

Film Project

Re-scoring 'Blade Runner' Graham Cole

Student Identification

Number: 200-011-841

Submitted in fulfilment of the requirements for
the Master of Music [MMus, Composition]
MUSC5160: Project

School of Music
University of Leeds
September 2004

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Acknowledgments

I would like to thank the following people for supporting me in this project -

- Amy Burdett for singing so wonderfully everything I threw at her - particularly the ones in Japanese!
- James Russell for his cool Sax playing.
- John Hunter for his assistance in keeping me going at work.
- Professor David Cooper for all his help, guidance and support with this project.
- ...and finally my wife Sarah, for not only supporting me in everything I do but for putting up with me for all these years! I would like to dedicate this project to Sarah.

Technical Information on Playing the DVD

- The film has been recorded onto the DVD-R format and has been split across two discs. Disc 1 consists of chapters 1 - 18 and disc 2 consists of chapters 19 - 36.
- These DVDs have been tested on five different machines, three stand alone players and two PC DVD players. If the disc does not play, please make sure your DVD player is DVD-R compatible. The PC DVD drives tend to be more compatible if there is a problem.
- It is best to limit the use of the fast forward, rewind and scene jump functions as, although these do generally work, they are less stable than a commercial DVD. In particular the final scene (credits) is difficult to jump to directly. The movie should however play from start to finish perfectly well.
- The picture is best set for viewing on 'wide screen 16:3' but can be viewed okay on a standard 4:3 setting.
- The stereo sound track is best heard through a good quality amplifier rather than in-built TV speakers.

Introduction

This submission consists of a complete score and synchronisation to the film Blade Runner. By completing the whole film it was possible to develop and show a variety of compositional styles and techniques used in today's film scoring business. Traditional scoring and timecode, improvisation to a visual image along with the more current practice of computer synchronisation using sequencing software, are all used in the project.

This technical report and commentary highlights these techniques in a break down of the compositional process and discusses their implications in the compositional method. A summary of the score and process is given below, followed by a more comprehensive description of each reels score.

Blade Runner, the Movie

A futuristic Film-Noir thriller by the director Ridley Scott, Blade Runner is based upon the novel 'Do Androids Dream of Electric Sheep' by Philip Dick. Originally released in 1982, the directors cut version from 1992 has produced an almost cult following after an initial box office failure. The directors cut omits the character voiceover narration, removes the uplifting finale and develops and extends a number of scenes including the unicorn dream sequence.

Original Vangelis score – using early 1980s technology which, although cutting edge at the time, can sound rather dated in today's digital film scoring world.

Project Preparation

The software *Smart Ripper* was used to take each scene from the 1999 DVD release and export them as VOB files – the standard DVD file format. The software *MPEG Mediator* was used to take these large files and compress them into more manageable MPEG4 files. These compressed files could then be imported into *Cubase SX* and would automatically run in synchronisation.

The *MPEG Mediator* software also enabled the original soundtrack to be extracted in stereo format. Unfortunately, as there is no Dolby Digital 5.1 surround sound version of the DVD currently available, the stereo mix had to be used, rather than just taking the centre speaker track often used for speech only. This meant the sound track had to be extensively edited to remove the original Vangelis musical scores. By importing each track into the digital editor *SoundForge* the Vangelis cues were able to be removed by the following methods –

- Mute - Silences any original Vangelis music cues
- Fade - fades in or out from speech and music
- Gain - adjust the volume of sections to hide the music
- Equalisation - filter out low or high frequencies or sounds from the music
- Noise Gate - filter out quiet sections of background music whilst keeping the louder speech
- Copy / Paste - copy segments of background ambience (e.g. street scenes) where there is no music and paste them into scenes where there is a mixture of music and ambience.

A few other techniques such as digital delay and panning were also occasionally used to filter out unwanted original music.

Once there was a full set of silent movie reels and a full set of edited soundtracks then preparation and setting up of the software and hardware begins. In a professional film production this would be the job of the Music Editor.

Each reel and soundtrack were imported into *Cubase SX*, synchronised and saved as a separate file. The soft-sampler *Kontakt* was set-up to play the orchestral strings, violins 1 and 2, violas, celli and double basses on channels one to five

respectively. These were then balanced and panned mirroring the orchestral seating system, followed by 5db of reverb added to each instrument. The remaining samples were added to this on channels 6-12 after decisions were made on the timbral aspects of the score.

Finally, before the compositional process started, the film had to be spotted. The composer would often be assisted by the music editor, director and possibly the producer and other editors in this task. A decision was made to follow the basic outline of the original film for music cues, which was mainly due to the extraction of the mixed speech and music soundtrack that was to be worked with. A few extra cues however, were added and some lengthened or shortened.

The main highlights spotted were as follows

- *An introductory main theme (Reel 1)*
- *The relationship between Deckard and Rachael (various reels)*
- *Deckard's Dream (reel 13)*
- *The chase between Deckard and Zhora, with the breaking window climax (reels 17 and 18)*
- *Roy Batty killing Tyrell (reel 26)*
- *The chase and building ledge scenes at the end (reels 31 to 34)*

Many other smaller cues were spotted and musical decisions were drafted on these. Also, a decision to create leit-motifs for the characters was made. Some of these motifs would interlink and swap round, echoing the confusion the main characters with not knowing whether they are or want to be androids or humans and good or bad.

Compositional Process

The natural pace of the movie is quite slow and the overall feel is quite dark. It is essentially a detective thriller in plot which dictates certain elements of the score, and of course being a Science Fiction film set in the future opens up further timbral possibilities. Further reading into the film and its various plot twists and meanings also provided inspiration into the compositional direction undertaken.

A clock ticking sample as well as the crotchet sixty tempo of many of the tracks is used to imitate the film theme of time running out. This tempo was very useful when recording and layering different sections together as calculations such as delay time were easier to define.

The instrumentation chosen differed to the original Vangelis electronic score. The use of vocals and the saxophone interchanging between the characters as they try to figure out their place in the world was an important one. The mixture of guitar based sounds used in current films was blended with a variety of vocal techniques and traditional string orchestration. The strings are intended to be played live and recorded although synthesised sounds were used for this project.

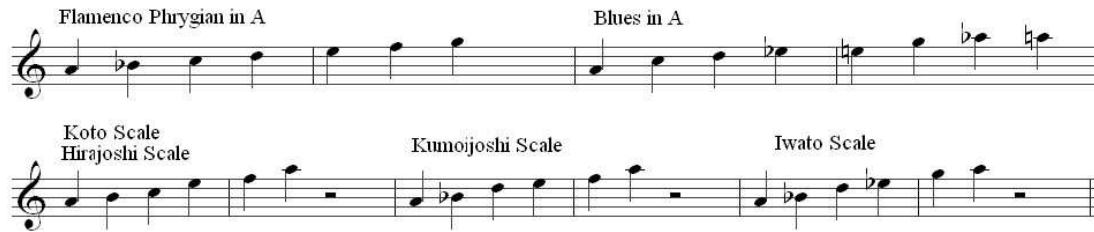
The film is set in a mixed cultural part of Los Angeles, 2019. The original voice over describes a mixed up local language.

That gibberish he talked was city-speak, guttertalk, a mishmash of Japanese, Spanish, German, what have you. I didn't really need a translator. I knew the lingo, every good cop did. But I wasn't going to make it easier for him.¹

Therefore using mixtures of sounds, scales, words and instruments from these languages seemed appropriate to the film setting. Three scales from Japan, the Hirajoshi, Kumoijoshi and Iwato were mixed in with the flamenco Phrygian mode and the American blues scale.

¹ Taken from the voice over of the original 1982 theatrical release. Source: BladeZone.com

Scales Used



The instrumentation also followed this mixed up pattern. There is use of the American saxophone, the Spanish guitar, Japanese taiko drums and Chinese gongs blended together with a traditional European string section and electric guitar based sounds. The vocal style ranges from operatic to oriental and even to sounds reminiscent of the German 'Death Metal' scene. The use of Japanese, Spanish and German lyrics also aids this idea.

Some of the other motifs used were developed from phrases from the Radiohead song 'Paranoid Android'. Although this song was written over ten years later, the words, feel, differing tempos and mixed styles seemed very appropriate to the film. The song is used in its original format for the final credits, a technique used in many films looking for a commercial spin off to sell more soundtracks!

Some of the scores were composed as 1-2 minute cues to be edited and dropped in and out where appropriate. These tracks were recorded on separate Cubase SX files before being imported into the appropriate reels and scenes. Some scores were set-up using timecode markings in Sibelius, then manipulated in Cubase SX to fit the scene.

Liet-motif style ideas can be heard in many of the scores. A saxophone for the detective, an ethnic vocal for the female android who doesn't know where she belongs, an aggressive growly vocal for the 'bad guy' android, accompanied with distorted electric guitar and a bass guitar for added low frequency response. The saxophone blues influenced piece is appropriate for the flirty 'basic pleasure model' character of Pris. Each of these sounds are often mixed with different cues depending on the mood. For example, the minor riff shown below is used frequently when danger is present.



A set of 1-3 bar cue motifs were composed and recorded on saxophone, vocals, bass and guitar and used in a variety of places in the film. These have often undergone extensive editing such as pitch shifting, effect processing and time-stretching. A few scenes, most notably the bass guitar part in reel 10, were improvised live to the image. No score was used, just the cue motifs used as source material. This again shows a variety of film scoring methods that have been used in the past and in the present day.

Recording Process

Recording sessions were organised for the vocalist and saxophonist. Both of these musicians and the guitar were recorded in a separate enclosed room using an AKG C3000 microphone and headphones. The bass guitar and piano were recorded using direct inject techniques. The audio tracks were recorded onto separate Cubase SX files and onto discreet tracks allowing further editing later. Comping was used to pick and mix the best sections of various takes, although many of the vocal cues are done in long phrases to capture the mood and feeling of the words.

A variety of samples were found, recorded and created. Some samples such as the string sounds, the Tam-tam were taken from the EMU World and Orchestra Sample CD-ROM. These were imported into *Kontakt* to provide more realistic and flexible sounds for the midi files played by the sequencer. A range of other samples were created using live recordings and editing in *SoundForge*, and some of these are shown below –

- | | | |
|--------------------------|---|--|
| Clock | - | ticking sound used for backing |
| | - | a version developed into echo clock |
| | - | a version changed into 5/4 |
| Dustbin lorry loading up | - | mechanical sound used for machinery |
| | - | e.g. lift and cars |
| Rain & Thunder | - | local weather provided a good foley source
for atmospheric rain and thunder |
| Vacuum Cleaner | - | edited to provide the flying 'Spinner' car sounds |

These interesting sounds have been used throughout the film score, often heavily disguised using digital editing techniques.

Final mix and DVD Authoring

Once the sound tracks and speech had been composed and synchronised with the foley using Cubase SX, the final sound track mix was undertaken and ready to write to DVD. This would traditionally be the job of the studio engineer working alongside the music editor, with possibly the composer in attendance.

Due to restrictions in AC-3 Dolby digital surround sound encoding software, which is very expensive, the final mix was done in stereo. Each reel would be mixed down with care taken on the balance between reels so the soundtrack would run smoothly. These sound track reels were once again imported into *SoundForge* for final tweaking and balancing before exporting into the DVD authoring software.

The greatest difficulty was addressing the sound tracks that ran over two scenes. For example, reel 17 and 18 sees a chase scene between Deckard and Zhora that builds up over reel 17 and the early part of 18 before arriving at the hit-point during the middle of 18. The end of one part of the score and the start of the next scored scene were edited so that they would blend in. Unfortunately the DVD software did not always audibly link the scenes as smoothly as hoped.

To create the DVD, the *Magix - Movies on CD & DVD* authoring software was used. This software enabled each video reel and each sound track to be placed onto a story-board and linked together a choice of transitions. Zooming in on each file end and start enabled the synchronisation to be completed. The DVD scene selection menu function was set using images from the film. The whole film had to be split between two discs, due to the change in compression settings in both audio and visual compared to the original.

Summary

This project shows a wide variety of musical and technological techniques used in the film music industry. Some traditional methods are employed, such as recording whilst playing along to the moving image. Some more standardised techniques were employed in the scoring and synchronisation (all be it without a real orchestral string section).

Today's film industry tends to follow the sequencer approach, using the flexibility of non-linear audio manipulation tools such as time stretching, digital synchronisation and sampling. These areas have also been highlighted in this project too.

Completing each area of the film scoring process has been reflected in this project. From music spotting to final mixing, composing to orchestrating, as well as being music editor, performing musician and recording engineer, each part of the process has had to be undertaken in order to achieve a final cut of the film and new sound track.

Appendix 1

Film Synopsis

Director Ridley Scott's 1982 film "Blade Runner" is arguably the most famous and influential science fiction film ever made. It has exerted a pervasive influence over all subsequent science fiction cinema, and indeed our cultural perceptions of the future.

The film is a combination of 1940s film noir and futuristic detective thriller. The setting is the decayed, rain-soaked Los Angeles of 2019. **Rick Deckard, played by Harrison Ford, is a retired Blade Runner, a cop who specialises in hunting down replicants.** The replicants are artificial humans, indistinguishable from the real thing in every way but two; they have no memories, and they have lifespans of only four years.

Five replicants are loose in LA, led by the fearsome combat specialist Roy Batty. Deckard's job is to hunt them down. **He stalks his prey through the neon-lit, future-noir city. The film climaxes in a showdown between the Blade Runner and his nemesis Batty.**

Ironically "Blade Runner" did not do well on its initial release. The film was burdened by numerous studio impositions, including an inane happy ending and a frankly embarrassing voice-over from Harrison Ford. The film was criticised for its thin story line, gaps in logic, and over reliance on spectacle. Reaction varied between indifference and hostility.

Time, and a director's cut, have vindicated Ridley Scott's vision. Ford's voice-over is mercifully deleted, and other scenes restored. The spectacle is still there; the most richly detailed future ever seen on screen is visible for all to enjoy. But this alluring eye-candy conceals a rich thematic complexity. "Blade Runner" impresses with its inquiry into the nature of memory, identity, and what it means to be human. The characters, behind their damaged and defensive facades, are complex and well realised. Ford's performance as the world-weary Deckard, and Rutger Hauer's portrayal of the terrifying yet sympathetic Batty, are noteworthy.

"Blade Runner" fully and richly deserves its reputation. It is simply one of the most extraordinary films ever made.

Source - BBC review by Nick Cramp

<http://www.bbc.co.uk/films/2001/02/07/blade_runner_1982_review.shtml>

Appendix 2

Character Overview

DECKARD (Harrison Ford): Ex-Blade Runner.

HOLDEN (Morgan Paull): Blade Runner, shot by Leon and put on life support.

H. BRYANT (M. Emmett Walsh): Inspector of the police force, Deckard's former boss.

GAFF (Edward James Olmos): A member of the police force.

RACHAEL (Sean Young): Experimental NEXUS 6 replicant. Works for Tyrell and has his niece's memories.

DR ELDON TYRELL (Joe Turkel): Owns the Tyrell Corp. and manufactures replicants. Extremely intelligent, designed the NEXUS 6 brain.

J.F. SEBASTIAN (William Sanderson): Genetic designer for the Tyrell Corporation. Still on Earth because of progeria, a premature geriatricism (Methuselah's Syndrome).

ROY BATTY (Rutger Hauer): Leader of the renegade replicants.

PRIS (Daryl Hannah): Replicant

ZHORA (Joanna Cassidy): Replicant.

LEON KOWALSKI (Brion James): Replicant.

Appendix 3

Lyric Translations

Una Vida Nueva (A New Life) - *Spanish*

A new life awaits you in the off-world colonies
The chance to begin again in a new life
In a golden land of opportunity off-world

Memories - *Japanese*

From a great height
Remember my name
You all forget to recognise
Be afraid, be afraid, Prisoner, Slave
Like tears in rain, forget to recognise
Time to die.

Souvenir of Dreams - *Japanese*

Rain down on me from a great height
Remember my name
You all forget to recognise, my name
My name, lost in time
(Be afraid, be afraid, Prisoner, Slave)
Rain down on me
(Like tears in rain, forget to recognise)
God loves his children,
(Time to die, moments like tears in rain)
Lost in time, lost in time
(Android)

The Prodigal Son - German

God loves his children
I guess he does
Rain down on me from a great height
It's not an easy thing to meet your maker
Can the maker repair what he makes?
Now it's my turn
I'm giving to give you a few seconds,
before I come
1, 2, 3, I'm coming
4, 5, I'm coming
How to stay alive
How to stay alive

Painful to Live in Fear (German)

How old am I?
How long do I live?
Painful to live in fear, isn't it?
Fiery the angels fell,
deep thunder rode around their shores,
burning with the fires of Orc

Atmosphere Cues (Mixed languages)

What's that?
Memories
Victim
Memories
Two, sixty-three, fifty-four
Killer, slave all of you
Time to die
Memories

Appendix 4

Software Used

AC3 Tool by Clier, BlackSunSoft, 2001
Cubase SX v1.02, Steinberg
Kontakt 1.2.20, Native Instruments
Movies on CD & DVD 2002, Magix
MPEG Mediator v1.5, Arno Hornberger,
Proteus 2 and 3 World and Orchestral Sample CDRom, EMU
Sibelius 3, Sibelius Software Limited
Smart Ripper 2.41, Tron
Sound Forge v5, Sonic Foundry

Hardware Used

Pentium4 PC with 512MB RAM running Windows XP
Creative SoundBlaster Audigy Soundcard
MIDIMAN MIDI Sport 2x2 USB midi interface
AKG C3000 Microphone
Shure SM58 Microphone
dBX 266XL compressor
Behringer DI 100 DI Box
Yamaha MD8s Mixer (and minidisk recorder)
Yamaha Clavinova CVP-20
Gibson Les Paul guitar
Yamaha Bass guitar
Marshall Valvestate 8080 amplifier
AKG K55 headphones
Cambridge Audio Amplifier
LG DVD Multi recorder

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