The
University
Of
Sheffield.

MUS340

Sound and Moving Image

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Contents

Chapter 1

Literature

- David Lewis Yewdall's book *Practical Art of Motion Picture Sound* (Yewdall, 2003) is the text if you want to go into sound recording, editing and mixing for film. It contains real examples of what worked and what didn't alongside very easy to read technical descriptions.

- Andy Farnell's book *Designing Sound* (Farnell, 2010)

- Nicholas Cook's book *analysing musical multimedia* (Cook, 1998) looks at commercials, CD-ROMs, music videos and songs, operas, ballet. Key to this book is the analysis of music as a component part of the multimedia setting.

- Michel Chion's book *Audio-Vision: sound on screen* (Chion, 1990)

- Roy M. Prendergast's book *Film Music: a neglected art* (Prendergast, 1992)

- Karen Collins' book *Game sound: an introduction to the history, theory, and practice of video game music and sound design* (Collins, 2008)

- Roy Thompson and Christopher J. Bowen's book *Grammar of the Edit* (Thompson and Bowen, 2009)

- Richard Davis' book *Complete Guide to Film Scoring* (Davis, 2010)

- Mervyn Cooke's book *A history of film music* (Cooke, 2008)

  And for orchestration and harmony you will need to reference

- Samuel Adler's book on orchestration which clearly details ranges and comes with plenty of musical examples (Adler and Hesterman, 1989)

- Walter Piston's excellent book on harmony (Piston et al., 1978)

- Taking the Piston further is Schoenberg's complete resource (Schoenberg, 1978)

Chapter 2

History of film music and sound

2.1 Historical trends and paths

Looking at Cooke (2008) and Prendergast (1992).

We begin with the silence of silent films. Sound used to cover up the noise of the projectors and further direct the audience's concentration.

Then the temptation to add your own 'imaginary' sounds when watching very realistic events.

Sergei Eisenstein *The Battleship Potemkin* (1925).

And this very act of 'perceiving' sounds by watching them happen was used by early film makers as an effect.

Remember that even in foley, room noise is always dubbed on to give 'realism'.

Sometimes 'silence' is created by focusing on a single motive rather than neglecting everything. Hitchcock's *The Birds* (1963)

/textitwe need to think about what music does and therefore ask, what is film without music?

Another reason why music appeared alongside film was because of the absence of real sound. You had actors lip syncing live from behind a screen (very acousmatic). Music ultimately 'made the film feel real'.

(page 7) Emile Reynaud's animated *Pantomimes lumineuses* with music by Gaston Paulin in November 1892 as the first film music. And Georges Méliès played the piano for his own *Le Voyage dans la lune* in 1902. (see Hugo for a realisation).

Cinemas grew in the early 20th Century. Diegetic - often light-hearted in nature. Non-diegetic much more melodramatic. Indeed, although we don't hear it, live music was often played on set to set the mood for the actors.

Successful production companies (still extant today) include that set up by Charles Pathé in the early 1900s. And pianists were given cue-sheets with specific pieces of music to accompany films. Rossini *William Tell* for 'hurry' scenes.

A general paradox of film music (even to this day):

> If you come out of the theatre almost unaware of the musical accompaniment to the picture you have just witnessed, the work of the musical director has been successful. Without music the present day audience would feel utterly lost. With it they should obtain an added satisfaction from the show, and still remain unconscious of the very thing which has produced that satisfaction.
>
> (Cooke, 2008, 16)

Ultimately some of the key psychological features of film music boil down to simple instructions which have applied for many years. 'Soft for going to happen, loud for happening'.

2.1.1 Venues and ensembles

The rise of dedicated venues for cinema gave rise to dedicated instruments (in particular the Wurlitzer organ) and ensembles.

2.1.2   Early Epics

Including D.W. Griffith's civil war movie *The Birth of a Nation* (1915) (YT) At three hours, it's a real epic. Original music composed by Joseph Carl Breil.

2.1.3   Music for comedy

Charlie Chaplin, Harold Lloyd, Buster Keaton. Charlie Chaplin - *Tillie's Punctured Romance* (1914) around 24:30 (YT) inside a nickelodeon (from Nickel - the 5 cent coin and odeion, a roofed theatre space).

2.1.4   Music specifically for film

Erik Satie's *Entr'acte* from 1924.

Music for Sergei Eisenstein's *Battleship Potemkin* (1925). With original music by Edmund Meisel but normally heard with a selection of Shostakovich. But Shostakovich was key to the development of film music in Russia. He worked at movie theatres in Leningrad and composed set pieces for a number of important films of the 20s.

2.1.5   The soundtrack

Whilst there was some resistance to the addition of real-time sound, it was inevitable.

Al Jolson in Warner Brother's *The Jazz Singer* (1927) was the first "talkie" using the vitaphone system (a vinyl disc linked to the projector). But *The Jazz Singer* still used a compilation score (mainly Tchaikovsky - brief examples on YT)

2.2   Hollywood

Hollywood and the studio system made film making a commercial art. MGM, Paramount, Warner Bros, Twentieth-Century Fox and RKO (Radio-Keith-Orpheum). And working conditions for composers were stressful and demanding.

Cueing and synch was completed using a click track. Then 'ducked' to enable the speech to come through. This is vital to remember if ever scoring with dialogue.

The symphonic style was unashamedly romantic - possibly a throwback from opera's success at merging music and acting, and in America, from Broadway theatre. And from Wagner, the leitmotif.

Examples. Star Wars, Indiana Jones, Jaws.

Citing Gorbman: Hollywood's compositional principles.

1. *Invisibility*: the technical apparatus of nondiegetic music must not be visible.

2. *Inaudibility*: Music is not meant to be heard consciously. As such it should subordinate itself to dialogue, to visuals - i.e., to the primary vehicles of the narrative.

3. *Signifier of emotion*: Soundtrack music may set specific moods and emphasize particular emotions suggested in the narrative, but first and foremost, it is a signifier of emotion itself.

4. *Narrative cueing*:
   - *referential/narrative*: music gives referential and narrative cues, e.g., indicating point of view, supplying formal demarcations, and establishing setting and characters.
   - *connotative*: music 'interprets' and 'illustrates' narrative events.

5. *Continuity*: music provides formal and rhythmic continuity - between shots, in transitions between scenes, by filling 'gaps'.

6. *Unity*: via repetition and variation of musical material and instrumentation, music aids in the construction of formal and narrative unity.

7. A given film score may violate an of the principles above, providing the vioilation is at the service of the other principles.

(Gorbman, 1987, 73)

2.3 Key figures

- Gottfried Huppertz - best known for his score to Fritz Lang's *Metropolis* (1927). The story line has its Wagnerian aspects (Sci-fi meets Parsifal) and the score is very reminiscent of Wagner, Strauss and Mahler. Note the leitmotives and use of pre-existing themes such as the *Dies irae* and *Marseillaise*. Very descriptive writing and it's always the music which pre-figures the action and sets the scene.

- Max Steiner - best known for huge score of *King Kong* (1933) (YT and Naxos). Also for the inside/outside use of non/diegetic music in *Casablanca* (1942) with the use of Herman Hupfeld's song 'As Time Goes By' (from 1931)

- Erich Korngold - well known for Errol Flynn blockbusters such as *The Adventures of Robin Hood* (1938)

- Franz Waxman - well known for horror music in particular *The Bride of Frankenstein* (1935). Also work with Hitchcock (such as *Rebecca* (1940), *Suspicion* (1941) and *Rear Window* (1954))

- Alfred Newman - *The Prisoner of Zenda* (1940)

- Aaron Copland - cf. *Billy the Kid* (1938) for the cowboy feel. Heard briefly in *Of Mice and Men* (1940) (YT)

- Miklós Rósa - *Ben Hur* (1959)

- Elmer Bernstein - *To Kill a Mockingbird* (1962)

- David Shire - *The Taking of Pelham 123* (1974)

- Jerry Goldsmith - *The Planet of the Apes* (1968) and *Escape from the Planet of the Apes* (1971)

- Louis and Bebe Barron - *The Forbidden Planet* (1956)

- Alex North - *2001: A Space Odyssey* (1968) YT but here it is interesting to note how Stanley Kubrick became so enamoured with his temp tracks that North's score was purged.

- Bernard Herman - beginning with *Citizen Kane* (1941) and following, a close working relationship with Hitchcock. *Vertigo*(1958), *North by Northwest*(1959) and *Psycho*(1960). N.B. whistling tune from *Twisted Nerve* (1968) used in....Herman in Cook (Cook, 1998, 66),

> I feel that music on the screen can seek out and intensify the inner thoughts of the characters. It can invest a scene with terror, grandeur, gaiety, or misery. It can propel narrative swiftly forward, or slow it down. It often lifts mere dialogue into the realm of poetry. Finally, it is the communicating link between the screen and the audience, reaching out and enveloping all into one single experience.

and in the United Kingdom, none other than.

- Ralph Vaughan Williams - *Scott of the Antarctic*(1948)

- Benjamin Britten - *Night Mail* (1936) - documentary and information films, but here with film composed to music and text. (YT)

- William Walton

- Malcolm Arnold

- Richard Rodney Bennett - *Four Weddings and a Funeral*(1994)

- John Barry - *Dances with Wolves* (1990) and in cartoons

- Carl Starling - WB cartoons for Daffy Duck, Donald Duck, Bugs Bunny etc. (Duck Amuck, 1953, Vimeo)

The list is endless and world-wide.

2.4 Sound of Cinema (BBC)

2.4.1 episode 1

After the silents and films such as *Don Juan* (1926) with discs synchronised with the picture you get works like *King Kong* (1933) fully scored by Max Steiner adopting the leitmotif. For composers like Erich Wolfgang Korngold *Captain Blood, 1934* the studios gave him full control over the film process. *The Adventures of Robin Hood* (1938) is another prime example of his work. Korngold worked for Warner Bros. The BBC programme lingered on the work of Bernard Hermann naturally with *Citizen Kane* then the Hitchcock collaborations: *Vertigo*(1958), *Psycho*(1960), *Marnie*(1964) - a failure, *Torn Curtain*(1965) - the film that got Hermann fired. In 1975 Hermann worked with Martin Scorsese on *Taxi Driver*.

2.4.2 episode 2

Popular music in film:

- Scorsese's *Mean Streets* using the Rolling Stones

- John Barry, Lalo Schifrin incorporate Jazz into their music

- Enio Moricone creates a very singular style

- Tarantino 'finds' his music - there is no film composer

- 1940s: Jazz with Miles Davis, 1951: *A Streetcar Named Desire* with a Jazz score by **Alex North** - there's the scene with the saxophones that denoted sexual tension which was cut for strings (denoting romance not sex)

- 1960: *Beat Girl* with score by John Barry - John Barry in his own band the John Barry seven

- Barry hit the big time with *Dr. No* - orchestrating the Monty Norman theme (which had come from one his musicals). Barry was the orchestrator and arranger for which he got 250. He got a further next 11 Bond jobs and created the idea of scoring in the title track with a singing legend (like Shirley Bassey for *Goldfinger*) The main tunes from these themes are then treated symphonically throughout the film.

- 1964: Beatles' *Hard Day's Night*

- 1964: Hollywood - Richard and Robert Sherman - academy awards for film scores. Particular success with their score for P.L. Travers (author) *Mary Poppins*. Their fusion of popular music and english music hall seemed entirely appropriate though many have views on D.V.Dyke's suitability for the role. Shermans went on to do the *Jungle Book*

- 1964: *Fistful of Dollars* - Sergio Leone and Enio Moricone partnership. He arranged a pop record called "pastures of plenty".

- Lalo Shifrin - played with Dizzie Gillespie. Was known for his music for the TV series *Mission Impossible*. He went on to score for *Bullit* and *Dirty Harry* (Dir: Don Siegel).

- 1973: Back to *Mean Streets* with no composer! Lots of Phil Spector and tie-ins between the meanings on the pop record and the identities of characters.

- 1973: George Lucas - *American Graffiti* - 50s and 60s pop

- 1977: DISCO and *Saturday Night Fever* - Bee Gees and David Shire. 120bpm and tunes from the classical repertoire reorchestrated. (The example in the film is MMussorgksy's *Night on a Bare Mountain*)

- More pop associated with commercial marketing of the film: 1986 "Take my breath away" - *Top Gun*

- 1986: David Lynch and *Blue Velvet* - Angelo Badalamento. "Mysteries of Love" with lyrics by Lynch. Went on to collaborate on *Twin Peaks*, *Lost Highway* and *The straight story*

- 1992: Quentin Tarantino: *Reservoir Dogs* - reliance upon the **music supervisor** - in this instance Karen Rackman. She cleared the rights for songs to be used.

- 2003: Tarantino: reusing the Bernard Herman tune for "Twisted Nerve" + Moricone

- 2006: David Arnold - *Casino Royale* and *Skyfall*. First song to be given an Academy Award (Adele)

2.4.3 episode 3

New Frontiers:

- *Chariots of Fire* (1981, dir: Hugh Hudson). Music by Vangelis using synthesizers. Electronic score but quite close to traditional music. Produced by David Putnam.

- 1945: Miklos Rozsa on Hitchcock's *Spellbound* and the Theremin. Then again in *The Lost Weekend* (dir: Billy Wilder).

- The Theremin - a 'predictable shorthand'.

- *Forbidden Planet* (1956, dir: Fred M. Wilcox). MGM. Sound effects came from Louis and Bebe Barron in NY. Whole score taken on. Diegetic and non-diegetic (albeit fictional).

- 1963 *The Birds* (dir: Alfred Hitchcock) using the Trautonium by Friedrich Trautwein and Bernard Hermann.

- The Moog synthesizer. Walter (then Wendy) Carlos. *Switched on Bach* (1968) led to Kubrick's 1971 *A Clockwork Orange*. 'Rape, ultra-violence and Beethoven'.

- Early 70s saw increased use of sound effects. Francis Ford Coppola *The Conversation* (1974)

- **Walter Murch** was a key figure here and went on to make sfx for many other films.

- *THX 1138* (1971, dir: George Lucas), again using the synthesizer.

- *Midnight Express* (1978, dir: Alan Parker) with music by Giorgio Moroder. The score achieved an Oscar.

- Korg M1.

- *Blade Runner* (1982, dir: Ridley Scott) again had a Vangelis score.

- Iconic sound effects. Walter Murch again key. *Apocalypse Now* (1979, dir: Francis Ford Coppola). New surround sound format for this film and increased importance of sound design.

- Skywalker Sound, CA. Post-production. Randy Thom (worked with Walter Murch), sound designer for *The Incredibles* (2004, dir: Brad Bird) received an Oscar for sound.

- Carter Burwell (*Twilight* series) and worked exclusively with the Coen Brothers (Joel and Ethan). *True Grit* (2010, dir: Coen Bros.). *Barton Fink* (1991, dir: Coen Bros.) incorporating annoying sound of mosquito, recorded by sound designer Skip Lievsay. In *No Country for Old Men* (2007, dir: Coen Bros.) also score by Burwell.

- π (1998, dir: Darren Aronofsky). Music by Clint Mansell (after Pop Will Eat Itself). Thereafter *Requiem for a Dream* (2000), *The Fountain* (2006) and *Black Swan* (2010) with the same team.

2.5 Well known films and their composers

Film	Composer
John Barry	From Russia with Love
John Barry	The Ipcress File
John Barry	The Quiller Memorandum
John Barry	Octopussy
John Barry	Midnight Cowboy
John Barry	Dances with Wolves
John Barry	Out of Africa
John Barry	The Specialist
John Barry	Mercury Rising
Jerry Goldsmith	The Man from UNCLE
Jerry Goldsmith	The Waltons
Jerry Goldsmith	Papillon
Jerry Goldsmith	The Omen
Jerry Goldsmith	Alien
Jerry Goldsmith	First Blood
Jerry Goldsmith	Total Recall
Jerry Goldsmith	Forever Young
Jerry Goldsmith	Star Trek: Nemesis
John Williams	Close Encounters of the Third Kind
John Williams	Raiders of the Lost Ark
John Williams	ET: The Extra Terrestrial
John Williams	Schindler's List
John Williams	Saving Private Ryan
John Williams	Minority Report
John Williams	Catch me if you can
John Williams	Harry Potter
John Williams	Star Wars
Danny Elfman	Spider Man
Hans Zimmer	Gladiator
Howard Shore	The Lord of the Rings
Vangelis	Chariots of Fire
James Horner	Titanic
Alan Silvestri	Forest Gump

2.6 Historical film music practice and analysis

Looking at Chion (1990) and Cook (1998)

Although sound and music should magically 'meld' with the image, Chion talks about 'added value'.

Where the music is very closely linked in style, emotion and meaning it is 'empathetic'. Where this is not the case the music can be 'anempathetic'. (Chion, 1990, 14-15) gives us examples of how sound 'temporalizes' image.

- Sustained sounds versus fluttering sounds (one is clearly more animated)

- Predictability versus irregularity.

Sound can augment and suggest what we're seeing (or as in horror movies) what we're not seeing.

2.7 Three modes of listening

- Causal listening: 'what is it?'

- Semantic listening: 'assuming a language, what is it saying?'

- Reduced listening: 'what is in the sound itself?'

Question: What do you have to work with?

- The sound recorded with the film

- Foley

- Dialogue / Dialogue replacement

- Sfx

- Music (diegetic or non-diegetic)

2.8 Sound and silence

Be wary of using silence (or black) as it is often perceived as though something has gone wrong. Better still to head towards the minute but keep something there.

2.8.1 The Punch

What we hear is what we haven't had time to see! (Chion, 1990, 61)

2.8.2 Synchresis

Chion's combination of *syncrhonism* and *synthesis*, the join between sound and image. Gestalt theories come into play here.

2.8.3 Space

See *Sonic Art: Recipes and Reasonings* for a discussion of space.

2.8.4 Time

Sound that precedes action, sound that sums up action. Sound that raises questions. Chion calls sound that precedes action *active offscreen sound* and sound that envelops and stabilizes a scene *passive offscreen sound*. Passive offscreen sound is the perfect extension of the scene and provides added value. So you should ask yourself, 'what is on screen and what is off screen?'

2.8.5 Phonogeny

Phonogeny is Chion's means to understand the quality of a sound (Chion, 1990, 101) in relation to the medium. (Note Chion's analogy of the not so beautiful women but 'incredibly photogenic'). The same can be true for audio. However, current practice deprives us of the time to see and hear. This quote is worth repeating in full:

> This leads us to wonder what the disappearance of the notion of phonogeny is the symptom of. Perhaps it signals an important mutation, to our total everyday immersion in *mediated acoustical reality* (sound is relayed by amplifiers and loudspeakers). The new sound reality has no difficulty supplanting unmediated acoustical reality in strength, presence, and impact, and bit by bit it is becoming the standard form of listening. It's a form of listening that is no longer perceived as a reproduction, as an image (with all this usually implies in terms of loss and distortion of reality),

but as a more direct and immediate contact with the event. When an image has more presence than reality it tends to substitute for it, even as it denies its status of image.

(Chion, 1990, 103)

We now expect the hyper-real.

Chapter 3

Case studies

3.1 Case Study 1: Michael Giacchino

Michael Giacchino (1967). website:http://www.michaelgiacchinomusic.com/. Note well his dedication to his education. He received a very thorough grounding in film, art and music. His major career boost came when he began writing for games including the well known *Medal of Honor* series. He then teamed up with J.J.Abrams and wrote for a number of TV series. And through this collaboration he wrote for *Star Trek* and *Star Trek Into Darkness*.

His collaboration with Brad Bird have included *The Incredibles*, *Ratatouille*. His collaboration with Matt Reeves resulted in a score for *Dawn of the Planet of the Apes*. His collaboration with Pete Doctor resulted in a score for *UP*. His collaboration with Andrew Stanton resulted in a score for *John Carter*.

3.1.1 John Carter

- Science fiction but with a Wild West slant.

- Horn theme. A lot of music backing the picture from simple drones to pulsing percussion.

- A three note theme. Open fifth (chord I to IVmin)

- Use of Ostinati and heavy reliance upon strings.

- Similarities with Star Trek especially in the love theme (around 1:15:00 and 1:17:30)

3.2 Case Study 2: Bernard Hermann

- The Society for the Appreciation of the Music of Bernard Hermann

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3.3 Case Study 3: Stanley Kubrick

Ligeti's music is closely linked to the films of Stanley Kubrick.

- 2001: A Space Odyssey

    - Atmosphres (StarGate sequence and other places)
    - Lux Aeterna (for the moon-bus scene en route to the TMA-1 monolith)
    - Requiem (Kyrie linked to the black monolith)

– Aventures (closing scenes)

– There are small recurrences in the film 2010.

- The Shining uses small portions of Lontano for orchestra alongside music in a similar vein by Penderecki (Utrenja, De Natura Sonoris No.1 and No.2, and Polymorphia)

Chapter 4

Multimedia

Multimedia, music video, games, commercials. Sign, symbol and signified. Read (Cook, 1998, 147-173) on Madonna's *Material Girl*.

Chapter 5

Game audio

Read *Game sound: an introduction to the history, theory, and practice of video game music and sound design* (2008)

Think about the concepts of *interactivity* and *nonlinearity*. Two terms which might seem obvious at first but are fundamental to games yet frustrate the design of sound and music in games.

Consider the notion of *diegetic* and *extradiegetic*.

- *diegetic* - a conscious interaction with the interface

- *extradiegetic* - a corporeal response to the gaming environment and experience.

Consider the triggering of sounds.
GTA...explore.

Chapter 6

Film scoring examples

More examples

- Forrest Gump: feather sequence. (YT)

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