporate world, would strive towards a score that achieves its objectives while using a minimum of time and resource. It is the product that counts to filmmakers and executives, not the creative process that leads to the product. Film composers cannot afford to make artistic statements for their own sake. However, something unique and inspiring can emerge as a by-product of the discourse. Arguably, this is how Hollywood has happened upon some of its most profound and cherished scores.

Although diverse in terms of musical backgrounds, style and working method, today's Hollywood composers share common characteristics. Their strengths perhaps cannot and should not be measured by strictly musical or aesthetic standards and may in fact have little to do with musicianship. Today's successful Hollywood composers are sociable and charismatic business people, who have strong interpersonal skills and demonstrate a high level of core competence in their respective stylistic specialties. They instill confidence in their clients as understanding listeners, eloquent communicators and skilled negotiators. They are assertive decision-makers and meticulous quality control officers. They are constructive team workers, efficient multi-taskers, and trusting delegators. They are punctual and reliable, open to criticism and accommodating to change. Composers may be selected and hired for any number of reasons but they keep their assignment by delivering convincing and workable results. Their clients frequently do not understand how composers do what they do but know if they like what they hear. In purely musical terms, the notion of what qualifies and constitutes a Hollywood film composer remains vague. However, in professional terms, the wide spectrum of active Hollywood composers is a reminder that Hollywood film music, too, is show business.

Film composers have a choice: They can choose to challenge the system if they feel it is broken or work the system and succeed. Composer Gabriel Yared falls in the prior category, and by his own admission he does not find nearly as much work as some of his contemporaries. Hans Zimmer firmly falls in the latter category and has gone to great lengths to adapt his working methods to the demands of the industry. There is no

space for idealism and those composers who best negotiate obstacles thrive. Choke points and bottle-necks include commercial considerations at every level, ranging from music budgets to tight schedules, frequent changes to the film and a constant drive for profitability. These pressures are not conducive to scoring solutions of musical integrity (again, by autonomous music standards), neither are the tools used by composers to comply with the pressures imposed on them. Of course, when musical creativity and autonomy are being held back in recent Hollywood film music, this is hardly a new phenomenon: Throughout the history of narrative sound film, music has been subservient to the filmic narrative. What is, however, unique to recent Hollywood film is that tools and processes have grown more refined and streamlined, often to the detriment of the resulting film scoring practice and film music. Unrealistic schedules for music composition and frequent changes to the picture, paired with a lack of communication or miscommunication between the composer and the filmmakers are cumulatively damaging the end result. Positive change is being held back by inherent working conditions that are not conducive of a rewarding, inspiring creative process. At the same time, practitioners lack champions in the system and have thus far neglected to make a concerted effort to improve matters.

Film composers can help improve film music's standing in the industry by bringing business and production models in line with other contributors to the post-production process. Visual effects (VFX) production houses and sound production facilities, editing studios, dubbing stages, grading and printing facilities are run as businesses with clear administrative structures and a public interface that is relatively divorced from the creative service these businesses provide. While a few music production houses exist that provide music for television and advertising (for example, Delicious Digital in the UK), and while production music companies (also called library music) have thrived on this business model, bespoke feature film music does not yet generally stem from similar business entities. Hans Zimmer's Remote Control Productions is a rare example and, considering its unparalleled success in the industry, might serve as a template for other businesses.

In order to remove barriers, practitioners and educators of film music composition can also raise awareness among filmmakers for the storytelling potential of film music. They can inspire filmmakers' appreciation for music in general and highlight that music is

more than a purchasable commodity. Rather than demand that filmmakers change their mode of thinking and working (for example, bemoan the disappearance of the locked picture), composers might instead choose to join the filmmaking process early on. Enabled by improved fiscal and logistic conditions that are required to sustain an experimental, flexible and open-ended workflow, composers would be allowed to continue to alter and amend their music as the film progresses throughout post-production. It is encouraging that Hans Zimmer and his team at Remote Control Productions are working in this way. If temporal and creative barriers were lowered, Hollywood film music might be liberated from aforementioned restraints and become less self-referential and derivative. Experimental film music might explore a more original relationship with film, as it does in less commercially driven World cinema, including European film. For example, the effect of music in the films of French director François Ozon ranges from comedic to perverse. Such more daring approaches need not negate overall appeal or marketability – but marketability is not a primary concern at the outset of the approach.

The study of film music in general, but the study of recent Hollywood film music in particular, offers rich and rewarding multi- and interdisciplinary research opportunities for scholars to tackle current issues that are of particular relevance to practitioners, whilst also inspiring future research. Further study might aim to settle the question of authorship in Hollywood film music. Who is to be rightfully credited when a multitude of assistants have helped compose, arrange, copy, and record the music? The role and impact of advanced music technology on film music composition offers considerable scope for further research into working methods, processes, and composition versus production. It would be fascinating to try to identify standards for the qualitative assessment of film music, beyond the aforementioned concept of fit-for-purpose-ness. Emerging trends in content distribution such as time-shifted viewing and online streaming are bound to alter consumption patterns and ways in which audiences engage with content. In turn, the use and usefulness of film and television music may need to be re-evaluated. These are key concerns for established practitioners but also students of film music and aspiring composers. Scholars might also explore new research tools and methods that can help focus on the opportunities and challenges screen composers face and to critically and holistically appreciate recent Hollywood film music practice. Academia can reach out to practitioners and engage in a fruitful dialogue about

concepts, strategies, techniques and creative ethos in the commercial realm. It may be idealistic to think that research can inform future practice, but research outputs might nevertheless have relevance for practitioners if they touch upon current concerns of the day-to-day practice of creative individuals, including those working at the most commercial end of the creative spectrum.

I set out to investigate why recent Hollywood film music departed from its symphonic, neo-Romantic tradition. Through the course of my research, I discovered a multi-facetted and complex network of creative processes inherent in contemporary Hollywood filmmaking, which have caused new phenomena and trends in film music. In the Hollywood realm, film music is always a means to a commercial and affective end, mediated by the films it accompanies, not an end in itself. Composers understandably feel pressured and challenged when they contribute to, and work within, a multi-agent creative environment of whose outcome they are not solely in control. Numerous musical and non-musical factors influence aesthetic considerations and creative choices that are ultimately settled by filmmakers and executives rather than composers. Prevalent creative practice has shaped the nature of recent Hollywood film music. Conditions can require or render obsolete, help construct or destruct, nourish or starve film music. Some practitioners might say this is lamentable, even terrifying. However, it is in the nature of collaborative arts to pose such challenges to creative specialists. Consequently, this research and its methods may inform the wider field of contemporary musical practice, within which notions of autership require closer scrutiny.

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Filmography

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2012 (U.S. 2009, dir. R. Emmerich, score by David Arnold)

3:10 to Yuma (U.S. 2007, dir. J. Mangold, score by Marco Beltrami)

A Bug's Life (U.S. 1998, dir. J. Lasseter & A. Stanton, score by R. Newman)

A Clockwork Orange (U.S. 1971, dir. S. Kubrick, score by Walter Carlos)

A Few Good Men (U.S. 1992. dir. R. Reiner, score by Mark Shaiman)

A Knight's Tale (U.S. 2001, dir. B. Helgeland, score by Cater Burwell)

A Nightmare on Elm Street (U.S. 1984, dir. W. Craven, score by Charles Bernstein)

A Nightmare on Elm Street Part 2: Freddy's Revenge (U.S. 1985, dir. J. Sholker, score by Christopher Young)

A River Runs Through It (U.S. 1992, dir. R. Redford, score by Mark Isham)

A Serious Man (U.S. 2009, dir. E. & J. Coen, score by Carter Burwell)

A.I. Artificial Intelligence (U.S. 2001, dir. S. Spielberg, score by John Williams)

Adaptation (U.S. 2002, dir. S. Jonze, score by Carter Burwell)

Adventures of Tintin: The Secret of the Unicorn, The (U.S. 2011, dir. S. Spielberg, score by John Williams)

Agents of S.H.I.E.L.D. (ABC, 2013-present, music by Bear McCreary)

Airplane! (U.S. 1980, dir. J. Abrahams & D. Zucker, score by Elmer Bernstein)

Airwolf (CBS / USA, 1984-1987, music by Sylvester Levay and Udi Harpaz)

Alf (NBC, 1986-1990, music by Alf Clausen)

Alias (ABC, 2001-2006, music by Michael Giacchino)

Altered States (U.S. 1980, dir. K. Russell, score by John Corigliano)

Amazing Spider-Man, The (U.S. 2012, dir. M Webb, score by James Horner)

American Beauty (U.S. 1999, dir. S. Mendes, score by Thomas Newman)*

Amistad (U.S. 1997, dir. S. Spielberg, score by John Williams)

Any Given Sunday (U.S. 1999, dir. O. Stone, score by Richard Horowitz & Paul Kelly)

Armageddon (U.S. 1998, dir. M. Bay, score by Trevor Rabin)

Austin Powers: International Man of Mystery (U.S. 1997, dir. J. Roach, score by George S. Clinton)

Avatar (U.S. 2009, dir. J. Cameron, score by James Horner)

Babel (U.S. 2006, dir. A. G. Iñárritu, score by Gustavo Santaolalla)

Back to the Future II (U.S. 1989, dir. R. Zemeckis, score by Alan Silvestri)

Band of Brothers (HBO, 2001, music by Michael Kamen)

Barton Fink (U.S. 1991, dir. J. Coen, score by Carter Burwell)

Batman (U.S. 1989, dir. T. Burton, score by Danny Elfman)

Batman & Robin (U.S. 1997, dir. J. Schumacher, score by Elliot Goldenthal)

Batman Begins (U.S. 2005, dir. C. Nolan, score by Hans Zimmer and James Newton Howard)

Batman Forever (U.S. 1995, dir. J. Schumacher, score by Elliot Goldenthal)

Batman Returns (U.S. 1992, dir. T. Burton, score by Danny Elfman)

Battlestar Galactica (NBC, 2004-2009, music by Bear McCreary)

Bedtime Stories (U.S. 2008, dir. A. Shankman, score by Rupert Gregson-Williams)

Being John Malkovich (U.S. 1999, dir. S. Jonze, score by Carter Burwell)

Best Laid Plans (U.S. 1999, dir. M. Barker, score by Craig Armstrong)

Beverly Hills Cop, (U.S. 1984, dir. M. Brest, score by Harold Faltermeyer)

Bible, The (History Channel, 2013-present, music by Hans Zimmer and Lorne Balfe)

Big Bang Theory, The (CBS, 2007-present, theme by Barenaked Ladies)

Big Lebowski, The (U.S. 1998, dir. by Ethan and Joel Cohen, score by Carter Burwell)

Black Swan (U.S. 2010, dir. D. Aronofsky, score by Clint Mansell)

Blade Runner (U.S. 1982, dir. R. Scott, score by Vangelis)

Blade: Trinity (U.S. 2004, dir. D. S. Goyer, score by Ramin Djawadi)

Blood Simple (U.S. 1984, dir. J. Coen, score by Carter Burwell)

Body Shots (U.S. 1999, dir. M. Cristofer, score by M. Isham)

Bounty Hunter, The (U.S. 2010, dir. A. Tennant, score by George Fenton)

Bourne Identity, The (U.S. 2002, dir. D. Liman, score by John Powell)

Braveheart (U.S. 1995, dir. M. Gibson, score by James Horner)

Breakfast at Tiffany's (U.S. 1961, dir. B. Edwards, score by Henry Mancini)

Brokeback Mountain (U.S. 2005, dir. A. Lee, score by Gustavo Santaolalla)

Brother Bear (U.S. 2003, dir. A. Blaise & R. Walker, score by Phil Collins & Mark Mancina)

Bruce Almighty (U.S. 2003, dir. T. Shadyac, score by John Debney)

Burn After Reading (U.S. 2008, dir. E. & J. Coen, score by Carter Burwell)

Cannonball Run II (U.S. 1984, dir. H. Needham, score by Al Capps)

Catch Me If You Can (U.S. 2002, dir. S. Spielberg, score by John Williams)

Cell, The (U.S. 2000, dir. T. Singh, score by Howard Shore)

Chariots of Fire (U.S. 1981, dir. H. Hudson, score by Vangelis)

Close Encounters of the Third Kind (U.S. 1977, dir. S. Spielberg, score by John Williams)

Cloverfield (U.S. 2008, dir. M. Reeves, score by Michael Giacchino)

Cocktail (U.S. 1988, dir. R. Donaldson, score by J. Peter Robinson)

Contagion (U.S. 2011, dir. S. Soderbergh, score by Cliff Martinez)

Core, The (U.S. 2003, dir. J. Amielm score by Christopher Young)

Crash (U.S. 2004, dir. P. Haggis, score by Mark Isham)

Crimson Tide (U.S. 1995, dir. T. Scott, score by Hans Zimmer)

Crow, The (U.S. 1994, dir. A. Proyas, score by Graeme Revell)

Curious Case of Benjamin Button, The (U.S. 2008, dir. D. Fincher, score by Alexandre Desplat)

Da Vinci Code, The (U.S. 2006, dir. R. Howard, score by Hans Zimmer)

Dallas (CBS, 1978-1991, theme by Jerrold Immel)

Dark City (U.S. 1998, dir. A. Proyas, score by Trevor Jones)

Dark Knight Rises, The (U.S. 2012, dir. C. Nolan, score by Hans Zimmer)

Dark Knight, The (U.S. 2008, dir. C. Nolan, score by Hans Zimmer and James Newton Howard)

Das Boot (Germany 1982, dir. W. Petersen, score by Klaus Doldinger)

Day After Tomorrow, The (U.S. 2004, dir. R. Emmerich, score by David Arnold)

Day the Earth Stood Still, The (U.S. 1951, dir. R. Wise, score by Bernard Herrmann)

Days of Thunder (U.S. 1990, dir. T. Scott, score by Hans Zimmer)

Dear John (U.S. 2010, dir. L. Hallström, score by Deborah Lurie)

Demolition Man (U.S. 1993, dir. M. Brambilla, score by Elliot Goldenthal)

Desperate Housewives (ABC, 2004-2012, theme by Danny Elfman, music by Steve Jablonsky)

Devil and Daniel Webster, The (U.S. 1941, dir. W. Dieterle, score by Bernard Herrmann)

Dick Tracey (U.S. 1990, dir. W. Beatty, score by Danny Elfman)

Die Hard (U.S. 1988, dir. J. McTiernan, score by Michael Kamen)

Disturbia (U.S. 2007, dir. D. J. Caruso, score by Geoff Zanelli)

Donnie Darko (U.K. 2001, dir. R. Kelly, score by Michael Andrews)

E.T.: The Extra-Terrestrial (U.S. 1982, dir. S. Spielberg, score by John Williams)

Edward Scissorhands (U.S. 1990, dir. T. Burton, score by Danny Elfman)

El Mariachi (U.S. 1993, dir. R. Rodriguez, score by various)

Elf (U.S. 2003, dir. J. Favreau, score by John Debney)

Elysium (U.S. 2013, dir. N. Blomkamp, score by Ryan Amon)

English Patient, The (U.S. 1996, dir. A. Minghella, score by Gabriel Yared)

Escape from New York (U.S. 1981, dir. and score by John Carpenter)

Eternal Sunshine of the Spotless Mind (U.S. 2004, dir. M. Gondry, score by Jon Brion)

Face/Off (U.S. 1997, dir. J. Woo, score by John Powell)

Falcon Crest (CBS, 1981-1990, various composers)

Fargo (U.S. 1996, dir. J. Coen, score by Carter Burwell)

Fast & Furious 6 (U.S. 2013, dir. J. Lin, score by Lucas Vidal)

Fight Club (U.S. 1999, dir. D. Fincher, score by The Dust Brothers)

Finding Nemo (U.S. 2003, dir. A. Stanton & L. Unkrich, score by Thomas Newman)

Firm, The (U.S. 1993, dir. S. Pollack, score by Dave Grusin)

First Blood (U.S. 1982, dir. Ted Kotcheff, score by Bill Conti)

Flags of Our Fathers (U.S. 2006, dir. and score by Clint Eastwood)

Flashdance (U.S. 1983, dir. A. Lyne, score by Giorgio Moroder (also song compilation))

FlashForward (HBO, 2009-2010, music by Ramin Djawadi)

Fog, The (U.S. 1980, dir. and score by John Carpenter)

Forrest Gump (U.S. 1994, dir. R. Zemeckis, score by Alan Slivestri & compilation)

Fox and the Hound, The (U.S. 1988, dir. T. Berman, R. Rich, A. Stevens, score by Buddy Baker)

Fresh Prince of Bel Air, The (NBC, 1990-1996, theme by The Fresh Prince)

Friends (NBC, 1994-2004, theme by The Rembrandts)

Fringe (Fox, 2008-present, music by Michael Giacchino)

Game of Thrones (HBO, 2011-present, music by Ramin Djawadi)

Girl With the Dragon Tattoo, The (U.S. / Sweden 2011, dir. D. Fincher, score by Trent Reznor and Atticus Ross)

Gladiator (U.S. 2000, dir. R. Scott, score by Lisa Gerrard and Hans Zimmer)

Glee (Fox, 2009-present, music by James S. Levine (not songs))

Gnomeo & Juliet (U.S. 2011, dir. K. Asbury, score by Chris Bacon, James Newton Howard & Elton John)

Godzilla (U.S. 1998, dir. R. Emmerich, score by David Arnold and Michael Lloyd)

GoldenEye (U.S. 1995, dir. M. Campbell, score by Eric Serra)

Gone With the Wind (U.S. 1939, dir. V. Fleming, score by Max Steiner)

GoodFellas (U.S. 1990, dir. M. Scorsese, compilation score)

Goonies, The (U.S. 1985, dir. R. Donner, score by Dave Grusin)

Graduate, The (U.S. 1967, dir. M. Nichols, songs by Simon & Garfunkel)

Great Gatsby, The (U.S. 2013, dir. B. Luhrmann, score by Craig Armstrong)

Groundhog Day (U.S. 1993, dir. H. Ramis, score by George Fenton)

Halloween (U.S. 1978, dir. and score by John Carpenter)

Hancock (U.S. 2008, dir. P. Berg, score by John Powell)

Happy Feet (U.S. 2006, dir. G. Miller, W. Coleman, J. Morris, score by John Powell)

Harry Potter and the Goblet of Fire (U.K. / U.S. 2005, dir. M. Newell, score by Patrick Doyle)

Harry Potter and the Order of the Phoenix (U.K. / U.S. 2007, dir. D. Yates, score by Nicholas Hooper)

Henry V (U.K. 1983, dir. K. Branagh, score by Patrick Doyle)

Highlander (U.S. 1986, dir. R. Mulcahy, score by Michael Kamen)

Hobbit: An Unexpected Journey, The (U.S. / N.Z. 2012, dir. P. Jackson, score by Howard Shore)

Home Improvement (ABC, 1991-1999, music by Dan Foliart)

Hook (U.S. 1991, dir. S. Spielberg, score by John Williams)

Hudsucker Proxy, The (U.S. 1994, dir. J. Coen, score by Carter Burwell)

Hulk (U.S. 2003, dir. A. Lee, score by Danny Elfman)

Hunger Games, The (U.S. 2012, dir. G. Ross, score by James Newton Howard)

Hunt for Red October, The (U.S. 1990, dir. J. McTiernan, score by Basil Poledouris)

Hurt Locker, The (U.S. 2009, dir. K. Bigelow, score by Marco Beltrami)

I ♥ Huckabees (U.S. 2004, dir. D. O. Russell, score by Jon Brion)

Ice Age: Dawn of the Dinosaurs (U.S. 2009, dir. C. Saldanha, M. Thurmeier, score by John Powell)

Ice Storm, The (U.K. 1997, dir. A. Lee, score by Mychael Danna)

In the Land of Blood and Honey (U.S. 2012, dir. A. Jolie, score by Gabriel Yared)

Inception (U.S. 2010, dir. C. Nolan, score by Hans Zimmer)

Incredibles, The (U.S. 2004, dir. B. Bird, score by Michael Giacchino)

Independence Day (U.S. 1996, dir. R. Emmerich, score by David Arnold)

Indiana Jones and the Kingdom of the Crystal Skull (U.S. 2008, dir. S. Spielberg, score by John Williams)

Indiana Jones and the Last Crusade (U.S. 1989, dir. S. Spielberg, score by John Williams)

Indiana Jones and the Temple of Doom (U.S. 1984, dir. S. Spielberg, score by John Williams)

Intolerable Cruelty (U.S. 2003, dir. J. Coen, score by Carter Burwell)

Iron Man (U.S. 2008, dir. J. Favreau, score by Ramin Djawadi)

Iron Man 3 (U.S. 2013, dir. S. Black, score by Brian Tyler)

J. Edgar (U.S. 2011, dir. and score by Clint Eastwood)

Jack Reacher (U.S. 2012, dir. C. McQuarrie, score by Joe Kraemer)

Jaws (U.S. 1975, dir. S. Spielberg, score by John Williams)

Jurassic Park (U.S. 1993, dir. S. Spielberg, score by John Williams)

Kill Bill Vol. 1 (U.S. 2003, dir. Q. Tarantino, score by RZA and various)

King Arthur (U.S. 2004, dir. A. Fuqua, score by Hans Zimmer)

King Kong (U.S. 1933, dir. M.C. Cooper, E. B. Schoedsack (uncredited), score by Max Steiner)

King Kong (U.S. 2005, dir. P. Jackson, score by James Newton Howard)

Knight Rider (NBC, 1982-1986, music by Stu Phillips)

Koyaanisqatsi: Life Out of Balance (U.S. 1982, dir. G. Reggio, score by Philip Glass)

Labyrinth (U.K / U.S. 1986, dir. J. Henson, score by Trevor Jones)

Ladykillers, The (U.S. 2004, dir.E. & J. Coen, score by Carter Burwell)

Last Action Hero (U.S. 1993, dir. J. McTiernan, score by Michael Kamen)

Last Boy Scout, The (U.S. 1991, dir. T. Scott, score by Michael Kamen)

Lethal Weapon (U.S. 1987, dir. R. Donner, score by Michael Kamen)

Lincoln (U.S. 2012, dir. S. Spielberg, score by John Williams)

Lion King, The (U.S. 1994, dir. R. Allers & R. Minkoff, score by Hans Zimmer)

Lone Ranger, The (U.S. 2013, dir. G. Verbinski, score by Jack White)

Lord of the Rings: The Fellowship of the Ring, The (U.S. 2001, dir. P. Jackson, score by Howard Shore)

Lord of the Rings: The Return of the King, The (U.S. 2003, dir. P. Jackson, score by Howard Shore)

Lord of the Rings: The Two Towers, The (U.S. 2002, dir. P. Jackson, score by Howard Shore)

Lost (ABC, 2004-2010, music by Michael Giacchino)

Lost World: Jurassic Park, The (U.S. 1997, dir. S. Spielberg, score by John Williams)

Lovely Bones, The (U.K. / U.S. / N.Z. 2009, dir. P. Jackson, score by Brian Eno)

Mad Men (AMC, 2007-present, theme by RJD2)

Magnificent Seven, The (U.S. 1960, dir. J. Sturges, score by Elmer Bernstein)

Magnolia (U.S. 1999, dir. P. T. Anderson, score by Jon Brion, songs by Amiee Mann)

Magnum, P.I. (CBS, 1980-1988, theme by Mike Post)

Malcolm in the Middle (Fox, 2000-2006, theme song by They Might Be Giants)

Man of Steel (U.S. 2013, dir. Z. Snyder, score by Hans Zimmer)

Man Who Wasn't There, The (U.S. 2001, dir. J. Coen, score by Carter Burwell)

Mars Attacks!! (U.S. 1996, dir. T. Burton, score by Danny Elfman)

Master, The (U.S. 2012, dir. P. T. Anderson, score by Jonny Greenwood)

Matrix Revolutions, The (U.S. 2003, dir. Watchowski Brothers, score by Don Davis)

Miami Vice (1984-1989, NBC, music by Jan Hammer)

Milk (U.S. 2008, dir. G. Van Sant, score by Danny Elfman)

Mindy Project, The (Fox, 2012-present, music by Jesse Novak and Blake Neely)

Minority Report (U.S. 2002, dir. S. Spielberg, score by John Williams)

Mission: Impossible - Ghost Protocol (U.S. 2011, dir. B. Bird, score by Michael Giacchino)

Mousehunt (U.S. 1997, dir. G. Verbinski, score by Alan Silvestri)

Mrs. Doubtfire (U.S. 1993, dir. C. Columbus, score by Howard Shore)

Mummy Returns, The (U.S. 2001, dir. S. Sommers, score by Alan Silvestri)

Munich (U.S. 2005, dir. S. Spielberg, score by John Williams)

Muppets, The (U.S. 2011, dir. J. Bobin, score by Christophe Beck)

My Fair Lady (U.S. 1964, dir. J. Cukor, songs by Frederic Loewe)

Mystic River (U.S. 2003, dir. and score by Clint Eastwood)

Nell (U.S. 1994, dir. M. Apted, score by Mark Isham)

Never Let Me Go (U.K. / U.S. 2011, dir. M. Romanek, score by Rachel Portman)

No Country for Old Men (U.S. 2007, dir. E. & J. Coen, score by Carter Burwell)

O Brother, Where Art Thou? (U.S. 2000, dir. J. Coen, score by Carter Burwell)

Oblivion (U.S. 2013, dir. J. Kosinski, score by Anthony Gonzalez, M83, Joseph Trapanese)

Ocean's 11 (U.S. 2001, dir. S. Soderbergh, score by David Holmes)

Of Mice and Men (U.S. 1939, dir. L. Mlestone, score by Aaron Copland)

Pacific, The (HBO, 2010, music by Hans Zimmer)

Pacifier, The (U.S. 2005, dir. A. Shankman, score by John Debney)

Peter Gunn (NBC / ABC 1958-1961, music by Henry Mancini)

Pink Floyd: The Wall (U.K. 1982, dir. A. Parker, original music by Bob Ezrin, David Gilmour, Roger Waters)

Pink Panther, The (U.S. 1963, dir. B. Edward, score by Henry Mancini)

Pink Panther, The (U.S. 2006, dir. S. Levy, score by Christophe Beck)

Pirates of the Caribbean: On Stranger Tides (U.S. 2011, dir. R. Marshall, score by Hans Zimmer)

Pirates of the Caribbean: The Curse of the Black Pearl (U.S. 2003, dir. G. Verbinski, score by Klaus Badelt)

Prison Break (Fox, 2005-2009, music by Ramin Djawadi)

Prometheus (U.S. 2012, dir. R. Scott, score by Marc Streitenfeld)

Psycho (U.S. 1960, dir. A. Hitchcock, score by Berhard Herrmann)

Pulp Fiction (U.S. 1994, dir. Quentin Tarantino, no composer credited)

Punch-Drunk Love (U.S. 2002, dir. P. T. Anderson, score by Jon Brion)

Raiders of the Lost Ark (U.S. 1981, dir. S. Spielberg, score by John Williams)

Rain Man (U.S. 1988. dir. B. Levinson, score by Hans Zimmer)

Raising Arizona (U.S. 1987, dir. J. Coen, score by Carter Burwell)

Rat Race (U.S. 2001, dir. J. Zucker, score by John Powell)

Ratatouille (U.S. 2007, dir. B. Bird and J. Pinkava, score by Michael Giacchino)

Red Dawn (U.S. 1984, dir. J. Milius, score by Basil Poledouris)

Red Lights (U.S. 2012, dir. R. Cortés, score by Victor Reyes)

Rescuers, The (U.S. 1983, dir. J. Lounsbery, W. Reitherman, A. Stevens, score by Artie Butler)

Richard Pryor: Live on the Sunset Strip (U.S. 1982, dir. J. Layton)

Rise of the Planet of the Apes (U.S. 2011, dir. R. Wyatt, score by Patrick Doyle)

Robin Hood: Prince of Thieves (U.S. 1991, dir. K. Reynolds, score by Michael Kamen)

Rock, The (U.S. 1996, dir. M. Bay, score by Hans Zimmer)

Rockford Files, The (NBC, 1974-1980, theme by Mike Post)

Rocky (U.S. 1976, dir. J. G. Avildsen, score by Bill Conti)

Rome (HBO, 2005-2007, music by Jeff Beal)

Rope (U.S. 1948, dr. A. Hitchcock, score by David Buttolph)

Royal Tenenbaums, The (U.S. 2004, dir. W. Andersen, score by Mark Mothersbaugh)

Run Lola Run (Germany 1999, dir. T. Tykwer, score by Tom Tykwer, Johnny Klimek, Reinhold Heil)

Salt (U.S. 2010, dir. P. Noyce, score by James Newton Howard)

Saving Private Ryan (U.S. 1998, dir. S. Spielberg, score by John Williams)

Saw IV (U.S. 2007, dir. D. L. Bousman, score by Charlie Clouser)

Schindler's List (U.S. 1993, dir. S. Spielberg, score by John Williams)

Scorpion King, The (U.S. 2002, dir. C. Russell, score by John Debney)

Scrubs (NBC, 2001-2010, theme by Lazlo Bane)

Se7en (U.S. 1995, dir. D. Fincher, score by Howard Shore)

Sea Hawk, The (U.S. 1940, dir. M. Curtiz, score by Erich Wolfgang Korngold)

Seecret Life of Walter Mitty, The (U.S. 2013, dir. B. Stiller, score by Theodore Shapiro)

Sideways (U.S. 2004, dir. A. Payne, score by Rolfe Kent)

Signs (U.S. 2002, dir. M. Night Shyamalan, score by James Newton Howard)

Simpsons Movie, The (U.S. 2007, dir. D. Silverman, score by Hans Zimmer)

Simpsons, The (1989-present FOX, theme by Danny Elfman)

Singin' in the Rain (U.S. 1952, dir. S. Donen & G. Kelly, score by Lennie Haytone (uncredited))

Six Feet Under (HBO, 2001-2005, theme by Thomas Newman, music by Richard Marvin)

Sixth Sense, The (U.S. 1999, M. Night Shyamalan, score by James Newton Howard)

Skyfall (U.K. / U.S. 2012, dir. S. Mendes, score by Thomas Newman)

Sleepy Hollow (U.S. 1999, dir. T. Burton, score by Danny Elfman)

Social Network, The (U.S. 2010, dir. D. Fincher, score by Trent Reznor & Atticus Ross)

Sopranos, The (HBO, 1999-2007, theme 'Woke Up This Morning' by Alabama 3)

South Park: Bigger Longer & Uncut (U.S. 1999, dir. T. Parker, score by Mark Shaiman)

Speed (U.S. 1994, dir. J. de Bont, score by Mark Mancina)

Spellbound (U.S. 1945, dir. A. Hitchcock, score by Miklos Rozsa)

Spider-Man (U.S. 2002, dir. S. Raimi, score by Danny Elfman)

Spider-Man 2 (U.S. 2004, dir. S. Raimi, score by Danny Elfman)

Spider-Man 3 (U.S. 2007, dir. S. Raimi, score by Christopher Young)

Star Trek -The Next Generation (Paramount Television (first-run syndication), 1987-1994, music by theme by Alexander Courage and Jerry Goldsmith

Star Trek (U.S. 2009, dir. J. J. Abrams, score by Michael Giacchino)

Star Trek Into Darkness (U.S. 2013, dir. J. J. Abrams, score by Michael Giacchino)

Star Wars: Episode I - The Phantom Menace (U.S. 1999, dir. G. Lucas, score by John Williams)

Star Wars: Episode II - Attack of the Clones (U.S. 2002, dir. G Lucas, score by John Williams)

Star Wars: Episode III - Revenge of the Sith (U.S. 2005, dir. G Lucas, score by John Williams)

Star Wars: Episode IV - A New Hope (U.S. 1977 dir. G. Lucas, score by John Williams)

Star Wars: Episode VI - Return of the Jedi (U.S. 1983, dir. G Lucas, score by John Williams)

Stardust (U.K. / U.S. 2007, dir. M Vaughn, score by Ilan Eshkeri)

Stargate (U.S. 1994, dir. R. Emmerich, score by David Arnold)

Streets of Fire (U.S. 1984, dir. W. Hill, score by Ry Cooder)

Super 8 (U.S. 2010, dir. J. J. Abrams, score by Michael Giacchino)

Superman (U.S. 1978, dir. R. Donner, score by John Williams)

Superman Returns (U.S. 2006, dir. B. Singer, score by John Ottman)

Synecdoche, New York (U.S. 2008, dir. C. Kaufman, score by Jon Brion)

Syrianna (U.S. 2005, dir. S. Gaghan, score by Alexandre Desplat)

Talented Mr. Ripley, The (U.S. 1999, dir. A. Minghella, score by Gabriel Yared)

Tarzan (U.S. 1999, dir. C. Buck and K. Lima, score by Mark Mancina, songs by Phil Collins)

Terminal, The (U.S. 2004, dir. S. Spielberg, score by John Williams)

Terminator (U.S. 1984, dir J. Cameron, score by Brad Fiedel)

Terminator 2: Judgment Day (U.S. 1991, dir J. Cameron, score by Brad Fiedel)

Terminator 3: Rise of the Machines (U.S. 2003, dir. J Mostow, score by Marco Beltrami)

Terminator: Salvation (U.S. 2009, dir. McG, score by Danny Elfman)

Terminator: The Sarah Connor Chronicles (Fox, 2008-2009, music by Bear McCreary)

There Will Be Blood (U.S. 2007, dir. P. T. Anderson, score by Jonny Greenwood)

Thor (U.S. 2011, dir. K. Branagh, score by Patrick Doyle)

Three Musketeers, The (U.S. 1993, dir. S. Herek, score by Michael Kamen)

Titanic (U.S. 1997, dir. J. Cameron, score by James Horner)

To Kill a Mockingbird (U.S. 1962, dir. R. Mulligan, score by Elmer Bernstein)

Top Gun (U.S. 1986, dir. T. Scott, score by Harold Faltermeyer)

Toy Story (U.S. 1995, dir. J. Lasseter, score by Randy Newman)

Toy Story 3 (U.S. 2010, dir. L. Unkrich, score by Randy Newman)

Traffic (U.S. 2000, dir. S. Soderbergh, score by Cliff Martinez)

Transformers (U.S. 2007, dir. M. Bay, score by Steve Jablonsky)

Transformers: Dark of the Moon (U.S. 2011, dir. M. Bay, score by S. Jablonsky)

TRON (U.S. 1981, dir. S. Lisberger, score by Wendy Carlos)

TRON: Legacy (U.S. 2009, dir. J. Kosinski, score by Daft Punk)

Troy (U.S. 2004, dir. W. Petersen, score by James Horner)

True Grit (U.S. 2010, dir. E. & J. Coen, score by Carter Burwell)

Twilight (U.S. 2008, dir. C. Hardwicke, score by Carter Burwell)

Twin Peaks (ABC, 1990-1991, music by Angelo Badalamenti)

Twins (U.S. 1988, dir. I. Reitman, score by Georges Delerue & Randy Edelman)

Twister (U.S. 1996, dir. J de Bont, score by Mark Mancina)

U-Turn (U.S. 1997, dir. O. Stone, score by Ennio Morricone)

Ugly Betty (ABC, 2006-2010, music by Jeff Beal)

Unborn, The (U.S. 2009, dir. D. S. Goyer, score by Ramin Djawadi)

Underworld Awakening (U.S. 2012, dir. M. Mårlind & B. Stein, score by Paul Haslinger)

Unstoppable (U.S. 2010, dir. T. Scott, music by Harry Gregson-Williams)

Up in the Air (U.S. 2009, dir. J. Reitman, score by Rolfe Kent)

Vertigo (U.S. 1958, dir. A. Hitchcock, score by Bernhard Herrmann)

Walking Dead (AMC, 2012-present, music by Bear McCreary)

Wall Street (U.S. 1987, dir. O. Stone, score by Stewart Copeland)

WALL-E (U.S. 2008, dir. A. Stanton, score by Thomas Newman)

War Horse (U.S. 2011, dir. S. Spielberg, score by John Williams)

War of the Worlds (U.S. 2005, dir. S. Spielberg, score by John Williams)

Westworld (U.S. 1973, dir. M. Crichton, score by Fred Karlin)

Who Framed Roger Rabbit? (U.S. 1988, dir. R. Zemeckis, score by Alan Silvestri)

Wire, The (HBO, 2002-2008, theme(s) by Tom Waits)

Witness (U.S. 1985, dir. P. Weir, score by Maurice Jarre)

Wolverine, The (U.S. 2013, dir. J. Mangold, score by Marco Beltrami)

Wonder Boys (U.S. 2000, dir. C. Hanson, score by Christopher Young)

World War Z (U.S. 2013, dir. M. Forster, score by Marco Beltrami)

Wrath of the Titans (U.S. 2012, dir J. Liebesman, score by Javier Navarrete)

X-Files, The (Fox, 1993-2002, music by Mark Snow)

X-Men: The Last Stand (U.S. 2006, dir. B. Ratner, score by John Powell)

Young Indiana Jones (ABC, 1992-1993, score by Joel McNeely and Laurence Rosenthal)

Appendix I – Piano reductions

Terminator Salvation (Salvation)

Danny Elfman
arr. Vasco Hexel

Hancock (Death And Transfiguration)

John Powell
arr. Vasco Hexel

Star Trek (That New Car Smell)

Michael Giacchino
arr. Vasco Hexel

Appendix II – Interview Transcripts

The follow section comprises transcripts of interviews taken with film composers Ramin Djawadi, John Frizzell, Klaus Badelt and orchestrator Jeff Atmajian. These interviews were undertaken to inform aspects of this thesis. Selected quotes from these interviews appear throughout the main text. Transcripts were made from Skype calls and interviews in person (Atmajian). The interviewees were selected based on their respective expertise in the field of recent Hollywood film scoring. The interviewees were asked open questions tailored to each individual, taking into account their respective specialism and experience. These were gauged from knowledge acquired prior to each interview. Off-script follow-up questions were asked for clarification depending on answers given.

II.1 – Ramin Djawadi (interviewed on 3 August 2010 by Skype)

VH: Do you think that film music has changed in your lifetime?

RD: It definitely has changed during my lifetime. I mean, the way movies were scored back in the day, that's just not how we do it anymore nowadays. I don't even know where to start. I think there's just certain things that we get asked a lot, that certain styles are considered, I want to say, 'cheesy' nowadays. So sometimes, even if musically we would want to write a certain way, it's just literally not allowed anymore – or doesn't fit a certain style of movie.

VH: You mean 'allowed' by producers or directors?

RD: Yeah. I mean in general, just because moviemaking has progressed: special effects, sound effects, there is so much that has progressed – so that musically, that kind of went with it. So, many things stylistically are just not standard anymore. For example, woodwinds are many times omitted just because they give the feeling of being 'too light', or 'that feels too much like a comedy', or 'that feels too much like an animation movie'. Especially in these big action movies, many times, woodwinds are not even being used anymore.

VH: Do you think the function of film music has changed?

RD: No, I think that the function is still to support the drama of a movie. That's still the same. But I think [there's been] progression, the audience we have now […], the way society… – not that I even want to go that deep – but I think that […] even outside of film music, if you look at hip hop and the way pop songs have progressed compared to pop songs in the 80s: they're much more simplified. – And so the same has happened in film scoring. I think a lot of times I get asked to simplify the theme, or 'there's too many notes', or 'there's too much harmony'. So a lot of it really gets down to simplifying the music.

VH: So do you think that pop music has infiltrated film music?

RD: Well absolutely. Because movies like the first *Blade* movie or *The Matrix*, where –
        very successfully – […] 'Crystal Method' and all these techno / electronica
        songs were used. And then that was blended with score. In fact, when I did
        Blade 3, we tried to do that even more, where we went and said 'okay, here are
        the songs, here's the score: how can we make it blend so it doesn't always sound
        like "okay, here's a song, now here's score."' So I was asked to get even more
        into their territory. Even though I was using a big orchestra, I was using a lot of
        electronics. So, yeah, that has crossed over a lot. And bands are placed into
        movies a lot, so we're trying to connect them. I think that actually can work
        quite well. It can be fun.

VH: You still work at Remote Control?

RD: I do, yeah. I have my studio here.

VH: Okay, so I'll skip [some of] the technology questions. But in having access to
        Remote Control's extensive studio facilities, do you feel that music technology
        influences the way you write?

RD: Not really, it shouldn't. The technology […] should only serve the purpose of
        demoing or give a sense of what the real recording will be like. However, if
        there's a project that won't allow for real orchestra or for real instrumentation,
        then I will adjust how I write, just because of how certain instruments sound
        just with samples. There's certain things you just can't express with samples. So
        I will restrict myself to make it sound good, rather than going 'okay, this is going
        to sound not as great as the demo – but it's going to sound good when we go
        live.' I will make these adjustments. But nonetheless I still hope and try to
        achieve a good score. And it's actually sometimes a good restriction where you
        find other ways of doing stuff.

VH: If you think of instrumental colour and timbre, how important is this to you as a
        composer – in your work in film and in television?

RD: To me, it's very important and it's something […] I've made a part of my style – and this actually also goes back to the first question. I always say that we know that orchestra always works because that has been done for centuries and we know if we have an orchestral score that will always work. And then I go in and say 'okay, what else can I add to my score that makes it modern and that moves it forward in terms of style – or just trying to be different.' And that can be just one solo instrument, or it can be multiple, and making the decision of using sythesisers, or adding a guitar like in *Iron Man*. So there is always that challenge of adding just some other colours to a score that can make a difference. And sometimes, given a score that is already set in a certain time period or in a location can obviously help with that decision. Because certain things you just automatically choose, like flutes or guitars, percussion or something like that.

VH: And would you ever consider those colours that you choose to become akin to a theme, perhaps what people call a 'leitmotif', or do you think that that's restricted to a more melodic idea?

RD: No, it doesn't have to be. It can be a purely rhythmic motif as well. Or just a sound. For example, in *Prison Break* there are certain distortion sounds […] that I've […] come up with that, even though they're not thematic, to me have such a distinctive sound that they definitely can be a called 'leitmotif' – or reoccurring sound that you can associate with a certain feeling in the movie. And specifically this distortion sound I've used throughout several of my scores just to place it as one of my signature sounds.

VH: You mentioned *Prison Break*. You seem to very successfully balance – or juggle – work in film and television. Do you think your work in television has had an impact on the way you write music – or on the music that you write?

RD: No, not really. I think it's the other way around. I've always approached television as if I was doing a giant movie over twenty episodes. So whenever I – like *Prison Break, FlashForward*, these shows that I've done, the first thing I always said to my producers and directors [is] 'I would love to approach this like a movie. So we need themes. We need an overall arch of the show. We need to

have themes for characters or themes for plot.' So I really tried hard to keep that consistent. And it was always well received. They were always very happy with it. Of course, what makes it hard is that the turnaround in television is just so fast – and we'd have a couple of days for one episode. But I'm a workaholic so I just don't go home [laughs].

VH: Is television becoming more cinematic – with the big drama shows?

RD: I think so, yeah. I mean definitely sound has gotten a lot bigger and I know Marco Beltrami is doing this show *V*, for example, and Michael Giacchino doing *Lost*. And so I think that back in the day you were only doing television or you only did features. But I think now – and you see it with actors too –there is a crossover that is much more open. And I think it's actually nice. And you see big feature directors doing TV shows. That's actually how I came about with *FlashForward*: because of my relationship with David Goyer [dir. *FlashForward* – Djawadi worked with him on *Blade 3* and *The Unborn*] and that's how I actually got attached to the show. And so, same thing, we just treated this like we were doing a giant movie. So, yeah, I think there's a great crossover now.

VH: I'd like to move on to *Iron Man*. At what stage did you get involved in that project?

RD: I got involved pretty early. I want to say maybe five months before release. Yeah, it was really early. And when Jon Favreau [dir. *Iron Man*] and I started talking […] – and this is something I learned from Hans [Zimmer] too: Hans always says let's just get involved early because you can start experimenting and you evolve with the movie. So the movie doesn't always have to be in a final locked stage, with final effects and everything. You just want to get involved early.

VH: What was your role in conceptualising the score?

RD: Well, it's basically all based on conversation – with the director or the producers. So, John and I, we would constantly talk. And I actually have to give him credit for the use of guitars, because from day one he said 'you know, Iron Man, he's a

rock&roll guy, he's a rock star. And I want guitars.' – And his idea was also to make it different than *Batman* and different than *Spider-Man*. So he said 'I wanna go quite different.' He really set the tone of what he wanted and then it was up to me to figure that out, to make that speak. And that's how we started. So I would start writing, in the beginning not even to picture. I would just start writing themes and motifs and he would come over and listen and point out things he liked and what he didn't and that's how we started the process.

VH: The film opens with AC/DC's 'Back in Black'. Presumably, that was then chosen much later in the process?

RD: No, that was actually from day one. John is a huge AC/DC fan. And if you see now in the second one, they even released an entire AC/DC album. So no, that song was in there from day one. He loves AC/DC.

VH: So you didn't find that limiting. You worked together closely around that, *with* that?

RD: Yes, that was always the idea. For me it was actually a little bonus that I grew up – my main instrument actually *is* guitar. So […] when we would meet, I would just grab my guitar, and I would just play and jam riffs and show him 'how about this, how about that?' – And he would say 'yeah, I like that,' and 'that's cool.' That's how we then started out. I was enjoying that process. Because in the 80s, in my teenage years, I literally played in rock bands so it actually came quite easily to me.

VH: You carefully choose varying rhythmic patterns and instrumental timbres to distinguish 'good' and 'bad', for example, the '10 Rings'. Do you conceive of these musical characterisations as themes?

RD: Absolutely. And the fact that we were in a different location helped with that too. We could really distinguish that. Also the fact that Iron Man was all about technology and over there it wasn't so much about technology. All that helped distinguish the sound.

VH: You 'recycled' the original *Iron Man* Theme [used early on in the film as jazz source music: at the award ceremony and in the casino]. But in your new original score there is no explicit *Iron Man* Theme, or is there?

RD: No, we wanted to completely stay away from that. It was decided to do something else.

VH: Was this again just to be different from *Batman* and *Spider-Man*?

RD: Exactly.

VH: On the *Iron Man* title card, we hear a combination of sounds that could be sound design or could be musical underscore…was that something you were involved in?

RD: Definitely. That was part of the score. That's another good example of finding sounds as motifs and thematic material. As part of this movie, we went out and we sampled a lot of metals that were placed all over the score. And I used them as part of the percussion. So I literally took big metal plates and just banged on them – and all kinds of crazy stuff. And that became part of my percussion palette. I used it in the score quite a bit. Of course, I had to be careful because I didn't want to get in the way of the sound design, which was brilliantly done too by the way. But if I had a moment, then I would use that.

VH: At several points in the film, when Iron Man is in-flight or gains the upper hand in a fight, electric guitars take over from the strings, playing much the same chords and rhythms. Was this a conscious decision and, if so, how did you decide to treat *Iron Man* in this way?

RD: [Hesitates] It's hard to remember how we decided when to pull back on the orchestra and when to do more guitars…

VH: But you have a keen sense as to when to celebrate the character?

RD: Absolutely. His big moments – also when we first reveal his suit, for example, those moments were always the big guitar moments. But another things we did – and this goes back to the experimenting – we doubled it a lot both: we had the guitars play the chords and the motifs and the same with the orchestra. And then we actually would literally go back and forth, going 'you know what, let's pull back on the orchestra here.' Or 'let's pull back on the guitar here.' We really left our decisions open till the very end. We definitely had room to play with that. Also, while I was working the [sound] effects and special effects were being done, so everything really comes together in the last couple of weeks. For that you really want to have the most choices you can have. And that's how we came up with those decisions saying 'in those heroic moments, let's pull back on the orchestra. And for danger let's go for the orchestra a bit more.'

VH: In one of the more intimate moments of the film, you treat Stark's revelation of weakness (when he says to Pepper 'I don't have anyone but you') with warm chords and gentle timbres. Did you at any stage consider composing a love theme for Pepper and Stark?

RD: That's a very valid question and that scene is actually the start of the love theme. And what's interesting is – and this goes all the way back to 'starting early' – what I did is: I actually wrote a love theme [laughs] that in the movie become the 'un-played love theme' – because they never really get together, do they? It's the balcony and also when he asks her to remove the heart, switch it out. They have their moments, but it never finishes really. There is no resolution. I wrote a beautiful love theme that only ever gets hinted to. [Laughs] And again, it's part of the colour too, it has a clarinet, it has a vibraphone in there, and then the warm strings, but as soon as you just hint at those colours – they're never used anywhere else in the movie – you get that sense 'oh, here we go, here we go, here we go…' – and then it's gone again. It's interesting that I never got to play it out fully. – But it does exist.

VH: Towards the end of the film Stark quite openly muses about having a 'superhero' alter ego. He then proceeds to announce to the press that he *is* Iron Man. How

did you decide as to how to treat the 2-in-1-character Stark and Iron Man as separate?

RD: In a way, he is one [character] because in his private life he behaved like a rock star and when he put his suit on, he still was pretty reckless if you think… He's all over the place. Especially when he is just defining [himself] –I mean this movie was really about him figuring out what he is all about. – We have different thematic material. For example, when in the beginning of the film he is driving his car [cue 'Merchant of Death'], that theme is not used for Iron Man at all. That's literally just for him being the rock star, driving his Audi. But there's still guitars in there and so the connection of 'the rock star' is there.

VH: Compare to its Marvel cousins, *Iron Man* feels more 'realistic' or plausible, doesn't it?

RD: Absolutely. And I think we successfully created a different score. You don't go like 'oh year, here's just another superhero like the others.' I give John Favreau a lot of credit for that. He had this vision – and I liked that very much.

VH: Do you think that 'understated' is adjective that applies to this score, where things don't quite get said..?

RD: I remember that when Pepper and Stark are together, those were the hardest scenes to write because they were so gentle and delicate. And because there is no resolution, you could never really open up, you could never make it into a love theme. Also, sometimes in the movie – and this also goes back to the way things get written nowadays – there is great dialogue, which this movie had, and there's great acting: the music doesn't need to do that much. Of course, as composers, if you ask us to write music, we go all out and write these lush melodies and go crazy – but then you stick it up to the picture and you go 'oh wait, that is killing the dialogue right now', or 'that's way too busy'. So you start literally stripping things out: less and less and less and less. But at the end of the day you have to do what serves the picture best. So that's why these scenes ended up being so delicate.

VH: Is there a higher level sophistication in filmmaking now, in terms of visuals, dialogue, sound?

RD: Can be, yes. That's why actually we sometimes record some of our thematic ideas: because they do play well on the album. But then in the movie we don't really have room for that. You see that all the time. I think nowadays people like to have the music less busy and let the dialogue do it's thing.

VH: Music has more of a complementary role…

RD: Yeah. We get asked that a lot. – Actually, I have one more thing to add in terms of your subject of melody. […] What I also struggled with was that when I first started [laughs] I actually wrote a gigantic hero theme with a long melody. And John listened to it and said 'you know, Ramin, I love it. It's really great. But I want to push more towards the guitar. This is not how I see Iron Man. I want it more to be like a rocker.' And that's how we ended up with more of these rhythmic, motivic elements [sings an example]. Because once I steered more towards the guitar, I realised that if I played the melody on the guitar, it's going to sound like *Top Gun*. It's going to sound way too much like an 80s movie. It would have sounded dated. – I loved all the 80s music. And I loved, as an example, *Top Gun*, which has a beautiful theme. But again, that's something that would have not worked in our movie, just because of the time we're in now. So that's how, all of a sudden, I felt myself restricted to cutting back melody for the purpose of making it sound modern and rhythmic and cool and hip. And that's how I came up with playing these rhythmic, motivic things. That was a very interesting discovery I made through the process.

VH: That is very interesting to hear because at the core of my research is the notion that melody is disappearing in film music…

RD: Unfortunately it is. – I don't want to say unfortunately, because [the *Iron Man* score] works incredibly well in the movie. I feel I still pulled it of and that it's a different type of music. But, yes, it really changes how music gets written

nowadays. Sometimes, these lush, long melodies are very hard to place – in a lot of movies nowadays.

VH: Although melodies used to be what's most memorable about film music. For example, John Williams is known for his themes…

RD: Oh my God, exactly! I love it. I absolutely love it. And one genre where you can still pull that off is animation movies. Animation is still an area where I feel you can go wild with orchestration and lush orchestra – that's still one [area] where it's almost over-the-top if you put it in another movie.

VH: Why do you think you can get away with it in animation movies?

RD: I'm not sure. Perhaps because it's not real? For example *How to Train Your Dragon*. I watched that movie and it's got an amazing score by John Powell. It's big orchestra throughout – and I think it's just amazing.

VH: It might perhaps also be because these films tell fairytale-type stories?

RD: Absolutely. Yes.

VH: Which obviously, movies like *Iron Man* have moved away from. Without a clear-cut 'good' and 'bad' – and villains not revealed till later in the film…

RD: Exactly. And another good example is Hans' *Batman* movies. That's very modern and 'real', the way that Chris Nolan [dir. *Batman Begins*, *Dark Knight*] created those movies. – He does not have those giant themes in there. It's this two-note theme. It has such an impact – but it's two notes.

VH: *Dark Knight* is another of my case studies. And the 1-note Joker theme is something to talk about…

RD: Exactly. It's incredible. *Batman* was two notes and with the Joker Hans was able to take it down to one note. So where do we go from here?

VH: It goes back to timbre also…

RD: Right. And what I love about it is that it's different. It's immediately recognisable. It's original. I think it's amazing.

VH: Thank you very much for this interview.

RD: You know, it's interesting talking about these things. Sometimes these things are done, either subconsciously – or you just do it as part of your workflow or your creative process. And you don't really sit back and really think about it all again. Like the Pepper theme… it's good [talking about this].

II.2 – Jeff Atmajian (interviewed on 14 June 2011 in person)

VH: In your recent seminar at the Royal College of Music, you said "There are trends in film music that make me want to slit my wrist." I wonder if you elaborate on that?

JA: Well, I think most film composers are frustrated because they sent allowed to be as inventive as they like to be. Even Gabriel Yared was saying to me [Jeff had just come from recording sessions with Gabriel Yared *In the Land of Blood and Honey* (U.S. 2012, dir. A. Jolie)] 'Oh, I can't write anything but pigeon eggs.' – but thankfully even Angelina said 'Oh, I know Gabriel found it hard cause I asked him to write more minimally - cause he has so much music in him.' She could tell how amazing a composer he was. [...] So for composers – they have a voice and they want to express this, but we're more reigned in than we used to be.

VH: Why is that?

JA: Well I think it's because the appreciation for the music as a character in a film has altered - in terms of style of filmmaking. I think filmmakers don't know so much how to let it be a voice in a film. The director as *auteur* – you know, where everything comes from them. Obviously, they often finish their films and don't consider leaving space for music. If you think of somebody like Hitchcock or Sergio Leone, the way they would shoot long scenes [...] where they knew music would be the only thing that would make that really work. They left that space for it. I think that everybody these days wants to say that they're hip, edgy. We live in a society where in a weird way it is cool to say, 'I can beat you up because I'm cooler, I'm hipper.'' There is this whole thing about edge – so I think that music – and melody in music is considered a little bit older fashioned.

VH: You think that people are afraid of clichés or their work being considers clichéd?

JA: I think so – they think melody makes it seem to much like 'film music' or something that is out of the style of ... You know, a lot of directors and

producers only know pop music; and as you know a lot of pop music doesn't have a lot of melody in the last thirty years. – I hear older rock and pop guys when they talk even about the demise of melodic stuff.

VH: Because arguably melody has disappeared from pop music as well in the last twenty years.

JA: Yes - and of course rap music when it came along... Is completely divorced from it. In many ways there is only a rhythmic element. And melodies such as they are, are usually just fragments. You know long lines in anything these days in anything: Twitter, Facebook, text speak [SMS] they're not about long lines.

VH: The way we converse has changed entirely...

JA: Very much so.

VH: You mentioned filmmakers as *auteurs* who leave no room for music in what they consider finished films. Is there an expressive layer being missed out?

JA: I think it's just a stylistic choice. I can't fault anybody for it. I might find it frustrating or even frightening, cause I might think, 'my living is being extinct.' I mean ever since seeing the Tower Records, and Virgin, and HMVs, and Blockbusters closing and all that - the writing has more than been on the wall that the way music is entered into people's life is very different. I think with anything in life, the less there is of something or the harder it is to get, the more value it often has. But music is so ubiquitous that now anybody can walk around like you and I do with their iPhones and have as they say ten thousand songs on it. Nobody minds that the quality of the audio is not good or that even that the quality of the very song might not be very good.

VH: You mentioned this in your seminar: people's infatuation with low-quality sound recordings (mp3s) and inadequate playback devices. - Then again the film studios these have to cater to consumers - and factor in that many consumers may watch their films on a laptop...

JA: The media devices have entered our lives in such way that in the truest sense of the word they're no discreet, meaning that they're not dedicated to one place. You can have it with you at any moment and any place. Any therefore the [film] product is tailored to the fact that you may be standing in line at Starbucks and while you're waiting there for one and a half minutes, let's see if we ca sell the idea to people that maybe they should watch our film or play our app – and that never existed before. And so we're re-training the human synapses, I think, to process much shorter lines. The number of times I hear people try to suggest that the reason I should buy a book of this and that - is that it's short. Mahler and Bruckner being exactly the opposite of that, I don't know if there was ever a time when people would have said 'You should listen to Mahler because it's really long!'

VH: While melodic lines may have become fragmented and shortened, composers seem to be more ambitious these days with texture and timbre. We may have lost an aspect of orchestral film music, but there'd are other aspects being nourished?

JA: Well, Thomas Newman actually told to me how he very cleverly created a sound concept of his own voice that didn't rely on melody. It actually was just soundscapes of bits. Whether it's ringy piano things or marimba-y things. And I think that part of the reason that's being done is because they don't have the option of being harmonically or melodically adventurous. So they're having to look to other elements. Whether that's using synthetically created sound design or orchestral colours.

VH: To satisfy their own artistic pride?

JA: Well, remember Schönberg: creating a melody out of colour rather than notes moving [Klangfarbenmelodie]. I think it's a 'needs must' thing. I think composers know they can't write a melody. And maybe they know they have to have a long held note. So some of them who are adept at it will cleverly use their synthetic palette to at least make that a bit more interesting. But for the thing

I've just done with Gabriel, or any composer for that matter, if they're writing for strings – and they probably didn't start out knowing that they were writing stuff that was going to be just held notes for a long time… (and by the way, that's not even a new concept. Ever since the beginning of even my career, I've worked on scores that have been like that.) …but as meetings progress with the director, more and more of their melodic moments got stripped away, [the director saying] "I like it when it just sits there." They end up playing string notes that just sit for a long time. With the sequencers, you can't do a lot of that but thankfully with a real orchestra – and if you know how to write for it properly – we can actually bring something back without going far afield from what the director wants. So it's almost like the sampled sounds are a disadvantage [because] there is just no way you can just sit there – it wouldn't make sense to introduce all the interesting little colouristic things like I have just done on this film – but with the orchestra you can. And the director … [to them] it doesn't intrude. The problem is, you see, directors don't have the imagination anymore. Dare I say, even some composers don't. So unless they hear something, they don't know if they're gonna like it or not. So it's what I said [in my seminar] about the two vanilla ice creams: if a director said, "I absolutely only want vanilla." But what they're *not* saying is, "It has to be bland vanilla." – It has to be vanilla but you and I both know there are *many* flavours of vanilla. So if you can give them a vanilla that's really amazing, but it's still vanilla … and I don't mean 'vanilla' as a pejorative term. – I think part of the reason why a lot of things are being lost is because nobody knows there is a middle ground. And in some ways melody has unfairly been thrown out, when I think there was probably a middle ground where it could be kept a bit more but still not be considered old-fashioned or conventional. And I think composers are doing their best to try and sneak that sort of concept in – and are starting to get away with it.

VH: And yet, it seems the vast majority of scores these days lack recognisable melodies, tunes, themes. For example, Christopher Young's score for *Spider-Man 3* features recurring themes, but they are low-profile; and mixed so low in the soundtrack that the audience hardly notice them.

JA: That's a very good point you're bringing up: having themes that go with characters is almost completely forbidden now in terms of it being a melodic thing. You know, from the corniest, cheesiest 1920s [sings boldly *bum-bum-bohm*]. And "now the sweet high violins for the little darling girl" [sings softly *dah-dee-dah-dee-dah-dee-dah*]. That definitely you can't do. But in a weird way I notice when I'm on sessions: I hear the phrase from directors, "Ah this is such-and-such's theme or motive." And I even have composers say that to me. – When I think there's hardly anything there. Buy for them something very minimalistic, just the fact that it was a brass chord… they will accept something very minimal being allied with a character as a theme. And part of that goes back to the filmmaker wanting to believe that their film is complete. That they don't need music to add that extra element. And it's considered cheesy now to have [recognisable themes]. Because it is a convention that's been around for so long and young people don't relate to that anymore.

VH: Which goes back to the notion of cliché.

JA: And also that fact they haven't developed a listening ability to link these things. I think when I was here last time I said something about how music – and only music – can say something that there's no way the film could [otherwise] say. If two people were talking in a scene and if you play a certain melody, it might tell you that the woman is thinking about something even though she's saying a different thing. She's might say, 'I love you. I'll never leave you.' But the music is saying that she's thinking about the man she was with last night and we know that's whom she really loves. You can't do that in a film unless if you have a cheesy little flashback bubble above her head with a little picture of the man that she really loves.

VH: This came up at a recent seminar I held at the London Film School. We watched *Vertigo* – and Hitchcock's use of thematic material juxtaposed with characters was completely lost on the students, most of whom are not musically literate.

JA: They're not even familiar with the sound of the orchestra, let alone melodic material. That's sadly something that's not going to be changing in a while. If a

language [dies] because there's nobody around who understands it when it's spoken, then as the ones who are trying to write in that language are the ones having to adapt. So we look for other ways. But *Vertigo* is such a brilliant score and a classic example for how music and film are on equal par.

VH: You mentioned how filmmakers may lack the sensibility to know what kind of music might work for their film. Do you find that composers of a younger generation come from different backgrounds or lack musical training?

JA: Quite a lot more. Pop stars have often been drawn to films or brought in on films. Before the 1950s it might have been a big band song – but because that kind of person is feeding the stream of what might become film composers, they come with the kind of limited knowledge of the kind of music they want to write. It starts to breed out the experience and depth of knowledge in film scoring.

VH: You traced the history of film music in your recent seminar. Although the heyday of compilation pop scores is behind us, do you think pop music has had a lasting impact on film music?

JA: It has, for economic reasons. Partly also because producers want to appear young and cool – because Hollywood is all about youth. And films being focus-grouped to young people: the things people often relate to is pop music. It's often only because Hollywood is still generally conventional in nature. They will still go to the orchestra for that kind of score. But this whole discussion is ultimately predicated on the fact that film [exists] because somebody wanted to bring their vision or story into a certain medium and they wanted to present to the world. The age-old concept of art and commerce together. It's much more than being artistic: it's a business commodity. It really is. And so marketing trends are what dictate why something is going to be made to sell. My point is, I would like to think that orchestral music is going to stay in films, if for no other reason than that it exposes people to orchestral music. But ultimately I can't argue for it because if the product that's being put out there, if the ultimate goal is to relate to society, then you have to do what does *that*. – What saddens me is

this attrition of experience; that the vehicle could still be put forth out there in a way where it still was of a high caliber and still could be a popular commodity, but it isn't because you get people that are completely ignorant coming in that only have very singular knowledge, [who will] throw out stuff that needn't be lost, thinking that a film can only survive if it has this much nudity in it, or violence, or only pop songs. And thankfully time and again human nature proves them wrong: when a *Blair Witch Project* comes along out of the blue. And then they try and copy it and none of it works as well. It shows you that the people want something that's got some originality and that is genuine. And I still think people will respond to that. The number of people who I heard comment on Rachel's [Portman] score for *Never Let Me Go*, which is fully orchestral. When it all works together and it has true integrity behind it, it still will catch people's attention. – When Angelina was at the sessions, she'd never worked with an orchestra like that before and she *loved* it. And if she were exposed to that more, I think she would continue to incorporate it. But its mostly that's it's not part of people's psyche. And there's so much music out there that is not of that ilk; that's crowding up people's ears and their time and their life… It's kind of like saying orchestral music has been around for a long time and it's okay if that's being ignored. it had a good run.

VH: There have been a number of recent scores that were orchestral but had a distinctly 'pop' flavour. For example, *The Pirates of the Caribbean* or *Tron; Legacy*, scores that perhaps make orchestral music more palatable to a wider audience. From an orchestrator's point of view, would you feel limited, having to compete with walls of synthesizers or rock guitars? Would that affect how you might work?

JA: Well if it's written well, it doesn't compete, it complements. Of course it affects the way you work, affects the palette, the colours. A lot of playing musicians and orchestrators and copyists will say that kind of music shouldn't exist because all they care about is their job. And of course I'd like to think I can still have a job. But ultimately, I'd say again if something is done right – and that's a subjective term – then that's all that matters. I think mixing synthesized and orchestral sounds, if it's got art to it and skill: that's great. Michael Kamen was great at

doing that. And I think a whole film done with just synthesizers is fine too. If they're not just out of the box, 'I held down this note, because I don't know how…' That's why I was saying to the students, learn your craft and hone your skills because then when you work, you come at it from a higher place. Also I think the reasons why so many [of these skills are being lost] is that the tools, the 'keys to the kingdom', are available to anybody. So an idiot can fly the airplane.

VH: You said this in your seminar: "You can have the keys to the kingdom, but that doesn't enable you to rule the kingdom."

JA: What's hard is when you work as an orchestrator for someone who might have got a job because they were good with technology or they knew someone… they've got all this gear in their studio but they don't really know how to use it except for pressing buttons. And yet they still want an orchestra. Sometimes I wonder why they still want an orchestra. And then I have to adapt to it and make it work, have to deal with the fact that they don't realize that woodwinds and brass have to breathe or that you can't get certain sound when everybody is playing quietly – which is why sometimes we have to record separately, so you can then just turn it up later. Or that string parts the more you divide them, the less strength you get out of them [with a sampler, the more notes you play, the richer the sound gets]. And the balances they can create with their equipment in their home studio are completely unrealistic compared to what a real orchestra is like. Which is another reason why more and more things are being recorded separately. Then you can go back to creating unrealistic balances.

VH: This is a real problem, isn't it? The way audiences are conditioned to perceive music as 'real' or 'realistic' in terms of sound and balances, even when they are not. Audiences getting accustomed to, say, a Hans Zimmer sound, when his scores don't necessarily sound like a 'real' orchestra.

JA: It's like people living in a home that isn't built of the same quality, or we have clothes that aren't good quality, but we get used to them. And either you actually begin to prefer them, because they're what you're used to or because it's what

everybody has. That saddens me, because I have nothing against what, to say his name, Hans Zimmer might do, but I want to see it done really well. If *Pirates of the Caribbean* is a hybrid of rock and pop and orchestra, that's fine, but I'd like to think that it's orchestrated really well. When it's sounding clunky…

VH: I didn't mean to criticise him at all, it's just that he is someone who has been a pioneer in working with technology.

JA: And he does great things. I would like to think he being the top of game. I want to think that all the elements that go along with him are also top of the game. I don't mind recording things separately – but the budgets haven't come in line. They're treating us as if we were doing things the way we used to do them. And the people who are spending the money have to realise that they getting something that works really well but that sometimes might cost more. So we're being forced to record a lot more music in less time. And in one way when I work on these scores as an orchestrator, it's a lot easier: I don't have to come up with all the complex textures. I think 'oh, this guy is just repeating the same chord over the next twenty bars, or the same rhythmic patters – this is easy for me!' Or he is recording string separately from the brass: I don't have to worry about balances or anything. I could actually get really lazy. In fact, I have to work hard not to let it dull my skills.

VH: You described your workflow, working from MIDI files that the composer's sequencer outputs, transcribing these into Finale. Yet you said you like to listen to the composer's demo. Sadly, the demo is what the final recording will be measured by. Don't you find this limiting in terms of what you can actually contribute to a score?

JA: Well, it's limiting because everybody gets used to [the demo] and they think the demo has things in it that it doesn't. A lot of times I've heard composers say, 'Just listen to my demo." And I think, 'It falls way short there.' – 'Oh, in my demo, the brass were doing this' and I say 'No they weren't.' – and then they listen to it again and realise [they were wrong]. They believe something was happening. And so sometimes I might have a struggle with a composer because

they think in their demo the music was doing this, this, and this, and I don't know why they're hearing it that way.

VH: The composer has an idea in you mind that they are projecting into their demo, but that isn't actually captured in the demo for an outsider to hear.

JA: When you're an architect designing your house, I really need to see a model of your house. And the architect doesn't do that – he just wants to build the house. And eventually you end up saying to the architect, 'I really need you to build me the house and then if I like it, I'll know that's what I want.' So let's say the architect, who is not a person who understands how to build frames that are strong, where to put the nails so that nobody sees them and all that, is the one who has to build the house before he can sell his design – then [the customer], once they get the house they like, they get so used to that house that when the builder *builds* the house, they don't want it that way. Even though the builder might come in and say the only way this house is going to stand is this or that or you shouldn't put that wall there – that's the frustrating thing. The composer generally doesn't have the time or the skills, or even the fact that the demo process and the tools he uses aren't the same as the orchestrator's. They can't get the same structure and nuance out of it. So once they get approval and everybody's gotten so used to it, they've limited the final performance, the orchestra, before they've even walked in the room.

VH: It sounds as though we are compromising a lot. Everybody is being compromised by the process?

JA: That depends on what you call 'compromise'. It could also be rephrased as 'everything is very collaborative', when there is a lot of input coming in. The problem is the input is coming from people who don't understand how it's being done. The creation of a score is adulterated by people, who have agendas that are different, or who lack of knowledge but think they have knowledge. I'm certainly not sitting here and saying the filmmakers are stupid, the composers are stupid… it's just that there's so many more people that are creating this thing, for various reasons, and they don't know how to or don't have time to or

aren't willing to listen to each other enough. I think that's a problem in relationships in general in society. It's actually a miracle we do all these things as well as we do all the time. […] On a film I worked on not long back, the engineer seemed to like saying, 'this should be that, that should be that.' What really frustrates me is when somebody comes in and he hasn't gone and lived through what we have lived through and they just comment. But the thing that really gave his hand away […] was a decrescendo in the orchestra. The music editor, I, the composer all thought it was perfect, which it was. But [the engineer] kept saying "I don't think it should decrescendo there." And the music editor of all people would be the one to know how the music is meant to work with the film. When three of us […] are all saying it's fine and he even the next day is making comments, I'm thinking, "your heart's in the wrong place." And what frustrates me, talking about compromising, is that often people will listen to the opinion of somebody else, who comes in without having been fully on board and they impose what they want […] and other people will listen to them.

II.3 – John Frizzell (interviewed on 5 August 2011 by Skype)

VH: You embraced synthesizers early on in your career, working as Sakamoto's 'synthestrator'. Do you work much with synthesizers today?

JF: Oh, tons, yah. Well, I don't know that 'synthesizer' is even the right term anymore. I would just call it 'music technology'. I think the term synthesizer is loaded. Nothing that I work with no is purely derived from an artificial source and very little of the end product is ever derived completely from a natural source. And so everything is sort of a mixture between the real and the unreal – if those are good terms. And actually, considering that statement, I use very few 'synthesizers', probably next to none.

VH: Back in the early days, the 'Synclavier' that you used, would this have functioned as purely a synthesizer or an early sampler, or both?

JF: It started as a frequency modulation synthesizer, but it rapidly turned into the pioneering sampler. It was really the first sampler, and it was primarily used as that. Although, when it was initially produced, it had a revolutionary FM modulation synthesizer in it.

VH: And when you first got your hands on it, presumably it wasn't your own?

JF: Oh, good God, no! I think they cost about half a million dollars back then. They were really, really expensive. I basically worked at a recording studio and I was basically the Synclavier's caretaker. They were very cantankerous machines and it as kinda like caring for an old crazy uncle that could only talk to certain people in the room. Programming it was challenging, it would often break down, and it had to have someone as a full-time baby-sitter pretty much. That was my job: baby-sitter.

VH: If you can remember back to then: would people use the Synclavier for its expressive capabilities or also, perhaps mostly, because it was a cool new toy to have and use?

JF: I think those years were really about discovering what audio sampling was about: 'what can we do with a sampler? What can we do by taking a sound and recording it and manipulating it? What can we do about pretending that a sound is real?' Imitative synthesis and creative synthesis / sampling.

VH: If we fast-forward then: Nowadays we have affordable samples libraries like EastWest and Vienna and lots of virtual synthesizers that are relatively cheap.

JF: Probably one thousandth the price or something.

VH: Do you think that's a problem, in that, arguable it allows far more people to use this technology [and become film composers].

JF: I think it's the antithesis of a problem. I think it's fantastic.

VH: In what way?

JF: In the same way in which the invention of the printing press was good for literature. You see what I mean? Before the printing press just simply having the power and the devices to create a book you had to have the monks and expensive ink and very expensive paper. So the church ended up manipulating and controlling everything that was written. But the printing press freed the world and allowed more and more people to express things, and then cheaper paper and cheaper pens allowed more and more people to write. The other thing is: When less people can create something simply because of a monetary stature, their talent is equated with and decided by that monetary stature rather than their talent. And so by leveling the playing field and giving everybody a paper and pen, so to speak, you've essentially leveled the playing field where the talent will rise.

VH: Early on in your career, you worked with James Newton Howard. And you shared credit on a few films?

JF: Yeah, I worked with James on quite a few things. I did two films with James and James mentored my early career and really helped me become a screen music writer and taught me the ropes.

VH: In a recent interview,[1] James Newton Howard talked about the importance of production to his music. In your own music, how important is production to your workflow? For example, for the cue 'Santos Dies' from *Ghostship*, were the eerie vocal effects, highly EQ-ed and mixed in the distance, planned up front–or later in the mix?

JF: I would say I planned to have a voice do something interesting in there. I'd have to look up the name of that fantastic singer again – but I didn't know exactly how it would come out. She emulated a Bulgarian traditional sound with the glottal stops. And I didn't know if it would be usable. You never really know what you're gonna get. I think that one of the positive ways to create something is to do some things you know are going to work and then take some chances where 'this might work, this might not.' And you gotta be a little creative. It's a lot like cooking: a good chef might go in and say 'well okay, I'm going to wing it s little here. I know that this will work and I'm going to try something a little experimental here. And if it works, it's cool. If not, I got something to fall back on.' So I think you have to be both controlled and also know where to improvise.

VH: If I may say so, I really liked that particular cue. It sounded different.

JF: Well, that's the thing: how do you make a score stick out and have a uniqueness that is a positive aspect of a film? It's challenging. Sometimes I find I write a cue that does sound unique and then you get to the [scoring] stage and just the balance of the stems can make it become a little more 'same'. In other words, the definition gets gobbled up. And one of the things that I'm learning, having written more now, is: Don't try to feature so many things. Try to really have you score focused, and each cue focused so that your intent is clear, whether consciously or subconsciously, to the viewer.

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[1] Reynolds & Brill (2010).

VH: I guess it's fair to say you've worked on a number of horror films?

JF: Yeah!

VH: Starting arguably with *Alien Resurrection…*

JF: Sure, that was the first biggie.

VH: … which got you noticed internationally and launched your career…

JF: Yeah, it was a big step for me.

VH: Can you talk about what you experience has been as a composer in this genre?

JF: Well, it's a fun and challenging genre. I think the good things about writing music for horror films is that you get to do some very strange and weird sounds. And in that respect it's a lot of fun. A no-holds-barred approach can be advantageous. And you get to experiment with just a lot of great things. Some things that can be challenging about it is just the level of intensity that you work with and the emotion that you're surrounding yourself with all day can be a little exhausting. And you have to know how to prepare – and if you're writing a very loud score, you have to know what levels to work at during the day so you don't burn out your ears and burn out your mind – and how to keep up your intensity while you're writing this. There is a lot of challenges and a lot of fun things about it. I think doing it all the time would be too much but I think it's great to write scary stuff.

VH: Where do you draw inspiration from when writing for horror films?

JF: Fear and greed. [laughs] I think that my inspiration for what I write is that I perceive my job as part of storytelling. I'm part of a storytelling team. I believe deeply that storytelling is a critical aspect of human culture. Some stories are great while you just watch the story. Some stories are transformative to a whole

society. Those are the exception in a few, the very best of the best. But most of them are just a good bit of escapism. And there's nothing wrong with that too. But I think that being a storyteller has been around for a long time. I'm sure that fifty thousand years ago, there was someone who had a similar job than mine. They were probably banging bones together around their campfire. And if they were really good at banging their bones together at some point in the story, they were given and extra bit of bear meat or whatever they were having that night. And that was your place in society. So it's really no different: you're telling stories, and I really like stories.

VH: In listening to some older scores of yours, for example, 'Ripley meets her clone' from *Alien Resurrection,* these scores, compared to more recent scores seem to draw on a smaller dynamic and pitch range.

JF: I don't think things are more extreme [today]. I think that the sound palette… it's very strange what's happened in the last few years: It seems like the sound palette has become more restricted. There is very little use of woodwinds and brass right now. And the technology has dictated a lot of repetitive note using because of all the libraries out there that do repetition so well. I actually see the opposite: I think there's less dynamics now. I think scores are – because production is so much more about making scores these days. I think one of your questions [that you sent me in advance] was "Is production part of composing?" I think that making a score now is a lot more like producing a record. And so you're using compressors, you're using all these plug-ins and devices and audio processing units that normally were kinda left out of scoring. And so they – especially the compressors – tend to make scores less dynamic.

VH: And yet, some of the effects in, say, *Ghostship* are on a different expressive level than *Alien Resurrection.*

JF: Well, that might just be the way films are dubbed, too. I'll think about that more… I don't know if I have a good answer.

VH: Is it a big challenge having to compete with sound effects and dialogue these days?

JF: Well, I think it's the way you phrase the question. I think if you think of a film composer as [someone] having to compete then yes. But if you think of yourself as part of the storytelling team and you find your place and you know that every piece of music has to contribute in its best possible way to telling the story… now, if that means being invisible, it means being invisible. If it means being in your face, it's in your face. But when you try to compete, it becomes a problem. And when a composer just wants to be heard that's when it becomes a problem for me.

VH: Your point about the composer being part of the storytelling team is compelling. I seem to remember you made this point when we first met in Cologne in 2009.

JF: Well, you see we're sitting here using words to talk about music, which is a bit like dancing about architecture. And so the dissection between what we say and what we're perceived as and what we mean can be very different things.

VH: The cue 'The Base' from *Whiteout* features a melody in medium-low strings weaving in step-wise motion, accompanied by counterlines. The tone is cold and stark. Do you ever have difficulty getting such melodic material approved by directors/producers?

JF: Well, that's Joel Silver and Joel loves a good melody. Yes, I think that there is a resistance to melodies today. And I think that the cause of that – and this is just a crazy theory of mine, which probably most of the things I say are – is that because of everything being digital now, and films are seen so many times over and over in the cutting room. There is no rewind time on the dub stage. You're able to switch and watch the film so many times while you're making it over and over and over…and the music is done earlier and so much more processed than it used to be… I think that filmmakers are hearing their score – and I'm talking about directors, producers, and editors–are hearing the music many, many more times. There's much more repetition than there used to be. And so if you take a

score that has a theme, if you play it five times, in today's world that seems to the filmmakers like a lot. But it's not a lot to the viewer, because they won't hear that music five times, because they only see the movie once. My theory is that the digital way we work has changed people's perception – because of the repetition – and made things seem more repetitive than they actually are perceived to be by the viewer. And that's a bad thing.

VH: Have you ever found yourself in a situation where they're asked you to remove a melody or where they objected to a theme you had written that was perhaps melodic?

JF: Oh, I've had every situation imaginable. And sometimes being too melodic is completely the wrong thing to be. You know, I think that really great scores can be just textures and sounds and shapes and I love writing that way too. And I think you have to find what's right. Again, this goes back to wanting to tell the story. There have definitely been times where I experimented with being melodic and that was the wrong idea, and [I] got back and got back and finding less melodic choices that were the way to go. I think that… this is sort of on the subject: in the way that Marlon Brando changed acting, where film actors were not very different from stage actors–in other words, they made expressions that were visible from the back of the house–and Brando to me was the guy who realise that you could twitch one little muscle and that's all you needed to do on film. He revolutionised film acting. I think that we've seen a transformation recently with film scoring: that movie doesn't have to be like opera. Maybe this lack of melodicism and texture and ambiences is really a sophisticated, evolved approach to expressing things in a more intimate way. So it's all good things, I think.

VH: One reviewer praised your ability to musically capture the wrath of God in *Legion*.

JF: [interrupts] What happened when I was writing on this score: God actually visited me. He became apparent in my writing room and helped me write it first

hand. Actually, I should have put God on the cue sheet. But I didn't know how to send a check to him.

VH: Thanks for that. On a more serious note, the reviewer / fan in question thought your score had captured the mood and intent of the film so well that he didn't even have to see the film.

JF: I actually wrote that review myself.

VH: …but you were talking about storytelling before…

JF: Oh yeah, yeah, yeah. I'm really flattered if someone perceived my music that way. I think that John Williams' score to *Jaws* say 'shark' when there's no picture. But I think when you watch it with the picture it says 'shark^2.'

VH: Doesn't it say 'shark' only once you've seen the film?

JF: Ah, good question! Now we're getting to the universality in music, not just film music. Is a minor scale sad or is it social? I'm of the believe that there are innate meanings in music that go beyond culture. And I am of the believe that a minor scale is physically and naturally sad and that a major scale is physically and naturally, because of the mechanics of the physics and how the scale is created. But it's really easy to argue both sides of this. So I think that *Jaws* is shark music whether you've seen the film or not. Okay, let me refine that a little bit: I think it 'predation' music.

VH: Do you feel that traditional musical training like you underwent benefits aspiring film composers anymore?

JF: I think it has benefited me. I definitely think it benefits a film composer, but if that's the only education they have, they can be limited. In other words, if you take someone who has only studied traditional European classical music and you take someone who has studied a broad range of everything else, the latter is probably going to do better as a film composer. But the person who is going to

do best these days is the person who has both. You have to remember that film storytelling, in my opinion, is mostly based in Western culture and the structure of our storytelling from the 19th century. There is a Western-ness to much of film, or at least to commercial film. We are sort of dancing around this question too, delicately, right? I think that understanding the concept of opera, the concept of recit and aria, of thematic use… you know, if you haven't see *The Magic Flute*, you're probably not going to get the core of what Western storytelling is. – But I think there's probably great film composers who have never seen *The Magic Flute*.

VH: What are the challenges and pressures you perceive that most affect film composers in Hollywood? Have these challenges and pressure changed over the years?

JF: I think that with the different types of outlets for films – a lot less people are seeing films in theatres, they're seeing them on their iPads or sometimes on their phone. They're starting them on their TV and then finish them on an airplane… I think that the experience is changing rapidly. I think that not just composers but everyone is doing a juggling dance trying to figure out how to best tell a story in the technology of today. And so I think staying in touch with that and responding to the way things are happening is really important. The one thing I know for sure is that it will get different.

VH: Do you perceive that as a threat to your work? Or how do you feel about it?

JF: No, I don't perceive it as a threat at all. I think you just have to be willing to be supple and I'm sure there's people in the beginning of the 20th century writing opera that saw the beginnings of film as a great threat–and certainly they *were* when they were silent, unless they were going to play the piano in the movie house. But things just change. If I had to take a guess–and I'm going to take a big guess right now–I'd say the my son, who's seven years old, will see stories in holographic images projected in some sort of theatre and that 2-dimensional storytelling is on its way out. When holographic storytelling first comes out, [it

will bring about] a Renaissance in going to the theatre, seeing holographic films in a communal space. I hope it's soon, I hope I get to see it. […]

VH: You have scored a wide range of genres and recently scored programs for television and also documentary.

JF: I'm actually working on a TV series today. It's called 'Secret Circle', it's with Kevin Williamson, someone I really enjoy working with. It's about witches and it's a really great show. It comes on the air September 15th and it's got really fun music. It's kinda dark, but it's kind of emotional. It's not really horror. Some parts are scary and I think it's gonna be a really cool show. […]

VH: Whereas composers used to 'graduate' from radio or TV to film, can today's composers comfortably move between media and genres, i.e. between film and TV and between horror / comedy?

JF: I certainly think so. It's very important to me *whom* I'm going to work with and working on subjects that I like to work on. Again, I think that's part of the suppleness: the world is evolving so rapidly that you can tell a good story in many mediums these days. […]

VH: In you opinion, what is the state of film music and where is it headed?

JF: 42. I think that's my answer. 42.

II.4 – Klaus Badelt (interviewed on 10 November 2011 by Skype)

VH: In a recent interview at an ASCAP convention you said your way into film scoring was via filmmaking. How do you feel your understanding and appreciation of filmmaking has helped you as a film composer?

KB: I think it's essential that you are a filmmaker first and a musician second. I see the composer being truly part of the filmmaking process. I don't see the composer as an external unit, used as a service so to speak, asking 'Give me the final picture and I'll write the music and give it back.' – I know that it does happen like this and very successfully so. In fact, when we were sitting down for *Gladiator* and I had written this stuff with Lisa Gerard and I was sitting with Hans Zimmer (Lisa, thank God wasn't part of that meeting) and Steven Spielberg came in and he was producer on this and we played him this stuff for the first time. He had very different expectations and he said that he loves what Alex North wrote and he as expecting the standard 40s/50s-stye sandal movie. The meeting took a few hours. He did understand at some point what we were aiming at and he grabbed his heart and said 'I do understand now. I feel it.' I was relieved that we had gotten away with it. […] He said: 'It's amazing that you let me be part of this process. Let me tell you how this works with Johnny [John Williams]: He comes to me in the cutting room, we watch the movie, it's spotted, we go through it together, and I don't see him for six weeks. Then I go to his house for a dinner and Johnny plays me the themes on the piano.' And then he doesn't see him for another few months and then they see each other on the scoring stage. And that's the way he has done movies with him. And I find this fascinating, but it would not be possible for me. […] I have a very different approach to film scoring. For example, I have a specific separate mobile study to move wherever the director is. If he's editing at Warner Brothers, let me move in there too, have my studio next to the cutting room. So I can hang with them, sit next to them, not talk about music at all maybe. Just get a feel for what's important, how the director feels. I go to the set if I can. How does he direct his actors? What's important to him? And nothing can replace that feel. […] Music is part of the process. I play them early stuff and I love to make mistakes and to learn from them. I might often be more critical than the director. – I had this

once, where they were happy with what I played to them. And [it was only when I played my music to them] that I stopped before it was finished [and asked] 'please let me make changes.' My background was in filmmaking. I remember saving a lot of money as a twelve-year-old to buy a super-8 film camera to do short films […] That's what I loved to do before I had my first keyboard. I love film. I love film and the function of music in film – I just happen to be a composer and write music. I'd probably be a terrible director.

VH: On your website, you state that it is important to you to tell a story, saying 'if you come out of the theater inspired, feeling your life has changed even slightly, I couldn't have done better.' Where do you see the composer's role and place in the storytelling team?

KB: That is an important question to ask yourself. In general, music – if it's done right – does a lot of the storytelling. It does a lot of the 'caring-for-a-character' part. I think it's a very simple formula: If you care for the character, you can tell any story you like. The story can even have flaws. Look at *Pirates* – the story… there's some open questions I still have about the story. But it doesn't matter. You allow this to happen because you get immersed [in] it. In that same film, for example, I think it took you thirty seconds to fall in love with the character Jack Sparrow. And you would care for him, and he could do whatever he liked. He doesn't even get the girl in the end. Or in *Gladiator*, our hero doesn't just *not* get the girl: He dies. That's brave for Hollywood filmmaking, isn't it? But you base a story on making the audience connect with a character. Let's say to simplify the idea a film has maybe the first five to ten minutes to grab the audience or not. I had a film called *K-19*, which was originally four hours long, but it had the whole pre-story of the characters: how they grew up in Russia in the Cold War, their relationship to the military, their relationship to their country. […] We didn't have time to tell that in the movie. The music had to introduce the characters. And that happens a lot actually, that the music will give you an impression of what the characters are in a film. And therefore, [music] is a major part [in determining whether the audience will] go with a film or not. […]

VH: *The Pirates of the Caribbean* score is remembered by many for its catchy,

swashbuckling theme. And yet, the score as a whole is remarkable in its departure from a traditional orchestral score towards a more produced, blended sound. Could you tell me about the 'production value' and other musical considerations that influenced this score?

KB: That's not really specific to *Pirates*. I'm not a purist when it comes to production. I'm no saying 'you have to do it with an orchestra'. I'm a purist when it comes to the resulting emotion. Whatever it takes to create that emotion is right. I love synthesizers and I love electronics – as long as they don't sound electronic. I always aim to make everything sound organic. I think it's about the organic value. Then, of course, it's about what every film needs, how deep and big you want to make this sound. Production is definitely as important to me as the 'thematic' and it's part of the music I write. When I write, I don't only determine the tunes but also the 'look and feel' of it. I think the instruments you use and the sound you create is as important as the tunes you make. A good tune can be played on anything and it *should* be recognisable as such […] Nothing can replace a good tune. I get very bored if there isn't a good tune in whatever music I listen to. […] I always try to weave in thematic elements […] that act as a cohesive […] But production is an important part and it is part of my writing process. I love production. And I love working in such a way that production is part of my writing. My technical setup, and it's a *very* technical setup, is aimed to make production part of the process and not [have it be] a separate step. I don't write 'demos' and then produce them later. […] When I produce my 'score previews', I never hide behind [poor production]. I never say to a director 'it doesn't sound really good yet but once they're played I promise it's gonna be great.'

VH: My students often struggle to create what they perceive to be a 'realistic' sound by use of samples, when it appears that contemporary blockbuster film scores have abandoned the aesthetic of acoustic / orchestral scoring. Would you agree this is the case?

KB: I think I disagree. I don't think it's a tendency and I don't think a 'produced' sound goes against the pure sound of an orchestra. First of all, it's all about what

the film needs. But also, [the music] is there to serve the film and not to stand on its own. Where I mostly disagree is that you're suggesting that it replaces an orchestra. I never do even a synth-oriented score, which is aimed at replacing original instruments. For example, I don't use my strings samples (which I worked on very hard and long to make them sound good) to replace the real players. At the end, for example, my samples are often part of the final production, because I often do a blend of the real recording and my 'preview', just because I like the sound. […] I always create new sounds for each film. Often I create them before I start writing so I can use them to inspire my writing. Sometimes there are sounds that stay with you for several projects and you go back to them. […] Sometimes I have just the orchestra left. I build my method of writing in such a way that there are no one-way streets and no milestones where I cannot return. There are no transitions into other phases of production: the first moment I sit down and tinker of a piano sound […] it's the same production environment I use at the very end to mix the finished score. That has the benefit that I can always go several steps backwards and make changes. Because film means change. You're constantly re-addressing… You go the final dub stage and suddenly think 'no, I get it, now I understand.' Even in the finished, mixed cue I can make changes to a synthesizer sound or a melody. […] I don't have to rely on others to cut my music around and I have a lot more creative freedom that way. […]

VH: The cue "Swords Crossed" stands out stylistically as quite different. Would it be fair to identify the middle section as a 'rock riff' played by orchestra?

KB: [Struggles to remember at first, then recognises the cue when played on piano.] As a matter of fact, you're right and this was a one-off in the film. To create almost a music-video-type of scene, to have a rock piece with an orchestra in there. Which had nothing to with 'crossed swords.' I remember us working independently on this for a long and Geoff Zanelli worked on this a lot, too, to get the sound right. It went through many revisions. It can happen that there is a scene where we say we need something completely different, to create a whole new level of fun. And this was a good example for this film. […]

VH: What are your thoughts on the influence of popular music in recent

(Hollywood) film scores?

KB: I can only speak for myself. Huge. I'm not a big soundtrack buff […] I don't get my inspiration from soundtrack. If you asked me 'who's your favourite soundtrack composer?' I might say Brian Eno. […] I do get my inspiration mostly from pop music a wide range of other music. I love singer-songwriters. […] When you create songs, you create a certain emotional output. […] No, I mean pop, rock, alternative, world music–that's the beauty of it: it's great for Hollywood to open the sound. To not have just what we had in [the past]. We have a greater variety now, I think. We are allowed to experiment a bit more. I think it's great that I have the opportunity to do a lot of international films still. [… goes on to talk about international film and experimental work and how he works in these areas.]

VH: You offer young composers the opportunity to do an internship at your Los Angeles studio. In training aspiring composers, what do you feel they need to learn to succeed in the industry?

KB: The first thing they learn is that it's not about the music. I just assume you have all the skills to write good music. Let's forget about that and start over with your personality training and your expectations training. Nobody here has been waiting for you. You might think whatever you think about yourself, […] but just assume you know nothing. That's the brainwash you have to go through, I think. That makes the difference here between who makes it and who doesn't. I think it's not necessarily the music talent. There are many great writers here. It's all about whether you can make people feel like they're understood. Are you a true filmmaker? Can you read between the lines? Can you shut up? And can you make a good coffee? […]

Appendix III.1 – Table 1: List of films

ID	Year	Movie Title
2	1980	Airplane!
6	1980	Bronco Billy
10	1980	Close Encounters of the Third Kind (Special Edition)
12	1980	Cruising
17	1980	Friday the 13th (1980)
22	1980	The Empire Strikes Back
23	1980	Little Darlings
24	1980	My Bodyguard
27	1980	Ordinary People
28	1980	Prom Night
39	1980	Raging Bull
51	1981	Absence of Malice
53	1981	Arthur
55	1981	Bustin' Loose
59	1981	Raiders of the Lost Ark
62	1981	Clash of the Titans (1981)
63	1981	Escape from New York
72	1981	Excalibur
76	1981	Mommie Dearest
78	1981	Only When I Laugh
79	1981	Paternity
80	1981	Private Lessons
101	1982	48 HRS.
102	1982	Airplane II: The Sequel
103	1982	An Officer and a Gentleman
107	1982	E.T.: The Extra-Terrestrial
113	1982	Blade Runner
116	1982	First Blood
119	1982	Kiss Me Goodbye
122	1982	Peter Pan (Re-issue) (1982)
125	1982	Porky's
126	1982	Quest for Fire
128	1982	Richard Pryor: Live on the Sunset Strip
152	1983	All the Right Moves
153	1983	Blue Thunder
154	1983	Breathless
155	1983	Cheech & Chong Still Smokin'
159	1983	D.C. Cab
162	1983	Return of the Jedi
163	1983	Flashdance
166	1983	Gorky Park
167	1983	Krull
170	1983	Max Dugan Returns
177	1983	My Tutor
202	1984	A Nightmare on Elm Street
205	1984	Against All Odds
209	1984	Breakin'
210	1984	Conan the Destroyer
213	1984	Ghostbusters

217	1984	Beverly Hills Cop
218	1984	Gremlins
224	1984	Oh, God! You Devil!
227	1984	Police Academy
228	1984	Protocol
230	1984	Red Dawn (1984)
252	1985	A Nightmare on Elm Street 2: Freddy's Revenge
253	1985	Back to the Future
254	1985	A View to a Kill
255	1985	Agnes of God
256	1985	Brewster's Millions
258	1985	Code of Silence
259	1985	Commando
260	1985	Desperately Seeking Susan
261	1985	E.T.: The Extra-Terrestrial (Re-issue)
262	1985	European Vacation
269	1985	Mad Max Beyond Thunderdome
301	1986	A Room with a View
302	1986	About Last Night...
306	1986	Children of a Lesser God
308	1986	Crimes of the Heart
310	1986	Down and Out in Beverly Hills
311	1986	Top Gun
312	1986	F/X
317	1986	Ferris Bueller's Day Off
318	1986	Heartbreak Ridge
319	1986	Heartburn
348	1986	Hoosiers
351	1987	* batteries not included
352	1987	A Nightmare on Elm Street 3: Dream Warriors
353	1987	Adventures in Babysitting
356	1987	Black Widow
357	1987	Blind Date
358	1987	Broadcast News
360	1987	Cinderella (Re-issue) (1987)
361	1987	Dirty Dancing
364	1987	Ernest Goes to Camp
366	1987	Full Metal Jacket
397	1987	Three Men and a Baby
401	1988	A Fish Called Wanda
402	1988	A Nightmare on Elm Street 4: The Dream Master
404	1988	Alien Nation
405	1988	Bambi (Re-issue) (1988)
407	1988	Beetlejuice
409	1988	Big
414	1988	Cocktail
416	1988	Coming to America
417	1988	Crocodile Dundee II
420	1988	Dirty Rotten Scoundrels
430	1988	Rain Man
451	1989	A Nightmare on Elm Street 5: The Dream Child
453	1989	Always

454	1989	Back to the Future Part II
455	1989	Batman
457	1989	Black Rain
458	1989	Born on the Fourth of July
464	1989	Driving Miss Daisy
468	1989	Glory
477	1989	Look Who's Talking
480	1989	Pet Sematary
481	1989	Peter Pan (Re-issue) (1989)
502	1990	Another 48 HRS.
504	1990	Awakenings
508	1990	Child's Play 2
511	1990	Days of Thunder
512	1990	Dick Tracy
513	1990	Die Hard 2: Die Harder
514	1990	Edward Scissorhands
517	1990	Ghost
519	1990	Green Card
520	1990	Gremlins 2: The New Batch
522	1990	Home Alone
551	1991	101 Dalmatians (Re-issue) (1991)
552	1991	Backdraft
553	1991	Beauty and the Beast
555	1991	Boyz n the Hood
557	1991	Cape Fear
558	1991	City Slickers
560	1991	Dead Again
564	1991	Dying Young
568	1991	Grand Canyon
588	1991	Terminator 2: Judgment Day
601	1992	3 Ninjas
602	1992	A Few Good Men
603	1992	A League of Their Own
605	1992	Aladdin
606	1992	Alien 3
608	1992	Batman Returns
609	1992	Beethoven
612	1992	Candyman
618	1992	Home Alone 2: Lost in New York
619	1992	Honey, I Blew Up the Kid
620	1992	Honeymoon in Vegas
651	1993	Addams Family Values
657	1993	Dave
659	1993	Dennis the Menace
660	1993	Dragon: The Bruce Lee Story
661	1993	Falling Down
664	1993	Jurassic Park
667	1993	Grumpy Old Men
668	1993	Homeward Bound: The Incredible Journey
671	1993	Hot Shots! Part Deux
672	1993	Last Action Hero
673	1993	Made in America

704	1994	Beverly Hills Cop III
706	1994	Blown Away
708	1994	Clear and Present Danger
709	1994	D2: The Mighty Ducks
710	1994	Disclosure
711	1994	Drop Zone
713	1994	Four Weddings and a Funeral
714	1994	Forrest Gump
715	1994	I Love Trouble
719	1994	Junior
720	1994	Legends of the Fall
754	1995	Apollo 13
758	1995	Braveheart
759	1995	Casino
761	1995	Clueless
762	1995	Congo
768	1995	First Knight
769	1995	French Kiss
771	1995	GoldenEye
774	1995	Higher Learning
775	1995	Jumanji
796	1995	Toy Story
801	1996	101 Dalmatians (1996)
802	1996	A Thin Line Between Love and Hate
804	1996	Beavis and Butt-Head Do America
805	1996	Black Sheep
806	1996	Broken Arrow (1996)
808	1996	Daylight
810	1996	Eraser
811	1996	Evita
812	1996	Executive Decision
815	1996	Independence Day
816	1996	Jack
851	1997	Absolute Power
853	1997	Alien Resurrection
855	1997	Anaconda
856	1997	Anastasia
857	1997	As Good as It Gets
858	1997	Austin Powers: International Man of Mystery
862	1997	Con Air
863	1997	Conspiracy Theory
867	1997	Face/Off
868	1997	Flubber
898	1997	Titanic
901	1998	A Bug's Life
904	1998	Antz
905	1998	Armageddon
911	1998	Ever After: A Cinderella Story
913	1998	Small Soldiers
918	1998	Godzilla
919	1998	Lost in Space
920	1998	Meet Joe Black
921	1998	Mighty Joe Young

927	1998	Mulan
931	1998	Saving Private Ryan
951	1999	American Beauty
953	1999	Analyze This
955	1999	Austin Powers: The Spy Who Shagged Me
961	1999	Deuce Bigalow: Male Gigolo
967	1999	Galaxy Quest
968	1999	House on Haunted Hill
969	1999	Inspector Gadget
972	1999	Never Been Kissed
973	1999	Notting Hill
976	1999	Runaway Bride
980	1999	Star Wars: Episode I - The Phantom Menace
1005	2000	Charlie's Angels
1006	2000	Chicken Run
1009	2000	Crouching Tiger, Hidden Dragon
1010	2000	Dinosaur
1015	2000	Gladiator
1016	2000	Space Cowboys
1017	2000	Final Destination
1017	2000	Gladiator
1018	2000	Gone in 60 Seconds
1019	2000	Hollow Man
1037	2000	How the Grinch Stole Christmas
1050	2000	X-Men
1054	2001	Ali
1057	2001	American Pie 2
1058	2001	Atlantis: The Lost Empire
1061	2001	Blow
1062	2001	Bridget Jones's Diary
1063	2001	Cats & Dogs
1067	2001	Enemy at the Gates
1069	2001	Hannibal
1070	2001	Harry Potter and the Sorcerer's Stone
1072	2001	Jurassic Park III
1103	2002	Austin Powers in Goldmember
1106	2002	Catch Me If You Can
1110	2002	Divine Secrets of the Ya-Ya Sisterhood
1113	2002	Harry Potter and the Chamber of Secrets
1114	2002	Ice Age
1116	2002	Jackass: The Movie
1117	2002	John Q.
1125	2002	Panic Room
1129	2002	Signs
1132	2002	Spider-Man
1152	2003	American Wedding
1153	2003	Anger Management
1157	2003	Bringing Down the House
1159	2003	Bruce Almighty
1160	2003	Charlie's Angels: Full Throttle
1165	2003	Elf
1166	2003	Finding Nemo

1168	2003	Freddy Vs. Jason
1169	2003	Gothika
1170	2003	Holes
1196	2003	The Lord of the Rings: The Return of the King
1200	2003	X2: X-Men United
1208	2004	DodgeBall: A True Underdog Story
1209	2004	Fahrenheit 9/11
1210	2004	Friday Night Lights
1211	2004	Garfield: The Movie
1212	2004	Harry Potter and the Prisoner of Azkaban
1213	2004	Hellboy
1216	2004	Kill Bill Vol. 2
1220	2004	Mean Girls
1222	2004	Million Dollar Baby
1229	2004	Shrek 2
1251	2005	Are We There Yet?
1252	2005	Batman Begins
1254	2005	Bewitched
1257	2005	Cheaper by the Dozen 2
1259	2005	Cinderella Man
1264	2005	Flightplan
1265	2005	Four Brothers
1271	2005	Jarhead
1275	2005	Memoirs of a Geisha
1284	2005	Star Wars: Episode III - Revenge of the Sith
1301	2006	Barnyard: The Original Party Animals
1302	2006	Big Momma's House 2
1306	2006	Charlotte's Web (2006)
1309	2006	Dreamgirls
1313	2006	Flushed Away
1314	2006	Happy Feet
1318	2006	Miami Vice
1321	2006	Nacho Libre
1325	2006	Pirates of the Caribbean: Dead Man's Chest
1329	2006	Saw III
1330	2006	Scary Movie 4
1351	2007	300
1357	2007	Bee Movie
1359	2007	Blades of Glory
1362	2007	Disturbia
1365	2007	Fantastic Four: Rise of the Silver Surfer
1366	2007	Fred Claus
1367	2007	Ghost Rider
1370	2007	Harry Potter and the Order of the Phoenix
1372	2007	I Now Pronounce You Chuck and Larry
1375	2007	Live Free or Die Hard
1387	2007	Spider-Man 3
1404	2008	Bedtime Stories
1407	2008	Cloverfield
1409	2008	Eagle Eye
1411	2008	Forgetting Sarah Marshall
1412	2008	Four Christmases

1414	2008	Gran Torino
1415	2008	Hancock
1421	2008	Journey to the Center of the Earth
1423	2008	Kung Fu Panda
1425	2008	Mamma Mia!
1436	2008	The Dark Knight
1451	2009	2012
1452	2009	A Christmas Carol (2009)
1455	2009	Avatar
1457	2009	Coraline
1459	2009	District 9
1460	2009	Fast and Furious
1466	2009	Hotel for Dogs
1467	2009	I Love You, Man
1468	2009	Ice Age: Dawn of the Dinosaurs
1469	2009	Inglorious Basterds
1470	2009	It's Complicated
1501	2010	Harry Potter and the Deathly Hallows: Part 1
1502	2010	The Social Network
1503	2010	Toy Story 3
1504	2010	The Karate Kid (2010)
1505	2010	Inception
1506	2010	Dear John
1507	2010	Little Fockers
1508	2010	The Other Guys
1509	2010	Salt
1510	2010	The Sorcerer's Apprentice

<u>Composition for Screen</u>
<u>Analysis of Film Scores – Questionnaire</u>

1. Title	
2. Director	
3. Composer(s)	
4. Year released	
5. Film genre	
6. Length (mins)	

	Yes	No	
7. Underscore (non diegetic)			
8. Pop Songs (non diegetic)*			
9. Musical (diegetic songs)			
10. Orchestral Score			
11. Synth-based score			
12. Rock Band / small combo			
13. Jazz Score			
14. Experimental / ext. tech. (acoustic)			
15. Experimental / ext. tech. (electronic)			
16. Vocals (solo or choir)			
17. Title theme / overture			
18. Recurring motives / themes**			
19. Prominent melodies			
20. *if pop songs used, number of songs*			
21. **number of distinct recurring themes*			

	1	2	3	4	5
22. Instrumentation: Acoustic (1) <-> Electronic (5)					
23. Instrumentation: live (1) <-> sample-based (5)					
24. Ensemble: Traditional (1) <-> Contemporary (5)					
25. Style: Neorom. / Classic. (1) <-> Pop / Contemp. (5)					
26. Tonal language: elaborate (1) <-> minimalist (5)					
27. Tonal language: tonal (1) <-> atonal (5)					
28. Consonant (1) <-> dissonant (5)					
29. Melodic underscore (1) <-> Pattern / harmonic (5)					

30. Additional comments and observations:

Appendix III.3 – Guidance Document for Questionnaire Completion

Introduction

Thank you for participating in this research project on trends in the music of recent Hollywood cinema. When filling in the questionnaire, please ensure you watch the chosen film in its entirety – and ideally in one sitting – before answering. This is particularly important for responses 22-29, where you need to see a substantial portion of the film before being able to respond accurately. You may choose to watch the film with a group of friends or colleagues. Two individuals from a group watching a film can submit a questionnaire. However, in this case, please ensure your responses are yours only and not influenced by others. Two completed questionnaires are needed for each film.

Choosing a film:

Below link leads to an updated FILMS spreadsheet, which you need to check before choosing / watching a film. This link will remain valid for duration of the project.

> https://spreadsheets.google.com/ccc?key=0ApZOytzKCl1zdDEtMTJILTdq
> WjNSWG5mUDc5TTJSNHc&hl=en&authkey=CIzH0UE - gid=0

Each film has a unique ID, which you need to enter on your questionnaire. The film title, composer and year will then automatically appear. Each film needs to be watched by two individuals (who may watch the film together but must not compare notes) and two separate questionnaires will be submitted.

To choose a film:

1. Choose a film from the 'Films.xls' Excel spreadsheet.
2. On the online 'live' spreadsheet, check that your film has not yet had two viewers. A greyed-out box indicates a questionnaire has been submitted.
3. Note the film's ID number, which you will need to enter on your questionnaire.

Filling in the questionnaire using Excel (preferred method):

1. Open 'GenericQuestionnaire.xls' and immediately SAVE AS 'FilmID_1.xls (for viewer 1) or 'FilmID_2.xls' (for viewer 2).
NOTE: When opening on a MAC, please hit 'OK' to both error messages. When opening on a PC, please click 'don't update' on the first message and 'OK' on the second. Please remember the file saving format (filmID_viewernumber.xls) prior to emailing me.

2. Fill in the questionnaire and save.

3. Email your completed questionnaire as an excel spreadsheet to vhexel@rcm.ac.uk

Filling in paper hard copy:

Filling in the questionnaire Excel and then email to vhexel@rcm.ac.uk is the preferred method as it saves time consuming data entry. However, you can request hard copies of the questionnaire by emailing vhexel@rcm.ac.uk. Once you have completed the paper questionnaire, please return it to Vasco Hexel (in person or RCM pigeonhole).

How to fill in the questionnaire:

1a. Film ID number – Type the film's unique ID number as per the 'Films.xls' spreadsheet.

1b. Film Title – Will appear automatically.

2. Director – Enter the director's name in field B5.

3. Composer(s) – Will appear automatically.

4. Year released – Will appear automatically.

5. Film genre – Choose from drop-down list the genre that you think best describes the film at hand.

6. Length (minuntes) – State length of film in minutes including full credit sequence (this number is often stated on the DVD sleeve). Please type in field B9.

7. Underscore (non-diegetic) – Indicate whether the film features non-diegetic underscore (of any kind).

8. Pop Songs (non-diegetic) – Indicate whether the film features non-diegetic pop songs.

9. Musical (diegetic songs) – Indicate whether the film is a musical (featuring diegetic singing). Only choose 'Yes' if this film is a musical

10. Orchestral Score – Indicate whether the film is predominantly underscored with an orchestral score (this should also include other, smaller traditional ensembles, such as chamber orchestra).

11. Synth-based score – Indicate whether the film is underscored with a score that features synthesised elements and/or is mainly synthesizer-based (this might include e.g. Maurice Jarre's score for *Witness* but perhaps also Michael Giacchino's score for *Star Trek*).

12. Rock Band / small combo – Indicate whether the film is underscored with music performed by a contemporary ensemble such as rock band, piano, solo guitar etc. NOTE: Please only choose 'Yes' if the composed score itself is performed by a rock band / small combo, NOT rock/pop songs feature in the film that are not art of the composed underscore.

13. Jazz Score – Indicate whether the film is underscored with music written in a jazz idiom (harmonic language, ensemble), e.g. *Taxi Driver*, even when only some cues are written in a jazz idiom. Please choose 'Yes' even if only one or a few cues are in this idiom.

14. Experimental / ext. tech. (acoustic) – Indicate whether the score appears to be experimental in nature and features experimental and/or extended techniques performed by acoustic instruments, e.g. Corigliano's *Altered States*.

15. Experimental / ext. tech. (electronic) – Indicate whether the score appears to be experimental in nature and feature experimental and/or extended techniques performed on electronic instruments, e.g. theremin.

16. Vocals (solo or choir) – Indicate whether the score features voices, solo or choir.

17 Title theme / overture) – Indicate whether the film opens, or has near its beginning (e.g. after a prologue) a notable title theme or overture (e.g. *Back to the Future*).

18. Recurring motives / themes – Indicate whether the score features recurring motives or themes (e.g. the *Jaws* theme or the augmented interval patterns in *Signs*).

19. Prominent melodies – Indicate whether the score features any notable and or prominently featured melodies, e.g. thematically recurring material or otherwise.

20. *if pop songs used, number of songs – Indicate the number of non-diegetic songs used.

21. **number of distinct recurring themes – Indicate if possible the number of themes used.

Please read the following definitions (1-5) carefully. Placing a film score on a scale of 1 to 5 should not be a guess but based on below definitions:

22. Instrumentation: Acoustic (1) <-> Electronic (5)

To the best of your knowledge / ability, try to determine how much of the music relies on acoustic instruments / sounds vs. electronic instruments / sounds. Choose one from drop-down list:

> 1 – Score performed solely on acoustic instruments
> 2 – Score relies mostly on acoustic instruments but features some electronic instruments
> 3 – Score performed equally by acoustic and electronic instruments
> 4 – Score relies mostly on electronic instruments
> 5 – Score performed solely on electronic instruments.

Please only consider the composed underscore (if any), not any rock/pop songs that may feature in the film.

23. Instrumentation: live (1) <-> sample-based (5)

To the best of your knowledge / ability, try to determine how much of the music was recorded and produced using live instruments / performers vs. sequenced, sample-based elements. Choose one from drop-down list:

> 1 – Virtually all music recorded with live instruments
> 2 – Score relies mostly on live instruments but contains some sample-based sounds
> 3 – Even blend (50/50) of live/sampled sounds, with neither dominating.
> 4 – Score mostly sample-based but contains some live instruments
> 5 – Score entirely sample-based

24. Ensemble: Traditional (1) <-> Contemporary (5)

To the best of your knowledge / ability, try to determine how much of the music relies on traditional ensembles such as orchestra, chamber group, string quartet, solo instruments as opposed to contemporary ensembles such as pop/rock band, jazz trio / quartet, big band etc. Choose one from drop-down list:

> 1 – Score performed solely by traditional ensembles
> 2 – Score performed mostly by traditional ensembles by features some cues performed by
>   a contemporary ensembles
> 3 – Even balance (50/50) of cues performed by traditional and contemporary ensembles
> 4 – Score performed mostly by contemporary ensembles but features some cues performed by traditional ensembles
> 5 – Score performed solely by contemporary ensembles

25. Style: Neorom. / Classic. (1) <-> Pop / Contemp. (5)

To the best of your knowledge / ability, try to determine how strongly the music draws on a neoromantic or 'classical' style (e.g. *E.T.*) as oppose to a pop music / contemporary style (e.g. *Moon*). Choose one from drop-down list:

1 – Score is neoromantic/classical in style throughout
2 – Score is mostly neoromantic/classical in style but cues are in a pop/contemporary style
3 – Even balance (50/50) of cues in a neoromantic/classical and pop/contemporary style
4 – Score is mostly pop/contemporary in style but cues are in a neoromantic/classical style
5 – Score is pop/contemporary in style throughout

26. Tonal language: elaborate (1) <-> minimalist (5)

To the best of your knowledge / ability, try to determine how elaborate the tonal language is, in terms of harmony, melody, developmental technique, tension and release; as oppose to a minimalist approach (e.g. *Raiders of the Lost Ark* vs. *Koyaanisqatsi*). Choose one from drop-down list:

1 – Tonal language is highly elaborate
2 – Tonal language is mostly of an elaborate, developmental nature but some cues/passages are rather minimalist
3 – Even balance (50/50) of cues whose tonal language is elaborate and minimalist
4 – Tonal language is mostly minimalist but some cues/passages are of a more elaborate, developmental nature
5 – Tonal language is highly minimalist

27. Tonal language: tonal (1) <-> atonal (5)

To the best of your knowledge / ability, indicated whether the musical language is mostly tonal or atonal. Consider elaborating on this in the comments section (30) as necessary. Choose one from drop-down list:

1 – Score is tonal throughout
2 – Score is mostly tonal, with occasional atonal passages
3 – Even balance (50/50) of tonal and atonal cues/passages
4 – Score is mostly atonal, with occasional tonal passages
5 – Score is atonal throughout

28. Consonant (1) <-> dissonant (5)

To the best of your knowledge / ability, try to determine how consonant or dissonant the music. Choose one from drop-down list:

1 – Score is mostly consonant
2 – Score is mostly consonant, with some dissonant passages
3 – Even balance (50/50) of consonant and dissonant passages
4 – Score is mostly dissonant, with some consonant passages
5 – Score is mostly dissonant

29. Melodic underscore (1) <-> Pattern / harmonic (5)
To the best of your knowledge / ability, try to determine how strongly the music relies on melodic lines (e.g. *Raiders of the Lost Ark*) as oppose to being pattern-based *(e.g. Stardust)*. Choose one from drop-down list:

      1 – Score is melodic and melody-driven throughout
      2 – Score is mostly melodic and melody-driven, but some passages are pattern-based
      3 – Even balance (50/50) of cues/passages that are melody-driven and pattern-based
      4 – Score is mostly patter-based, but some passages are melody-driven
      5 – Score is patter-based throughout

30. Additional comments and observations:
In this section, you have the opportunity to add any comments you deem relevant and useful to help summarise the score's overall shape, style, approach, effect, and generally anything that you think is remarkable. For example, if you have detected the use of thematic materials, you may choose to outline your observations here. Please be as concise and specific as possible, but write in as much detail as necessary.

<u>PLEASE NOTE:</u>

All responses will be kept confidential and anonymous. Your contribution is valued highly and credit will be given where possible. Should you wish to be named in the final research write-up, please submit your name in the 'additional comments' section.

v2.5, 14/03/2011 (published 14/03/2011)

Appendix IV - Table 2: Films scored within sample per year

Composers:	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	TOTAL
A.R. Rahman																													1	1	2
Aaron Zigman																							1		1		1	2	1	3	9
Al Capps		1		1																											2
Alan Menken										1		1	1			1	1											1	1		7
Alan Parker			1																												1
Alan Pasqua																		1													1
Alan Silvestri					1	2	2	3	1	2	3	2	3	1	3	2	2	3	2	1	3	2	3	1	2		1	1		3	49
Alejandro Amenábar																							1								1
Alex North					1		1																								2
Alex Wurman																									1		1		1		3
Alexandre Desplat																											1	1		2	4
Andrea Guerra																											1				1
Andrew Lockington																													1		1
Andrew Powell					1																										1
Andy Summers							1			1																					2
Angelo Badalamenti								1		2																					3
Angelo Milli																													1		1
Anne Dudley														1				1													2
Arthur B. Rubinstein			2				1					1																			4
Arthur Kempel												1																			1
Artie Butler			1																												1
Atli Örvarsson																													1		1
Barbra Streisand							1																								1
Basil Poledouris	1		1		3		1	1			1	1		2	2	1		2													16
Bill Conti	1	2	1	2	1	1	2	2	1	3	1	1			1					1							1				21
Bill Lee										1																					1
Billy Sherrill		1																													1
Boris Blank							1																								1
Brad Fiedel				1	1			1				1			1																5
Brent Lewis															1																1
Brian Gascoigne					1																										1
Brian May			1									1																			2
Brian Reitzell																											1				1
Brian Tyler																											1		1	3	5
Bruce Broughton					2			1		1		1	2			1		1													9
Bruce Rowland			1																												1

Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Total
Bruce Smeaton								1																						1
Bruno Coulais																													1	1
BT																				1										1
Buddy Baker		2						1																						3
Burkhard von Dallwitz																		1												1
Burt Bacharach		1	1																											2
Carl Davis		1																												1
Carl Zittrer				1																										1
Carly Simon							1				1																			2
Carmine Coppola				1				1			1																			3
Carter Burwell												1		1				2		1		1	1				1	1	2	11
Charles Bernstein				1	1																									2
Charles Fox	2		2		1																									5
Charles Gross							1	1	1																					3
Charlie Clouser																									1	1	1			3
Chris Boardman																				1										1
Christophe Beck																				1			2	1	1	1	1	1	1	9
Christopher Franke													1																	1
Christopher Lennertz																												1		1
Christopher Young					1										1	1				2		1		1	1		2			10
Claude Foisy																									1					1
Cliff Eidelman											1																		1	2
Cliff Martinez									1												1									2
Clint Eastwood				1		1								1		1				1			1	1				1		8
Clint Mansell																									1					1
Clinton Shorter																													1	1
Collaboration	3	3	2	4	1		1	2	1		2	1	3	2	2			4	5	2	5	4	3	2	5	4	2	4	2	69
Craig Armstrong																				1		1		1	1		1	1		6
Craig Safan				1				1																						2
Craig Wedren																									1			1		2
Curt Sobel								1																						1
Curt Sobel				1																										1
Dan Wyman													1																	1
Daniele Amfitheatrof	1																													1
Danny Elfman					1	1	1	3	1	3		1	2		2	3		1	1	1	1	4	2		1	2	1	2	1	35
Dario Marianelli																											1	1		2
Dave Grusin	1	2	1		1			1				1								1										8
David Arnold														1	1	1	1	1	1	1		2	1	1	1	1		1		14
David Byrne								1																						1
David Foster					1		1																							2
David Hentschel				1																										1

Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
David Hirschfelder																	1														**1**
David Holmes																					1			1			1				**3**
David Kitay									1	1				1				1				1									**5**
David Lawrence																		1	1										1		**3**
David McHugh				1					2																						**3**
David Michael Frank						1			1	1																					**3**
David Newman								1		2		2	2	1	2		3	1		3	1	1	2	3	1	2		1		1	**29**
David Richard Campbell			1																												**1**
David Robbins															1																**1**
David Sardy																													1	1	**2**
David Shire		3	1	1	2		1		1																						**9**
David Whitaker			1																												**1**
David Yazbek								1																							**1**
Dennis McCarthy													1																		**1**
Dennis Ricotta						1																									**1**
Dick Halligan	1																														**1**
Dick Hyman								1																							**1**
Dolly Parton					1																										**1**
Dominic Frontiere		1																													**1**
Don Davis																		2		2		2									**6**
Douglas Pipes																											1				**1**
Ed Shearmur																		1	2		1	1									**5**
Edward H. Plumb			1					1																							**2**
Elia Cmiral																1															**1**
Elliot Goldenthal									1		1	1	1	2	1	1								1						1	**10**
Elmer Bernstein	2	2	1	3	1	2	1		1						1			1													**17**
Ennio Morricone	1		1				1			1		1	2					1													**8**
Eric Serra																1															**1**
Erran Baron Cohen																											1				**1**
Fine Young Cannibals							1																								**1**
Frank Churchill													1																		**1**
Frank De Vol	1																														**1**
Gabriel Yared																	1		1	2				1					1		**6**
Gary Chang												1																			**1**
Gaye Delorme			1																												**1**
Geoff Zanelli																												1			**1**
George Barr McCutcheon					1																										**1**
George Bruns					1	1				1	1																				**4**
George Fenton			1					1		1	1	1	1					2						1				2		1	**12**
George S. Clinton				1											1			1		1				2				2			**8**
Georges Delerue						1	2		1	1	1	1																			**7**

Composer																																			Total
Giorgio Moroder	1			3																																4
Graeme Revell								1		1		2	1		2	2		2		2													1		14
Gregor Narholz																														1					1
Gustavo Santaolalla																															1				1
Hans Zimmer						1	2	4	3	1		2	3	4	1	1		2	3	2	2	1		3	2	1	2								40
Harald Kloser																												2							2
Harold Faltermeyer				1	1	1	2		2																										7
Harry Gregson-Williams																								1			1	1	2	1	1	1			8
Harry Manfredini	1	1	1	1	1	1	2																												8
Heitor Pereira																																1			1
Henry Jackman																																	1		1
Henry Mancini		2	1			1	1	1																											6
Herbie Hancock				1		1		1	1																										4
Howard Goodall																	1																		1
Howard Shore								1		1		1	1	3	2	1	2	2		1	1	2	3	1	1		1								24
Hummie Mann													1																						1
Ira Newborn				1	1		2	1	1		1		2																						9
J. Peter Robinson								1		1		2																							4
J.A.C. Redford								1					1																						2
Jack Nitzsche	1		1	1	1	1	1				1																								7
James Dooley																																		1	1
James Horner		2	3	1	3	2	1	3	4	1	1	3	1	2	4	2	1	3	1	2	2		2	1									1	1	47
James L. Venable																									1			1							2
James Newton Howard						2			1	4	5		4	1	4	3	2	1	2	3	2	1		3	2	1	2	1							44
James Patrick Dunne						1																													1
Jamshied Sharifi																										1									1
Jan A. P. Kaczmarek																												1							1
Jay Chattaway					1	1																													2
Jay Ferguson								1	1																										2
Jay Gruska												1																							1
Jeff Beck						1																													1
Jerry Goldsmith		2	2	2	1	1	2	1	1	2	2	1	3	2	2	2	3	2	4	2	1	1	1												40
Jimmy Page			1																																1
Joe Raposo		1																																	1
Joe Renzetti		1						1																											2
Joel McNeely																													1						1
John Barry		1		2	1	3	1	1			1			1	1																				12
John Boshoff					1																														1
John Carpenter	1																																		1
John Corigliano	1																																		1
John Debney														1					2		2	1	3	3	2	3	3	1	1					2	24

John Du Prez				1					1		1	1		1																**5**
John Frizzell																1	2													**3**
John Harrison			1																											**1**
John Kander					1																									**1**
John Lurie															1															**1**
John Morris	1	1			1			1																						**4**
John Murphy																									1	1				**2**
John Ottman															1								2		1		1	1		**6**
John Powell															1		1		1	3	1	1	3	3	2	4	1			**21**
John Scott					1			1																						**2**
John Williams	2	2	3	1	1	1		1	1	3	2	2	2	2		1	1	5	2	1	1	2	3		2	3			1	**45**
Johnny Mandel	1		2	1																										**4**
Jon Brion																									1		1			**2**
Jonathan Richman																1														**1**
Jonathan Tunick		1																												**1**
Julian Nott																									1					**1**
Keith Emerson		1																												**1**
Keith Forsey						1																								**1**
Ken Thorne				1																										**1**
Kenneth 'Babyface' Edmonds														1																**1**
Klaus Badelt																			1	1		1	1	1						**5**
Lalo Schifrin	2	1		1				1					1										1				1			**8**
Laurence Rosenthal		1		1																										**2**
Lee Holdridge				1	2			1																						**4**
Leigh Harline				1	1																									**2**
Lennie Niehaus					1	1							1																	**3**
Leonard Rosenman	1						1				1																			**3**
Lyle Workman																									1		1	1		**3**
Mack David		1						1																						**2**
Marc Shaiman									1		1	1	2	2	1	1	1	2	1		1						2			**16**
Marc Streitenfeld																									1					**1**
Marco Beltrami																1	1		1		1	1	2	1	1	2		1		**12**
Marcus Miller													1		1															**2**
Mark Davis	1	1																												**2**
Mark Isham						1					1	1	1	2	1		1	1	1	1	2			1	1	1				**16**
Mark Knopfler								1																						**1**
Mark Mancina													1	3	1	1		1		1		1								**9**
Mark McGrath																							1							**1**
Mark Mothersbaugh								1							1		1		1	1				1					1	**7**
Mark Snow								1									1													**2**
Marvin Hamlisch	2		1					1							1															**5**

Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Mateo Messina																												1				**1**
Maurice Jarre		1	2		1	2		2	1	1	2				1																	**13**
Mervyn Warren																						1										**1**
Michael Boyd				1																												**1**
Michael Convertino							1		1			1		1			1															**5**
Michael Giacchino																											1	2	1	1	2	**7**
Michael Gore				1			1																									**2**
Michael Kamen				1				2	2	3	1	2		2		2	2		2		2											**21**
Michael Nyman														1																		**1**
Michael Small		1					1																									**2**
Michel Colombier						1	3					1			1																	**6**
Michel Legrand	1		1	2																												**4**
Mike Moran		1																														**1**
Mike Oldfield				1																												**1**
Mike Simpson																						1										**1**
Miklós Rózsa		1	1																													**2**
Miles Goodman						1	1	1		1	1	1	2	1																		**9**
Misha Segal						1																										**1**
Musical	2		2		1		1	1								1													1			**9**
Mychael Danna																												1				**1**
Nancy Wilson																						1										**1**
Nathan Barr																									1							**1**
Nathan Wang																												1				**1**
Nathaniel Méchaly																															1	**1**
Nelson Riddle	1																															**1**
Nicholas Hooper																												1			1	**2**
Nicholas Pike											1			1																		**2**
Nick Glennie-Smith																					1			1								**2**
Nicola Piovani																					1											**1**
Nigel Westlake																1																**1**
Nile Rodgers									1					1																		**2**
Normand Corbeil																						1										**1**
Oliver Wallace	1		1				1				1																					**4**
Other	3	2	2	2	3	1	1	2	2		3	1	1		1	2	3		1	1	2		1	1	2		2			2	3	**44**
Owen Bradley	1																															**1**
Patricia Cullen						1																										**1**
Patrick Doyle											1		1		1							1					1	1				**6**
Patrick Williams	1		2		1									1																		**5**
Paul Buckmaster																1																**1**
Paul Chihara							1																									**1**
Perry Botkin Jr.		1																														**1**
Peter Best							1		1																							**2**

Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Peter Rodgers Melnick												1																			**1**
Philip Glass													1																		**1**
Philippe Sarde	1	1	1							1																					**4**
Pino Donaggio	1	1																													**2**
Proof																						1									**1**
Queen	1																														**1**
Quincy Jones						1																									**1**
Rachel Portman														1		1			1	1			1	1							**6**
Ralph Burns	2		2	1	1					1																					**7**
Ramin Djawadi																					1				1		1				**3**
Randy Edelman									1	1	1		2	2	2	2	2	1	1		2		1	1					2		**21**
Randy Newman				1				1		1	1		2		1	1		1	1	1	1		1	1		1				1	**16**
Richard Gibbs														1					1			1		1		1					**5**
Richard Marvin												1										1									**2**
Richard Robbins							1					1																			**2**
Richard Sherman	1																														**1**
Robbie Robertson							1																								**1**
Robert Folk				2	1	1	2						1	1			1														**9**
Roger Troutman																1															**1**
Rolfe Kent																					1	1	2	2	1	1				1	**9**
Rupert Gregson-Williams																											2	2	2		**6**
Ry Cooder	1																														**1**
Ryûichi Sakamoto								1										1													**2**
Sam Cardon																		1													**1**
Shane Keister								1																							**1**
Shirley Walker																						1									**1**
Silkwood				1																											**1**
Snuff Garrett	2																														**2**
Stanley Clarke												1	1	1		1						1									**5**
Stephen Schwartz																1															**1**
Stephen Sondheim		1																										1			**2**
Stephen Warbeck																		1													**1**
Steve Bartek																						1									**1**
Steve Jablonsky																								1		1		1		1	**4**
Stewart Copeland						1		1		1									1												**4**
Suzanne Ciani		1																													**1**
Sylvester Levay							1	1			1	1																			**4**
T-Bone Burnett																										1					**1**
Tan Dun																						1									**1**
Tangerine Dream				1																											**1**
Teddy Castellucci																			1	2		1	1	1	2	1		1			**10**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Terence Blanchard												1	1						1		1					1					**5**
The Brady Bunch															1																**1**
Theodore Shapiro																								1	3	1	1	1	2	1	**10**
Thomas Newman				1	1	2	1	1			2	1		1		2		2	2	1		1	1	1	2			1			**23**
Todd Rundgren															1																**1**
Tom Scott	1					1	1																								**3**
Tommy Vig			1																												**1**
Tony Cora																		1													**1**
Tôru Takemitsu														1																	**1**
Toto				1																											**1**
Trevor Horn																			1												**1**
Trevor Jones		1	1						1	1	1			1		1			1			1									**9**
Trevor Rabin																	1	1	1	2		2	1	1				1	1	2	**13**
Tyler Bates																												2	1	1	**4**
Van Dyke Parks	1																														**1**
Vangelis		1	1																												**2**
Waddy Wachtel																														1	**1**
Wally Pfister																					1										**1**
Webster Lewis				1																											**1**
Wendy Carlos			1																												**1**
William Ross													1			2		1					1								**5**
Willie Nile		1																													**1**
Wojciech Kilar													1																		**1**
Wyclef Jean																		1													**1**
Zbigniew Preisner														1																	**1**
Cumulative Total:	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	**1500**

Appendix V – PRS cue sheets for key examples

Cue Sheet

Title	**Top Gun**	Production ID	0000 5614 0194
Production Type	Feature	Film Title File Number	F0021892 \
Year of Production	1986	Production Number	56140194 \
Music Duration	01:21:47	Director	Tony Scott
Country of Origin	Usa		
Date Added to Database	19/12/1990 00:00:00		
Date of Last Amendment	19/06/2013 01:02:49		

Seq	Title	Role	Interested Parties	CAE Number	Share %	Society	Usage	Dur.	Work No
1	Top Gun 51	Composer/Author	FALTERMEIER, HAROLD	76212489	50.00	GEMA	Feature	00:02:43	011063GP T-800.605 .378-8
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	50.00	PRS			
2	Top Gun 51	Composer/Author	FALTERMEIER, HAROLD	76212489	50.00	GEMA	Back ground	00:44:12	011063GP T-800.605 .378-8
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	50.00	PRS			
3	Top Gun 52	Composer/Author	WHITLOCK, THOMAS ROSS	125898834	37.50	ASCAP	Feature	00:00:13	7034789E T-071.401 .049-7
		Composer/Author	MORODER (DE 1), GIORGIO	21545123	12.50	GEMA			
		Original Publisher	BUDDE MUSIC INC	129188947	0	Non Society			
		Sub-Publisher	WARNER BROS INC	58855632	0	ASCAP			
		Sub-Publisher	WARNER/CHAPPELL NORTH AMERICA LIMITED	285605937	18.75	PRS			
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	18.75	PRS			
		Original Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	12.50	PRS			
4	Top Gun 52	Composer/Author	WHITLOCK, THOMAS ROSS	125898834	37.50	ASCAP	Back ground	00:14:19	7034789E T-071.401 .049-7
		Composer/Author	MORODER (DE 1), GIORGIO	21545123	12.50	GEMA			
		Original Publisher	BUDDE MUSIC INC	129188947	0	Non Society			
		Sub-Publisher	WARNER BROS INC	58855632	0	ASCAP			
		Sub-Publisher	WARNER/CHAPPELL NORTH AMERICA LIMITED	285605937	18.75	PRS			
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	18.75	PRS			
		Original Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	12.50	PRS			
5	Top Gun 53	Composer/Author	SPIRO, MARK	120694690	25.00	BMI	Feature	00:04:04	6506876N T-801.513 .886-1
		Composer/Author	FALTERMEIER, HAROLD	76212489	25.00	GEMA			
		Original Publisher	SONY/ATV MELODY	538928114	0	BMI			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	50.00	PRS			

6/24/13 Printer Friendly Cue Sheet

		Role	Name	Number	Share	Society	Usage	Duration	Code
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
6	Top Gun 53	Composer/Author	SPIRO, MARK	120694690	25.00	BMI	Back ground	00:03:12	6506876N T-801.513 .886-1
		Composer/Author	FALTERMEIER, HAROLD	76212489	25.00	GEMA			
		Original Publisher	SONY/ATV MELODY	538928114	0	BMI			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	50.00	PRS			
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
7	Youve Lost That Lovin Fe	Composer/Author	MANN, BARRY	19359863	16.67	BMI	Feature	00:01:08	0002647N T-070.248 .344-0
		Composer/Author	SPECTOR, PHILIP	63684950	16.67	BMI			
		Composer/Author	WEIL, CYNTHIA	32645007	16.66	BMI			
		Original Publisher	SCREEN-GEMS-COLUMBIA-MUSIC INC	28197568	0	BMI			
		Sub-Publisher	MOTHER BERTHA MUSIC INC	21626907	0	BMI			
		Sub-Publisher	EMI BLACKWOOD MUSIC INC	223437493	0	BMI			
		Sub-Publisher	EMI MUSIC PUBLISHING LTD	87019563	10.00	PRS			
		Sub-Publisher	ABKCO MUSIC LTD	51591097	2.50	PRS			
		Sub-Publisher	SCREEN GEMS-EMI MUSIC LTD	36933275	37.50	PRS			
8	Youve Lost That Lovin Fe	Composer/Author	MANN, BARRY	19359863	16.67	BMI	Feature	00:02:24	0002647N T-070.248 .344-0
		Composer/Author	SPECTOR, PHILIP	63684950	16.67	BMI			
		Composer/Author	WEIL, CYNTHIA	32645007	16.66	BMI			
		Original Publisher	SCREEN-GEMS-COLUMBIA-MUSIC INC	28197568	0	BMI			
		Sub-Publisher	MOTHER BERTHA MUSIC INC	21626907	0	BMI			
		Sub-Publisher	EMI BLACKWOOD MUSIC INC	223437493	0	BMI			
		Sub-Publisher	EMI MUSIC PUBLISHING LTD	87019563	10.00	PRS			
		Sub-Publisher	ABKCO MUSIC LTD	51591097	2.50	PRS			
		Sub-Publisher	SCREEN GEMS-EMI MUSIC LTD	36933275	37.50	PRS			
9	Hot Summer Nights	Composer/Author	SCOTT, ALAN ROY	143315996	12.50	BMI	Back ground	00:02:37	000842AV T-801.160 .340-1
		Composer/Author	FREELAND, ROY	70599065	25.00	BMI			
		Composer/Author	JAY, MICHAEL	209433581	12.50	BMI			
		Original Publisher	SCREEN GEMS-EMI MUSIC INC	36205509	0	BMI			
		Sub-Publisher	SCREEN GEMS-EMI MUSIC LTD	36933275	25.00	PRS			
		Original Publisher	SONY/ATV MELODY	538928114	0	BMI			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	25.00	PRS			
10	Playing With The Boys	Composer/Author	LOGGINS, KEN	40500832	21.50	ASCAP	Back ground	00:01:39	6693101Y
		Composer/Author	WOLF, PETER	59605656	14.25	ASCAP			
		Composer/Author	WOLF, INA	62406500	14.25	AKM			
		Original Publisher	CHAPPELL-CO INC	5876870	0	ASCAP			
		Sub-Publisher	WARNER/CHAPPELL NORTH AMERICA LIMITED	285605937	21.37	PRS			
		Original Publisher	UNIVERSAL MUSIC-MGB SONGS	538724724	0	ASCAP			
		Sub-Publisher	JOBETE MUSIC CO INC	15357991	0	ASCAP			
		Sub-Publisher	EMI ENTERTAINMENT WORLD INC US	133591581	0	Non Society			
		Sub-Publisher	EMI SONGS LTD	160488566	0	PRS			
		Sub-Publisher	EMI MUSIC/JOBETE	484548613	5.38	PRS			

298

Printer Friendly Cue Sheet

		MUSIC					
	Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP		
	Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society		
	Sub-Publisher	SONY/ATV HARMONY UK	556043752	12.50	PRS		
	Original Publisher	MILK MONEY MUSIC	37007409	0	ASCAP		
	Sub-Publisher	UNIVERSAL MUSIC CORPORATION	31312147	0	ASCAP		
	Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS		
	Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	10.75	PRS		
11	Dock Of The Bay	Composer/Author	CROPPER, STEPHEN LEE	7120242	25.00	BMI	Background	00:02:04 000653KU T-072.030.201-1
	Composer/Author	REDDING, OTIS	25572393	25.00	BMI		
	Original Publisher	IRVING MUSIC	39860945	0	BMI		
	Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS		
	Sub-Publisher	UNIVERSAL MUSIC PUBLISHING LIMITED	282429357	37.50	PRS		
	Original Publisher	COTILLION MUSIC INC	6935976	0	BMI		
	Sub-Publisher	WARNER/CHAPPELL NORTH AMERICA LIMITED	285605937	12.50	PRS		
12	Heaven In Your Eyes	Composer/Author	MOORE, DEBORAH MAE	48487837	7.50	SOCAN	Background	00:00:15 6485812L T-072.300.476-9
	Composer/Author	DEAN, PAUL WARREN	61622796	15.00	SOCAN		
	Composer/Author	DEXTER, JOHN WILLIAM	201195807	12.50	SOCAN		
	Composer/Author	RENO, MIKE	48489635	15.00	SOCAN		
	Original Publisher	SONY/ATV MELODY	538928114	0	BMI		
	Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society		
	Sub-Publisher	SONY/ATV HARMONY UK	556043752	21.25	PRS		
	Original Publisher	SORDID SONGS	205820203	0	SOCAN		
	Sub-Publisher	EMI APRIL MUSIC (CANADA) LTD	226464374	0	SOCAN		
	Sub-Publisher	EMI SONGS LTD	160488566	10.00	PRS		
	Original Publisher	DUKE RENO MUSIC	49055281	0	SOCAN		
	Original Publisher	IRVING MUSIC	39860945	0	BMI		
	Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS		
	Sub-Publisher	UNIVERSAL MUSIC PUBLISHING LIMITED	282429357	18.75	PRS		
13	Great Balls Of Fire	Composer/Author	BLACKWELL, OTIS	3289899	25.00	BMI	Feature	00:02:20 0007226R T-071.000.632-8
	Composer/Author	HAMMER, JACK	13304931	25.00	ASCAP		
	Original Publisher	HILL AND RANGE SONGS INC	546564233	0	BMI		
	Sub-Publisher	CARLIN MUSIC CORP	5223240	50.00	PRS		
	Notified Publisher	MIJAC MUSIC	53765369	0	BMI		
14	Destination Unknown	Composer/Author	GOLDE, FRANNIE	48661951	17.50	BMI	Background	00:00:37 6567267Y T-911.703.385-9
	Composer/Author	FOX, PAUL	215974750	17.50	BMI		
	Composer/Author	HOOKER, JAKE	14338019	15.00	BMI		
	Original Publisher	SONY/ATV MELODY	538928114	0	BMI		
	Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society		
	Sub-Publisher	SONY/ATV HARMONY UK	556043752	25.00	PRS		
	Original Publisher	DEL ZORRO MUSIC	74193667	0	ASCAP		
	Sub-Publisher	BUCKS MUSIC GROUP LTD	55248283	4.38	PRS		
	Original Publisher	DEJAMUS LTD	121644015	6.56	PRS		
	Original Publisher	UNIVERSAL MUSIC	31312147	0	ASCAP		

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	CORPORATION			
Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS
Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	4.37	PRS
Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP
Original Publisher	UNIVERSAL MUSIC CAREERS	539732230	0	BMI
Sub-Publisher	UNIVERSAL MUSIC PUBLISHING MGB LIMITED	534290267	7.50	PRS
Original Publisher	VMG WORLDWIDE	627172255	0	BMI
Sub-Publisher	WIXEN MUSIC PUBLISHING INC	229993322	0	BMI
Sub-Publisher	WIXEN MUSIC UK LTD	624590643	17.50	PRS
Notified Publisher	RIGHTSONG MUSIC INC	58322874	0	BMI
Notified Publisher	FRANNE GOLDE MUSIC	49034586	0	BMI
Notified Publisher	SONY ATV HARMONY	537275340	0	ASCAP
Notified Publisher	SONY/ATV MELODY	538928114	0	BMI
Notified Publisher	DEL ZORRO MUSIC	74193667	0	ASCAP

Cue Sheet

PRS for MUSIC

Title	**Terminator 2 Judgement Day**	
Production Type	Feature	
Year of Production	1991	
Music Duration	01:52:48	
Country of Origin	Usa	
Date Added to Database	28/04/1993 00:00:00	
Date of Last Amendment	20/04/2013 01:57:28	

Production ID	0000 5614 7553
Film Title File Number	F0029816 \
Production Number	56147553 \
Director	James Cameron
Producer	James Cameron
Originating Distribution Company	Guild
Production Company	Carolco/Pacific Western

Seq	Title	Role	Interested Parties	CAE Number	Share %	Society	Usage	Dur.	Work No
1	Tri Star Logo 04	Composer	GRUSIN, DAVID	12819501	50.00	BMI	Back ground	00:00:19	2893566X
		Original Publisher	EMI INTERTRAX MUSIC INC	233460397	0	BMI			
		Sub-Publisher	EMI WORLDTRAX MUSIC INC	333857156	0	ASCAP			
		Sub-Publisher	EMI TUNES LIMITED	250300819	50.00	PRS			
2	Carolco Logo 01	Composer/Author	GOLDSMITH, JERRY	12178123	50.00	BMI	Back ground	00:00:17	1987658C T-072.925 .240-7
		Original Publisher	ANABASIS MUSIC	130538896	25.00	BMI			
		Original Publisher	STUDIOCANAL SA	434729643	25.00	PRS			
3	Guitars And Cadillacs	Composer/Author	YOAKAM, DWIGHT DAVID	201702234	50.00	BMI	Feature	00:02:08	6481558E T-070.234 .382-5
		Original Publisher	FIGS D MUSIC	533878031	0	BMI			
		Sub-Publisher	BUCKS MUSIC GROUP LTD	55248283	50.00	PRS			
4	Bad To The Bone	Composer/Author	THOROGOOD, GEORGE	136591955	50.00	BMI	Feature	00:01:21	6308630L T-070.232 .896-8
		Original Publisher	DEL SOUND MUSIC	130831507	0	BMI			
		Sub-Publisher	SONGS OF UNIVERSAL INC	353271280	0	BMI			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS			
		Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	50.00	PRS			
5	You Could Be Mine	Composer/Author	STRADLIN, IZZY	127521592	12.28	ASCAP	Feature	00:01:09	6971150T T-071.599 .954-4
		Composer/Author	MC KAGAN, DUFF ROSE	127524289	12.29	ASCAP			
		Composer/Author	ROSE, W AXL	216357969	13.14	ASCAP			
		Composer/Author	SORUM, MATT	338454253	0	ASCAP			
		Composer/Author	SLASH (US 2)	127521396	12.29	ASCAP			
		Composer/Author	REED, DARREN A	526748429	0	ASCAP			
		Original Publisher	GUNS N' ROSES MUSIC	127501401	0	ASCAP			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	36.86	PRS			
		Original Publisher	BLACK FROG MUSIC	345597038	0	ASCAP			
		Sub-Publisher	SANCTUARY MUSIC PUBLISHING LIMITED	289941012	13.14	PRS			
		Notified Publisher	UNIVERSAL MUSIC PUBLISHING LIMITED (GB)	282429357	0	PRS			
6	You Could Be Mine	Composer/Author	STRADLIN, IZZY	127521592	12.28	ASCAP	Feature	00:02:09	6971150T T-071.599 .954-4
		Composer/Author	MC KAGAN, DUFF ROSE	127524289	12.29	ASCAP			
		Composer/Author	ROSE, W AXL	216357969	13.14	ASCAP			
		Composer/Author	SORUM, MATT	338454253	0	ASCAP			

6/24/13   Printer Friendly Cue Sheet

		Composer/Author	SLASH (US 2)	127521396	12.29	ASCAP			
		Composer/Author	REED, DARREN A	526748429	0	ASCAP			
		Original Publisher	GUNS N' ROSES MUSIC	127501401	0	ASCAP			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	36.86	PRS			
		Original Publisher	BLACK FROG MUSIC	345597038	0	ASCAP			
		Sub-Publisher	SANCTUARY MUSIC PUBLISHING LIMITED	289941012	13.14	PRS			
		Notified Publisher	UNIVERSAL MUSIC PUBLISHING LIMITED (GB)	282429357	0	PRS			
7	Guild Films Logo 01	Composer	COOKE, DAVID LEONARD	47941264	50.00	PRS	Back ground	00:00:15	1912541N T-010.161 .337-9
		Composer	MAC-DOUGALL, DUNCAN MICHAEL	135094291	50.00	PRS			
8	Terminator 2	Composer/Author	FIEDEL, BRAD IRA	87390837	50.00	ASCAP	Feature	00:02:36	7285040X T-070.187 .904-0
		Original Publisher	CAROLCO MUSIC	126873361	0	ASCAP			
		Sub-Publisher	STUDIOCANAL SA	434729643	50.00	PRS			
9	Terminator 2	Composer/Author	FIEDEL, BRAD IRA	87390837	50.00	ASCAP	Back ground	01:42:34	7285040X T-070.187 .904-0
		Original Publisher	CAROLCO MUSIC	126873361	0	ASCAP			
		Sub-Publisher	STUDIOCANAL SA	434729643	50.00	PRS			

302

6/24/13

Printer Friendly Cue Sheet

Cue Sheet

PRS for MUSIC

Title	**American Beauty**	
Production Type	Feature	
Year of Production	1999	
Music Duration	01:19:52	
Country of Origin	Usa	
Date Added to Database	01/02/2000 00:00:00	
Date of Last Amendment	19/06/2013 01:05:40	

Production ID	0000 5616 5165
Film Title File Number	F0048843 \
Production Number	56165165 \
Director	Sam Mendes
Producer	Bruce Cohen
Originating Distribution Company	Uip
Production Company	Dreamworks Llc

Seq	Title	Role	Interested Parties	CAE Number	Share %	Society	Usage	Dur.	Work No
1	Dreamworks Logo 02	Composer/Author	WILLIAMS, JOHN T	32981579	100.00	BMI	Back ground	00:00:21	015234LQ T-700.128 .962-1
2	American Beauty	Composer/Author	NEWMAN, THOMAS	72001821	50.00	BMI	Feature	00:06:27	019370EQ T-700.191 .490-7
		Original Publisher	SONGS OF SKG	195311863	0	BMI			
		Sub-Publisher	SONY ATV SONGS LLC	187062752	0	BMI			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	50.00	PRS			
3	American Beauty	Composer/Author	NEWMAN, THOMAS	72001821	50.00	BMI	Back ground	00:47:51	019370EQ T-700.191 .490-7
		Original Publisher	SONGS OF SKG	195311863	0	BMI			
		Sub-Publisher	SONY ATV SONGS LLC	187062752	0	BMI			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	50.00	PRS			
4	Bali Hai	Composer	RODGERS, RICHARD	26361401	25.00	ASCAP	Back ground	00:01:50	0001676V T-070.010 .190-1
		Author	HAMMERSTEIN, OSCAR II	13308919	25.00	ASCAP			
		Original Publisher	WILLIAMSON MUSIC COMPANY	126573278	0	ASCAP			
		Sub-Publisher	IMAGEM CV	563966800	0	BUMA			
		Sub-Publisher	IMAGEM MUSIC	552687816	50.00	PRS			
5	On Broadway	Composer/Author	LEIBER, JERRY	17713791	12.50	PRS	Back ground	00:01:10	0055689Q T-070.160 .242-7
		Composer/Author	MANN, BARRY	19359863	12.50	BMI			
		Composer/Author	STOLLER, MIKE	29692846	12.50	PRS			
		Composer/Author	WEIL, CYNTHIA	32645007	12.50	BMI			
		Original Publisher	SCREEN-GEMS-COLUMBIA-MUSIC INC	28197568	0	BMI			
		Sub-Publisher	SCREEN GEMS-EMI MUSIC INC	36205509	0	BMI			
		Sub-Publisher	SCREEN GEMS-EMI MUSIC LTD	36933275	50.00	PRS			
6	Use Me	Composer/Author	WITHERS, BILL	56633178	50.00	ASCAP	Back ground	00:01:14	7800578Q
		Composer/Author	BUTLER, CHAD		0	Non Society			
		Original Publisher	INTERIOR MUSIC CORP	139912946	0	BMI			
		Sub-Publisher	SONGS OF UNIVERSAL INC	353271280	0	BMI			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS			
		Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	50.00	PRS			

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1/3

6/24/13   Printer Friendly Cue Sheet

7	Open The Door	Composer/Author	CARTER, BETTY	35774076	50.00	BMI	Back ground	00:00:57	6889091T T-700.051 .403-6
		Original Publisher	EMI UNART CATALOG INC	223437591	0	BMI			
		Sub-Publisher	EMI UNART CATALOG INC	223437591	0	BMI			
		Sub-Publisher	UA-MUSIC-INTERNATIONAL INC	31245033	0	ASCAP			
		Sub-Publisher	EMI U CATALOG INC	128633081	0	ASCAP			
		Sub-Publisher	EMI UNITED PARTNERSHIP LTD	160556775	50.00	PRS			
8	This Is The Army Mr Jone	Composer/Author	BERLIN, IRVING	2852023	50.00	ASCAP	Back ground	00:00:03	2722762P T-070.179 .767-2
		Original Publisher	BERLIN IRVING MUSIC CORP	2853020	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING LIMITED	282429357	50.00	PRS			
9	Something Grand	Composer/Author	RUIZ, HILTON	86861239	50.00	BMI	Back ground	00:01:48	2137947R T-901.959 .848-2
		Original Publisher	HILTON RUIZ MUSIC CO	86182459	0	BMI			
		Sub-Publisher	GROW YOUR OWN MUSIC	468164333	0	BMI			
		Sub-Publisher	BUCKS MUSIC GROUP LTD	55248283	50.00	PRS			
10	Tenderfoot	Composer	ARBUCKLE, RICHARD DEAN JR	87664822	50.00	BMI	Back ground	00:00:56	0822165T T-071.088 .615-9
		Original Publisher	FRAGOS MUSIC	44022231	50.00	BMI			
11	If I Could	Composer	GABOURY, STEPHEN ANTHONY	263737254	25.00	ASCAP	Back ground	00:01:07	3202786H
		Composer	MACHUN	250780672	25.00	ASCAP			
		Original Publisher	3 UNDER MUSIC	336991723	50.00	Non Society			
12	Cancer For The Cure	Composer/Author	EVERETT, MARK O	334280973	37.50	ASCAP	Feature	00:00:07	7921278Q T-071.059 .206-5
		Composer/Author	PETRALIA, MICKEY	196523347	12.50	BMI			
		Original Publisher	SEXY GRANDPA MUSIC	338939515	0	ASCAP			
		Sub-Publisher	ALMO-MUSIC CORPORATION	649518	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING LIMITED	282429357	37.50	PRS			
		Original Publisher	DISTRICT 6 MUSIC PUBLISHING LIMITED	615325863	12.50	PRS			
13	We Havent Turned Around	Composer/Author	BALL, IAN THOMAS	270372186	10.00	PRS	Back ground	00:01:10	8066091F T-010.385 .895-2
		Composer/Author	BLACKBURN, PAUL	270372284	10.00	PRS			
		Composer/Author	GRAY, THOMAS WILLIAM	270389847	10.00	PRS			
		Composer/Author	PEACOCK, OLIVER JAMES	270398748	10.00	PRS			
		Composer/Author	OTTEWELL, BEN	271113600	10.00	PRS			
		Original Publisher	WARNER CHAPPELL MUSIC LTD	160187388	50.00	PRS			
14	All Along The Watchtower	Composer/Author	DYLAN, BOB	8955074	50.00	SESAC	Back ground	00:01:17	002725HW T-070.250 .259-7
		Original Publisher	DWARF MUSIC (USA)	8946467	0	SESAC			
		Sub-Publisher	FELDMAN B AND CO LTD	9907180	50.00	PRS			
15	American Woman	Composer/Author	CUMMINGS, BURTON	34109514	12.50	SOCAN	Feature	00:01:20	0285709X T-901.964 .421-4
		Composer/Author	PETERSON, GARRY	63831185	12.50	SOCAN			
		Composer/Author	KALE, JIM	55784842	12.50	SOCAN			
		Composer/Author	BACHMAN, RANDALL CHARLES	120833508	12.50	SOCAN			
		Original Publisher	SHILLELAGH MUSIC COMPANY	40049814	0	SOCAN			

6/24/13   Printer Friendly Cue Sheet

#	Title	Role	Name	Number	Share	Society	Type	Time	Code
		Sub-Publisher	BUG MUSIC INC	36210128	0	BMI			
		Sub-Publisher	BUG MUSIC LTD	176871136	50.00	PRS			
16	Straight To The Top	Composer	WALSH, ROBERT JOSEPH	120809995	50.00	BMI	Back ground	00:00:23	2642283N
		Original Publisher	CHAPPELL FIRSTCOM MUSIC	253219190	50.00	PRS			
		Original Publisher	FIRST DIGITAL MUSIC	211629598	0	BMI			
17	Call Me Irresponsible	Author	CAHN, SAMMY	4803224	25.00	ASCAP	Back ground	00:02:02	004080BU T-901.357 .764-5
		Composer	HEUSEN VAN, JIMMY	219748050	25.00	ASCAP			
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	50.00	PRS			
18	Where Love Has Gone	Author	CAHN, SAMMY	4803224	25.00	ASCAP	Back ground	00:00:25	0243337Q T-070.201 .359-9
		Composer	VAN HEUSEN, JIMMY	14047817	25.00	ASCAP			
		Original Publisher	SONY ATV HARMONY	537275340	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV HARMONY UK	556043752	50.00	PRS			
19	Dont Rain On My Parade	Author	MERRILL, BOB	20568602	25.00	ASCAP	Feature	00:01:18	0011631Z T-070.040 .725-5
		Composer	STYNE, JULE	29827555	25.00	ASCAP			
		Original Publisher	WONDERLAND MUSIC COMPANY INC	33189981	0	BMI			
		Sub-Publisher	CHAPPELL MUSIC LTD	46879043	25.00	PRS			
		Original Publisher	CHAPPELL-STYNE INC	5877377	0	ASCAP			
		Sub-Publisher	WARNER/CHAPPELL NORTH AMERICA LIMITED	285605937	25.00	PRS			
20	Seeker	Composer	TOWNSHEND, PETER DENNIS BLANDFOR	54760672	50.00	PRS	Back ground	00:00:55	002158EU T-010.037 .026-0
		Original Publisher	FABULOUS MUSIC LTD	9669263	50.00	PRS			
21	As Long As Im Singing	Composer/Author	DARIN, BOBBY	7499567	50.00	BMI	Back ground	00:01:08	0035025C T-070.225 .631-2
		Original Publisher	TM-MUSIC INC	30706517	0	Non Society			
		Sub-Publisher	T M MUSIC LTD	30706615	50.00	PRS			
22	Dont Let It Bring You Do	Composer/Author	YOUNG, NEIL	33411035	50.00	ASCAP	Back ground	00:03:08	0095071Z T-070.041 .330-4
		Original Publisher	BROKEN ARROW MUSIC	53016712	0	ASCAP			
		Sub-Publisher	BROKEN FIDDLE MUSIC INC	51848081	0	ASCAP			
		Sub-Publisher	SHARANDALL MUSIC	682837700	50.00	PRS			
23	Because	Composer/Author	LENNON, JOHN WINSTON	17798450	25.00	PRS	Feature	00:02:20	0037563T T-010.436 .614-4
		Composer/Author	MCCARTNEY, PAUL JAMES	18873266	25.00	PRS			
		Original Publisher	SONY/ATV TUNES LLCD/B/A	628023565	0	ASCAP			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	50.00	PRS			
24	All Right Now	Composer/Author	RODGERS, PAUL BERNARD	65378161	25.00	PRS	Back ground	00:00:35	002874LV T-070.880 .596-2
		Composer/Author	FRASER, ANDY	65383662	25.00	BMI			
		Original Publisher	BLUE MOUNTAIN MUSIC LTD	3429518	50.00	PRS			

Cue Sheet

PRS for MUSIC

Title	**Dark Knight**	Production ID	0001 5967 7122
Alternative Title	Batman The Dark Knight	Production Number	159677122 \
Production Type	Feature		
Year of Production	2008		
Music Duration	02:15:41		
Country of Origin	Usa		
Date Added to Database	17/09/2008 14:35:17		
Date of Last Amendment	20/06/2013 00:22:20		

Seq	Title	Role	Interested Parties	CAE Number	Share %	Society	Usage	Dur.	Work No
1	Dark Knight	Composer/Author	ZIMMER, HANS FLORIAN	22486300	17.25	ASCAP	Back ground	02:07:37	062635HNT-903.042.602-9
		Composer/Author	HOWARD, JAMES NEWTON	69574335	12.50	ASCAP			
		Composer/Author	WESSON, MELVYN THOMAS	145737362	9.00	PRS			
		Composer/Author	BALFE, LORNE DAVID RODERICK	271121700	7.50	PRS			
		Composer/Author	JACKMAN, HENRY PRYCE	260802686	2.50	PRS			
		Composer/Author	GIBSON, ALEX	130589089	1.25	BMI			
		Original Publisher	WARNER OLIVE MUSIC LLC	347636538	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC CORPORATION	31312147	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS			
		Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	50.00	PRS			
		Original Publisher	WARNER-BARHAM MUSIC LLC	358203370	0	BMI			
		Sub-Publisher	SONGS OF UNIVERSAL INC	353271280	0	BMI			
2	String Quartet No 13 In A Minor						Back ground	00:00:44	
3	Bamboo Rafting	Composer	MIKLOSH, F	340950477	50.00	ASCAP	Back ground	00:00:32	3928883X
		Original Publisher	BEATBOX MUSIC PTY LIMITED	160790865	0	APRA			
		Sub-Publisher	JW MEDIA MUSIC LTD	262095571	50.00	PRS			
4	Whitol Minuet	Composer/Author	HOLROYD, BOB	160166497	50.00	PRS	Back ground	00:00:48	6843511PT-010.244.749-3
		Composer	WHITOL		0	Non Society			
		Original Publisher	CHAPPELL RECORDED MUSIC LIBRARY	160186783	50.00	PRS			
5	Balmoral						Back ground	00:00:12	
6	Balmoral						Feature	00:00:31	
7	Scatterin Monkey	Composer	NAKANO, MASAYUKI		25.00	Non Society	Back ground	00:00:38	8277498T
		Author	KAWASHINA, MICHIYUKI		25.00	Non Society			
		Original Publisher	FILAMENT MUSIC PUBLISHERS	139759723	0	JASRAC			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	50.00	PRS			
8	A Moment Of Silence	Composer	NAKANO, MASAYUKI		25.00	Non Society	Back ground	00:00:34	8277401F

6/24/13   Printer Friendly Cue Sheet

		Author	KAWASHINA, MICHIYUKI		25.00	Non Society			
		Original Publisher	FILAMENT MUSIC PUBLISHERS	139759723	0	JASRAC			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING LLC	269021863	0	Non Society			
		Sub-Publisher	SONY/ATV MUSIC PUBLISHING (UK) LIMITED	269137346	50.00	PRS			
9	Dark Knight	Composer	ZIMMER, HANS FLORIAN	22486300	50.00	ASCAP	Back ground	00:04:05	062635GW T-903.041 .755-1
		Original Publisher	WARNER OLIVE MUSIC LLC	347636538	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC CORPORATION	31312147	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS			
		Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	50.00	PRS			

Cue Sheet

Title	**Tron Legacy**	
Production Type	Feature	
Year of Production	2010	
Music Duration	01:52:05	
Country of Origin	Usa	
Date Added to Database	04/01/2011 10:36:12	
Date of Last Amendment	20/06/2013 00:24:54	

Production ID	0005 7911 4155
International Standard AudioVisual Work	0000-0002-6B21-0000-8-0000-0001-B \ GE01
Production Number	579114155 \

Seq	Title	Role	Interested Parties	CAE Number	Share %	Society	Usage	Dur.	Work No
1	Tron Legacy Cues	Composer	CHRISTO, GUY MANUEL HOMEM	261873943	25.00	PRS	Back ground	01:44:21	063886AP T-905.685 .722-8
		Composer	BANGALTER, THOMAS	261873747	25.00	PRS			
		Original Publisher	WONDERLAND MUSIC COMPANY INC	33189981	0	BMI			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	50.00	PRS			
2	Separate Ways (Worlds Apart)	Composer/Author	PERRY, STEPHEN RAY	44567178	25.00	ASCAP	Back ground	00:01:45	002234HN T-070.243 .438-5
		Composer/Author	CAIN, JONATHAN	87834334	25.00	ASCAP			
		Original Publisher	TWIST AND SHOUT MUSIC	75070781	0	ASCAP			
		Sub-Publisher	SHARANDALL MUSIC	682837700	41.67	PRS			
		Original Publisher	LOVE BATCH MUSIC	338736632	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC CORPORATION	31312147	0	ASCAP			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING INTERNATIONAL LTD	282431573	0	PRS			
		Sub-Publisher	UNIVERSAL/MCA MUSIC LIMITED	282430576	8.33	PRS			
		Notified Publisher	TWIST AND SHOUT MUSIC	75070781	0	ASCAP			
3	Sweet Dreams (Are Made Of This)	Composer/Author	LENNOX, ANNIE	122040051	25.00	PRS	Back ground	00:02:04	0420074R T-010.140 .554-2
		Composer/Author	STEWART, DAVID ALLAN	65424090	25.00	PRS			
		Original Publisher	BMG MUSIC PUBL LTD	159994600	0	PRS			
		Sub-Publisher	UNIVERSAL MUSIC PUBLISHING MGB LIMITED	534290267	25.00	PRS			
		Original Publisher	UNIVERSAL MUSIC PUBLISHING MGB LIMITED	534290267	25.00	PRS			
4	Tron Legacy Opening Theme	Composer	BANGALTER, THOMAS	261873747	25.00	PRS	Feature	00:01:30	085958LV
		Composer	CHRISTO, GUY MANUEL HOMEM	261873943	25.00	PRS			
		Original Publisher	WONDERLAND MUSIC COMPANY INC	33189981	0	BMI			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	50.00	PRS			
5	Creation Of Tron	Composer	CARLOS, WENDY	73322596	50.00	BMI	Feature	00:00:05	0446690E T-700.007 .528-7
		Original Publisher	WONDERLAND MUSIC COMPANY INC	33189981	0	BMI			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	50.00	PRS			

6	Tron Cues	Composer/Author	CARLOS, WENDY	73322596	50.00	BMI	Back ground	00:00:05	046417AN T-070.224 .913-5
		Original Publisher	WONDERLAND MUSIC COMPANY INC	33189981	0	BMI			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	50.00	PRS			
7	Tron End Credits	Composer	CHRISTO, GUY MANUEL HOMEM	261873943	25.00	PRS	Feature	00:02:15	080244CS T-905.664 .466-7
		Composer	BANGALTER, THOMAS	261873747	25.00	PRS			
		Original Publisher	WONDERLAND MUSIC COMPANY INC	33189981	0	BMI			
		Sub-Publisher	ARTEMIS MUZIEKUITGEVERIJ B V	1419436	0	BUMA			
		Sub-Publisher	WARNER/CHAPPELL ARTEMIS MUSIC LIMITED	285605741	50.00	PRS			