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ETHNIC ROOTS AND THE HOLLYWOOD SOUND: A MUSICAL EXPERIMENTATION IN TIME AND TRADITION

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**ETHNIC ROOTS AND THE HOLLYWOOD SOUND: A MUSICAL  
EXPERIMENTATION IN TIME AND TRADITION**

**EVANGELOS CHOUVARDAS**

**A thesis submitted to the University of Huddersfield in partial  
fulfillment of the requirements for the degree of Doctor of  
Philosophy**

**(Extracted text from the final PhD research website form available online in:**

**<https://echouvardas.wixsite.com/intolerancephd>)**

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## **Introduction**

### **1. About Me**

It all began with a couple of thoughts while watching and observing the music behind films. Thoughts of experimentation that I had since my early childhood passing through my early years in the imaginary world of music composition. Why does that film's score evoke my 'x' or 'y' feeling and why at the same time, when I am filtering that through logic, I hear instruments and music scales that have nothing to do with the location this film is based on? I wonder what would happen if I **changed** this instrument with that instrument, **introduced and blended** exotic scales between different scenes in order to create new emotional textures **etc.** This scepticism has brought me to **the** point where I felt the need to explore into more depth the music behind the picture and create my own unique portfolio of works in which I wish to discover new music paths as well as seeing how these may reflect my own personality.

### **2. Abstract**

This PhD thesis is based on the exploration of the Hollywood film industry in view of scored music and the association between the latter and **Middle Eastern** music culture. It aims to determine how the music relates to the picture, what are the direct or implied associations with eastern music styles **are** and if they exist, to what extent these represent eastern physiognomies or a **westernised** model of perceived ethnic authenticity. Due to the vast amount of material available for researching and discussing, this study's angle focuses mainly **on silent** and science fiction cinema.

The study explores these areas by presenting and discussing the lack of communication between the visual and eastern ethnic music implementation in view of scoring composition and instrumentation. It explores a number of films that relate to the issue, or associated **subcategories** of the main issue. **It** presents and discusses scoring segments in terms of music implementation and gathers information in view of the composing techniques used. Additionally, it demonstrates interrelating examples and approaches where this is relevant and draws conclusions in view of the original question considering **Middle Eastern** music. **Collected** information is **then processed** sculpting the following creative part.

In order to test the hypothesis of audiovisual fluidity and relevance, it then demonstrates a number of originally composed music examples on how films can be scored in a controversial way, with an increased sense of authenticity in terms of ethnic instrumentation, harmonic progression and rhythmic structure, drawing parallel lines when necessary with the preliminary films' exploration outcomes. Naturally, this is always related to each film's corresponding visual, chosen for its appropriateness in terms of ethnic portraiture, insinuation or potentially dynamic experimentation.

Considering the latter, Middle Eastern ethnic instrumentations artistically combine with the Western symphonic orchestra on numerous occasions and the results of this amalgamation are being discussed and evaluated accordingly. Additionally, in view of experimentation, there is an effort to unite the two previous angles (eastern ethnic and Western symphonic) with computer sound design procedures with the intention of constructing hybrid scores specifically for the science fiction genre. Thus the study explores, identifies and demonstrates the potential of ethnic instrumentation in a film genre in which the visual does not necessarily equate, or imply, an eastern scoring character.

The end results of this study determine and discuss the observed lack of depth in view of eastern music character. Out of the composed scores' presentation and analysis, the research verifies the originality of this attempt focusing also in the associated physiognomies between the music and the visual. Furthermore it explores and presents the scoring potential in view of eastern ethnic instruments and sound design, especially in the directly related science fiction genre.

Finally, the problematic nature of the outcome, as well as thoughts and concerns about the superficial use of eastern music in the Hollywood cinema, are being discussed under a variety of different angles including technology, social culture, film industry, politics, et. al.

### **3. Acknowledgments**

Music cannot be written without any form of inspiration and guidance. In order to take a big step forward, you must first make sure that you have solid foundations and genuine support.

Therefore, I would firstly and most importantly like to express my most sincere gratitude to my PhD supervisor and personal mentor Dr Julio D'Escrivan to whom I owe the biggest part of completing this

project. His support throughout time was unquestionably vital in both terms of academic research and psychological support. His special way of transmitting positive energy together with his theoretical knowledge and **practical** music skills contributed to a greater extent **to** each of our personal meetings. Above all, I would like to thank him for making me believe in myself by treating me respectfully and as an equal.

Secondly, I would like to thank my close surrounding circles but mostly my wife, brother and close friends for having confidence in me and **supporting** me in any way they could at any time given. They were the people that all I had to do is think about them in my times of difficulty in order to find the strength to carry on. I would also like to thank my parents for their patience and long term financial support as without it I would not have the luxury of **pursuing** and realising my dream.

Last but not least, I would like to thank the University of Huddersfield and the staff **for the opportunity** of cooperating with (Monty Adkins, Lisa Colton, Frances Phillips, Rukhsana Browning, Tony Gray, et al.) for all their support and immediate help provided at any stage of my research. Their sense of humanity and commitment made a significant contribution to my progression.

#### **4. Table of contents**

- **Introduction**

- 1. About Me**

- 2. Abstract**

- 3. Acknowledgments**

- 4. Table of Contents**

- 5. Preliminary Terminology Discussion**

- **Part I: The **Intolerance** Project**

- **Preliminary Research**
  - **Introduction / Research Perspectives**
  - **Preliminary Compositional Survey**
  - **Complementary Information**
  - **Synopsis**
  
- **Building the Music**
  - **Introduction**
  - **Procedural Design**
  - **Scoring for the Classical Orchestra**
  - **Transformation**
  - **Pure Exoticism**
  - **Summary**
  
- **Part II: Science Fiction**
  - **Preliminary Research**
    - **Introduction**
    - **Rationale**
    - **Preliminary Compositional Survey: Part I**
    - **Preliminary Compositional Survey: Part II**
    - **Discussion**
  
  - **Creating the Score: Part I**

- Prologue
- Films' Introduction
- Pre-Composition: Recording & Sound Design
- Presenting the Score: Part I
- Presenting the Score: Part II
- Comparative Exploration
- Summary

- **Supplementary Research: Alien Forms**

- Prologue
- Rationale
- List of Films/Categorization
- Exploration/Aesthetics
  - Action-Horror
  - Action-Adventure-Mystery (Hostile)
  - Action-Adventure-Mystery (Friendly)
  - Action-Adventure-Comedy
  - Robotic Form
  - Anthropomorphic
- Discussion

- **Creating the Score: Part II**

- Introduction

- Films' Scoring Procedure/Realization
  - Stargate
  - The Fifth Element
  - Alien vs. Predator
  - John Carter
- Summary
- End Discussion
  - Evaluation
  - Practical Issues/Problematics
  - Complementary Discussion
  - Philosophical Insights
  - Conclusion
- Supplementary Audio-Visual Material
  - Eastern Scales/Modes
  - Rhythmic Structures
  - Composed Scores
  - Ethnic Instruments' List
  - Multitrack Project Images
- Bibliography & Further Reading

## 5. Preliminary terminology discussion



Before starting this research, it is important to have an upfront discussion and clarification of some specific terminology that is intended to be used frequently in the following chapters. This terminology is **consists** of the words 'authenticity', 'exoticism', 'ethnic' and 'orientalism'.

Beginning with the term 'authenticity' and given the study's **Middle Eastern music standpoint**, I must clarify that my position is going to be in terms of describing the more accurate, the closer-related to the picture representation in terms of geographical location but also in terms of music cultural tradition. It is a fact that it is **impossible to be precise in** and literally claim that an original composition **is authentic in absolute terms**, in the **sense** of replicating the exact music idioms **that** existed in time periods where the music structure information is quite limited, or in some cases non-existent. **Nevertheless, the matter of authenticity, in terms of validity, can be examined by focusing mainly on the following two interconnected facets.**

First and foremost, music travels through time and although its formation undoubtedly alters as it evolves, there is still one pipeline of this time travel **that can be used in order to** determine how this music was once composed and performed. This communication pipeline is folk tradition which, through ethnic cultures, can be traced back to the fundamental expression of an art form. **For that reason, cultural heritage is a form of identity in art and in life expression in general.** Consequently, by using ethnic music elements together with traditional harmonic constructions one could argue that, a more relevant ancient music reproduction, in terms of authenticity, can be actually pragmatic. This in turn proves the validity of using the term 'authentic' or more accurately the expression 'more authentic than' inside the research. Again, this is impossible to be monolithically accurate **but it is certainly a valid process in order to examine the music history of ethnic groups and cultures.**

**Secondly, there is historical evidence considering the instrumentation of eastern music cultures. One of many examples in the Middle Eastern music tradition is the santur which, as the Islamic Culture and Communication Organization (1995) states, "has been identified through stone carvings dating back to the sixth century BC in Assyria and Babylonia". It is important to mention that instruments such as the santur, oud, tambouras, saz, etc., are today some of the most widely used instruments in the reproduction of traditional Middle Eastern music in several countries.**

Considering the term 'exoticism', there seems to be diversity in opinions considering its meaning and interpretation. According to Mark Brownrigg's (2007) summarization, exoticism ideologies are:

"The use of a non-Western instrument; the use of Western instruments in imitation of non-Western ones; the use of a melody associated with a specific place; the concoction of a melody shadowing a tune with a specific geographic connotations, adopting the theoretical principles of a music culture in order to produce a simulacrum of it; harnessing rhythms evocative of a certain part of the world; using genuine music and/or musicians from the country the film is interested in evoking" (p.312).

Brownrigg's interpretation is quite wide in context although in a more focused view of his opinion Buhler (2019) states that "the exoticism is usually tied to representing a place as distant and governed by customs alien to the "norms" of Western, tacitly white culture"(p.192).

On the other hand, according to Ralph Locke (2009), "exoticism generally includes a will to represent something that is other, to use representation to capture and objectify the other, and not all exoticism is so explicitly racialized, but the exoticism of racialized topics does reveal especially clearly the cultural stakes of topical signification. And it should be noted that a clear separation between the two is not easy to maintain".

In view of exoticism, this research's angle will be very much on par with Locke's thesis and this has to do with its very nature. Explaining the last, since it is principally focused on the practical elements that construct a score and examines the relations between the score and the picture, irrelevantly if it is a matter of **audiovisual** authenticity or not, it is not possible to proceed if looking the subject exclusively from a political view most frequently portraying white culture supremacy over the 'exotic' 'unknown' or 'otherness'.

Setting an example by forming a question, in a hypothetical scenario in which a composer is using the Western symphonic orchestra's dynamics, for example low brass crescendos together with forte drums and percussion, to describe an American villain character, how would that change if the composer would attempt this by introducing a **didgeridoo** with bendir and frame drums on an Arab character? Would this instrumentation's variation necessarily translate in a composer's attempt to add his own stone in the creation of a negative 'exotic' stereotype? This example certainly isn't **specifically** related

thus it does not apply only to eastern cultures as it could be the same for any other possible ethnicity used to set a similar paradigm.

At the same time, this specific standpoint is not opposing a diverse opinion in view of other studies' validity that is merely related to the exoticism as a form of actual stereotype realisation. It is just examining the issue from a different angle. Hence, in order to remain focused in identifying the music matters, it will use the term 'exotic' and exoticism' agreeing with Locke's opinion in view of the relativity of racial interpretation and topical signification.

Similarly, 'orientalism' will be excluded from this study as it is a term closer related to the Far Eastern countries. As a side note, the same rule would theoretically apply in this situation as well, since the main idea considering Western white culture supremacy over the others and the generation of the 'otherness' distorted image is similar to 'exoticism'. In view of this matter, in his historical discussion considering orientalist Liu (2010) points out:

"They have reconstructed an entire Orient by firstly dissecting or breaking the Orient into pieces and then reassembling those pieces together to create a mirror image of the other. The process is highly selective because only those facts that help relegate the Other to inferiority in moral, social, cultural, religious, artistic and racial aspects are selected, rearranged, and devoid of their context before they are finally presented to the west" (p. 45).

Finally, it is also important to clarify that for convenience reasons the term 'Middle Eastern' will be more often referred to as simple 'eastern'. Since these are somehow undefined terms as to which exact countries the Middle East consists of, this study will focus on the ethnic music traditions of the wider geographical areas of North Africa, Turkey, Syria, Saudi Arabia, Iraq and Iran. The term 'ethnic' will also relate to the ethnic music and music tradition of these Middle Eastern countries, unless it is stated otherwise.

As a final point, it is significant to clarify that the naming of scales and modes will be mainly deriving from Middle Eastern titling, which was taken from books and links that are included in the end bibliography. Of course a number of the scales used in this research are the same, or bearing similarities, with scales used in Western harmony but it is important to mention that the specific ones are used

predominantly because of their frequent appearance in **Middle Eastern** traditional music today. In fact, most of them, together with the amalgamation between them especially in eastern improvisation, are used as a profound foundation for thematic music development. What is also important is not only the implementation of a specific **music scale** but also the **combinations** between them that, in conjunction with instrumentation and performance techniques, makes the actual difference in creating music context that has an imperative sense of eastern music philosophy. After all, music around the world **is created** using continuous connections of music structural idioms and physiognomies **used** as an interconnected artistic entity.

A list of the scales and modes with complemented audio examples, as well as the fully constructed scores of the entire research, are included in the 'Supplementary Audio-Visual Material' chapter.

## **Part I: The **Intolerance** Project**

### **A. Preliminary Research**

- **Introduction / Research perspectives**

Silent film has always been an area of interest from a composer's point of view. Given the fact that the film has no sound puts the composer into a different perspective of writing music. Composition and instrumentation have fewer restrictions therefore the imagination in **music scoring** could be virtually limitless. As Larsen (2007) states:

"The music of the silent films is not film music in the modern sense – it is cinema music; **an** external addition to the moving pictures, part of the total performance more than part of the film and its narrative" (p.26).

At the beginning of my research studies, I had the chance of watching and observing a number of films in the Hollywood silent era. I was always intrigued by movies like Metropolis, A Trip to the Moon, Nosferatu, et al. The film which I found to be most motivating in view of the plot, production, and most importantly music and **visual geographic location** was **Intolerance** by D.W. Griffith. **Intolerance** is a movie divided into four separate stories; the modern story set in California (**1914 A.D.**), the Judean story set in Judea (**27 A.D.**) the French story set in Paris (**1572 A.D.**), and the Babylonian story set in ancient

Babylonia (539 B.C.). Ancient Babylonia has been chosen for this specific research as it was the most compatible set in order to start experimenting with music based on the traditions and instruments of the particular region. Middle Eastern scales and instrumentation have always been subjects of personal interest in view of their history and overall aesthetic.

Furthermore, I have always had the feeling that something is missing from the scores of many different Hollywood films in the silent era and across the greater spectrum of Hollywood productions throughout time. The sense of repetition was always present, to a certain degree, and as musicologist, film and TV composer Fred Steiner (cited in Rosar, 2002) observed “the changes in film music style are somehow superficial resulting in new wine in old bottles” (p.4).

Authenticity, particularly in terms of traditional Middle Eastern related instrumentation and composition, was a key element that I felt the need of investigating, constructing, and demonstrating in this practical research. In his discussion considering film music, Aaron Copland states that the purpose of music is to “create a more convincing atmosphere of time and place” (as cited in Prendergast, 1990). Queries of comparing contrasting and blending instruments and sounds inspired my search for cultural diversity and genuineness. Researching relevant literature and discovering opinions that agreed with my argument of what is ethnic in film music “is what Hollywood has made ethnic” (Goldsmith cited in Kassabian, 2001) increased my appetite for further investigation and practical experimentation. Consequently, *Intolerance* became the core of my project, my primary source of writing music and exploring the possibilities of presenting a diverse aesthetic experience.

The original score for *Intolerance* was written by Joseph Carl Breil, one of the earliest American composers in the motion picture industry. Unfortunately, the remaining scores kept by the New York’s Museum of Modern Art were only used in the film’s reconstruction in 1989 with the collaboration of Gillian Anderson, a musicologist and conductor who worked in the music department of the Library of Congress, and Peter Williamson who was the museum’s film curator. Anderson describes the score transcripts condition as ‘very brittle; the paper quality was bad. It wasn’t meant to last, it was meant to be used and thrown away’ (cited in Harrison, 1989).

The construction of the new score was assigned to Carl Davis, who used what was left from the original transcripts of J.C. Breil in combination with his own original music. To this day Davis’ score of *Intolerance* is considered to be the most successful in terms of authenticity and coherency, as an extent of Breil's

work. A quite interesting article from the Washington Post's archives (dated back to 1989) considering the reconstruction of *Intolerance* can be found here:

This official reconstructive version is going to be used in this research as a basis for the analysis, comparative process, and original scoring presentation that will follow. Below is a link demonstrating Carl Davis approach to *Intolerance*:

Apart from J.C. Breil and Carl Davis', there are two more music published works of *Intolerance*. The most widely known version is that of the composer Gaylord Carter who composed a score for the pipe organ:

The second published work was composed by Joseph Turrin and contains a synth orchestral score:

## **2. Preliminary compositional survey**

### **Rationale**

Comparative analysis in a number of different films was the first step in order to obtain a spherical view of the silent film era to the rest of the 20th century. This particular subject has its meaning in observing other people's work and drawing a map of characteristics demonstrating their similarities and variations whilst preserving the initial angle searching for ethnic implementations and eastern music aspects in general.

Out of the list of films that have been studied, there was a certain number that was finally chosen due to its agreeing with the pre-selected *Intolerance* segments. Furthermore, the appropriate sections of these films could be examined considering their semiotic process presenting the findings in corresponding tables and video examples. In this way, there could be a direct comparison with *Intolerance* exploring the initial argument of eastern music implementation and/or experimentation. This would be a practical way to confirm the validity of the results as well as to help shape any potential problems and their

proposed solutions. Additionally, it is an effective method in sculpting creative ideas feeding the next chapter of scoring approaches in relation to the previous outcomes.

According to Stevens (2006), 'No composer has ever achieved complete freedom of expression without first learning to control the progression and development of his work so that it will sound effectively within prescribed limits. Film scoring provides this discipline in its most demanding form'.

Starting from a time period of early 1900 until the mid-60s the following set of motion pictures was used as a primal introduction to the analysis:

## Analysis

An interesting point is that music scores, moving through time, begin to fade away from classical harmony structure and overall use of orchestra introducing a greater variety of textures, dissonance, and the use of specific music tools for increasing immersion such as vocals, choir et al.

Additionally, instrumentation complexity together with specific leitmotifs for characters and scenes seem to be less apparent as music for films evolves. Instead, repeated patterns take place using the classical orchestra closer in creating certain effects and building an overall atmosphere inside the movie. In his discussion considering tonality and the Hollywood scoring practice through the 20th century Lehman (2012) states that 'other differences include; a greater tolerance for repetition or thematic inactivity (or, indeed, athematicism); relative contrapuntal and orchestrational simplicity'.

The use of ethnic instruments, and furthermore experimentation in view of eastern harmonic constructions, seems to be absent or rarely used, in terms of mimicking instruments as well, in combination with the classical orchestra. Though it is worth noting that in some cases composers make use of certain eastern coloured scales but this is an exception to the rule. Also, rhythmic patterns seem to be specific, with no major alteration or introduction of ethnic percussion.

After watching *Intolerance* and drawing the film's timeline (see table.1) the first two clips were chosen based on the inspiration and the controversy that re-arranged music could produce. Clip 1 begins with the title 'Cyrus Moves upon Babylon' and describes the marching of Cyrus' army towards the Babylonian king Belshazzar. Clip 2 has the title 'The Feast of Belshazzar' and is set on the great feast in Belshazzar's palace. Below you can watch those two clips with the original music of Carl Davis:

### Clip 1 - 'Cyrus Moves upon Babylon'

These two video clips offered the opportunity to examine the harmonic movement more closely and the overall aesthetic of music, always in conjunction with the visual progression. In order to compare and contrast with other film composers' stylistic approaches, the next logical step was to separate the scenes into smaller parts based on the characters and overall plot development of the visual. Therefore, clip 1 ('Cyrus Moves upon Babylon') was divided into three smaller sections:

- Scene 1 – Duration 22 seconds (0:00:00 – 0:00:22)

This is the opening scene of this film's chapter, starting with the book title, signifying the beginning of a military attack.

- Scene 2 – Duration 14 seconds (0:00:22 – 0:00:36)

This scene demonstrates the following of Cyrus' orders and the preparation of his army going to attack the Babylonian king Belshazzar.

- Scene 3 – Duration 46 seconds (0:00:36 – 0:01:22 / end of clip 1)

The last scene starts with the presentation of the other side, King Belshazzar and his preparation for defence against Cyrus' attack, as the title suggests. This is a more contradictory and dramatic scene showing Belshazzar's emotional state of having to leave his beloved queen in order to go and defend his city. It demonstrates his inner struggle between emotion and responsibility.

In this clip, the main instruments used for building up the tension in Carl Davis' score are the woodwinds, brass and percussion. The music begins with woodwinds and high brass phrases (grace notes reflecting the book page flipping), followed by the introduction of lower brass (French horns, trombones) and dynamics variation from piano to forte especially noted in the trumpets and tremolo strings. Strings also play the role of connecting this scene with the next one by adding the note C, using it as a seventh interval of D major, in order to resolve into the next scene which begins in G minor.



Scenes from other films were examined and presented further on in an attempt to discover other composers' stylistic approaches. These are:

- The Ten Commandments (1956 – Music by Elmer Bernstein)
- Lawrence of Arabia (1962 – Music by Maurice Jarre)
- The Mummy (1999 - music by Jerry Goldsmith)
- 300 (2006 - Music by Tyler Bates)

A general map of the video analysis that will take place can be seen from the table below:

### **Scene 1**

Starting with The Ten Commandments the part of the film that was found to be based on a similar foundation as scene 1 from *Intolerance* is the following:

In the case of The Ten Commandments one can observe a more simplistic arrangement approach. Minimalistic orchestration with trumpets, and supporting horns, are performing a theme introducing the character and creating a dynamic sense of superiority. One observation could well be that the specific motif is less complex, in comparison with the majority of the film's score, forming in such way a stronger connection with the visual. This connection of course is not to be examined in musicological terms nor terms of sound authenticity.

Additionally, if someone pays specific attention to the scene's characters can observe that the specific cue is balancing between diegetic and non-diegetic sound. Music is synchronized with one guard holding a brass instrument although the film could imply that others are off the camera's perspective, even though they do not appear further on while the viewing perspective expands covering almost all of the scene's characters.

To a certain extent, a different approach was observed in the film Lawrence of Arabia:

Though one could argue that this edited video clip would be better suited in combination with the next *Intolerance* scene because of its visual characteristics (Scene 2), instead it was used here purely for describing a different approach to a somewhat compatible section development. Maurice Jarre's approach here contains more string elements and phrases that reach and demonstrate the unknown, the camel's march in the chaotic desert in conjunction with the camera's wider/distant angle. Moreover, one could argue that the overall atmosphere of the score contributes greatly to the geolocation the film is based on projecting a sense of mystery with its dissonant structure in combination with the eastern-flavour scales performed by the orchestral strings.

Moving forward in time, the next example comes from Tyler Bates' score of the 300 film (2006):

In this example, the composer is using a similar approach as the one observed in both *Intolerance* and The Ten Commandments by making use of the brass instruments to build a certain climax. The scene begins with a diegetic sound of a low wind ethnic instrument, possibly a didgeridoo, which signifies the beginning of the attack. What is also worth noting is the use of a vocal choir, an element that radically became to be apparent in the evolution of epic war films in Hollywood cinema. Nevertheless, there seems to be no sense of instrumentation relevancy, other than the ethnic woodwind instrument, considering the time and place of the film.

## **Scene 2**

Moving into the next scene of *Intolerance* (scene 2), the first aspect that can be noted is the introduction of a new theme performed by the bass trombones and tubas in conjunction with a slow pace rhythmic structure supported by the timpani. The overall compositional procedure attempts to focus on the main theme by leaving a certain space in the audio spectrum without enabling other instruments to be involved. One could argue that this is the main reason why the composer has chosen not to use instruments like orchestral strings or woodwinds.

A first **analogous** example was taken again from a segment of the film The Ten Commandments:

This example follows the same pattern as the one used in scene 1, only this time as the music develops one can detect the introduction of more instruments, thematic changes, and blending of the eastern-colour scales. As it progresses, **the score's character becomes** more apparent from being diegetic to non-diegetic. Also one could notice the rhythmic structure scored for high-pitched strings and woodwinds in order to unite with the film's movement (horse and carriages).

Moving forward, the next example was drawn from Lawrence of Arabia:

What is common here with the above, and with the **Intolerance clip as well (Scene 2)**, is the apparent use of rhythmic structure. Maurice Jarre following a more exotic approach throughout the entire film distinguishes here from the rest by using a combination of the classical orchestra timpani together with high-pitched percussion **such as toms, bongos, tambourine, etc.** Although the rhythmic synthesis is not based on something Middle Eastern exotic like the Arabic **ciftetelli**, **whade**, **halay etc.**, the sound of these instruments are quite close in implementing the desired ethnic touch; after all these specific percussions have a lot of common roots found in several different **geolocations** through time **and especially in the middle eastern region**. What is also common with the music in the The Ten Commandments is the **reintroduction** of the main theme and the buildup of the entire arrangement based on it; a theme that has been composed in an eastern-flavour Hijaz (Phrygian dominant) and Hijaskar mode.

The last example was taken again from the film 300:

Again, here one can observe that the main thematic lines have been scored for the vocal choir. The simplistic structure followed **by the low pitched timpani and toms performing in a slow pace rhythmic structure** (also in **Intolerance** scene 2) contributes **in** building a dramatic atmosphere and creates a sense of anxiety and expectation to the **viewer**.

### Scene 3

In the third and last scene of *Intolerance* (Scene 3) Carl Davis' intention is to **keep the uniformity of the previous arrangement, such as the percussive rhythmic structure, without introducing any new elements to the score**. Instead, he decides to reinstate the woodwinds and give them the central role as the picture dictates a more delicate approach based on the characters' emotional state. Overall tension is lowered here, moving from the previous **dynamic low brass theme** into the subtler instrumentation of woodwinds. The preservation of the same rhythmic **patterns** contributes to the continuity of the film's plot; there is war ahead and the Babylonian king must stand in his place and execute his duties.

As a first example, a video segment has been chosen from the film *The Ten Commandments*:

In this example, Elmer Bernstein is using a quite **distinctive** approach in describing this emotional scene. Instead of using a **vibrant rhythmic structure**, like in *Intolerance*, to imply the overall dramatic sense of slavery and war, **he relies on romanticism by using the orchestral strings** in order to achieve a more sentimental 'Hollywood' moment of two people that used to be in love. Therefore, the legato violins are moving continuously performing with a distinctive expressivity contributing **to** the scene's **romantic character**. Music scales that have been used here have an **apparent angle towards** Western harmony and no attempts have been noticed **considering moving into or blending any Middle Eastern music idioms**.

The second example comes from the **mini-series film** *Jesus of Nazareth*:

Maurice Jarre composed an emblematic score for the *Jesus of Nazareth* with aspects of great experimentation based on the location and thematic content of the film. In the specific scene, he makes use of symphonic strings **performing a** dramatic motif. This minimalistic approach enhances the scene and makes room for the viewer to focus more on the dialogue between the two characters. Western harmony approach can be found here **emphasizing the use** of minor thirds.

Further on the last example for this scene (scene 3) comes from the film The Mummy scored by Jerry Goldsmith:

Again in this situation, one can observe the **protagonistic** role of the strings. Followed by a more grandeur arrangement the orchestral strings signify and **reinforce** the scene's dramatic atmosphere. In this example, the motif moves in various keys in a harmonic minor scale indicating in that way an eastern music **flavour** based on the film's narrative and **geographic** location. In terms of performance and arrangement, there is no ethnic instrument that supports or enhances the previous statement.

### **Clip 2 - ' The Feast of Belshazzar'**

The second clip chosen for comparative analysis was divided into four sections:

- Scene 1 – Duration 1:19 minutes (0:00:00 – 0:01:19)

This is the opening scene of this film's chapter, starting with the introduction of a great feast in the Babylonian palace. It demonstrates King Belshazzar's gloriousness by celebrating Babylon's victory.

- Scene 2 – Duration 21 seconds (0:01:20 – 0:01:41)

This scene illustrates the king's and princess's marching towards the centre of the feast. It is a ceremonial moment distinguished also by the raised left hand of the king.

- Scene 3 – Duration 46 seconds (0:01:42 – 0:01:51)

The soldier/guard in this scene is fondling a white bird signifying peacefulness. During the last seconds of the scene, the guard straightens his body while his king is approaching.

- Scene 4 – Duration 56 seconds (0:01:52 – 0:02:15 / end of clip 2)

The last scene is similar to the first; the camera is moving towards the centre of the feast, where the king and the princess are. It is an immersive scene that concludes the ceremonial celebration.

Once again scenes from other films were examined and presented further on. These are:

- The Ten Commandments (1956 – Music by Elmer Bernstein)
- Spartacus (1960 – Music by Alex North)
- Star Wars IV: A New Hope (1977 - Music by John Williams)
- Star Wars VI: Return of the Jedi (1983 - Music by John Williams)
- The Lord of the Rings: The Return of the King (2003 – Music by Howard Shore)

A general map of the video analysis that will take place for this scene can be seen from the table below:

In this clip, Carl Davis is building the arrangement around a certain theme scored for the violins. Gloriousness is described here with a rich symphonic instrumentation. The rhythmic structure has been built by using the timpani and low brass **performing in intervals of an eighth** sharing relevance with certain compositional approaches like the one found in 'Pomp and circumstance' by Sir Edward Elgar

(see video link below – starting from 1:51"). High pitched woodwinds and harp in conjunction with the solo violin are also used when needed according to the visual. The scene before the king's and princess's appearance (A golden moment for Belshazzar and the princess's beloved) in combination with the soldier and the white pigeon suggests a more romantic approach. In this way, the composer reflects a dreamier atmosphere of pureness and peacefulness.

### **Scene 1**

As a first comparative example of scene 1, the following video clip from the film The Ten Commandments has been selected and presented below:

In this example, Elmer Bernstein's score has been used to demonstrate Moses' arrival in the palace returning from a successful conquest. One can observe the composer's minimal approach by using only a rhythmic structure describing the character's movement towards the king. It is worth mentioning that the stylistic approach, in this case, is moving towards a superficial idea of eastern-related music with the use of the tambourine and timpani contributing to the overall exotic atmosphere in the palace. In the scene's end, where Moses approaches the king of Egypt there is a commonly used music motif of trumpets performing in intervals of a fifth, wavering between diegetic and non-diegetic sound.

A second example has been used from the film Star Wars IV: A New Hope:

In this example, John Williams' score embodies the heroic award ceremony celebrating the alliance's victory and peace perseverance. The scoring approach is presented by a rather dynamic theme; French horns and trombones are starting to build up the structure and viewer's expectation for the scene, followed by the trumpets performing the main thematic session.

### **Scene 2**

As a first example of comparing *Intolerance* scene 2, a scene has been chosen once more from the film Star Wars IV: A New Hope:

This is basically the continuation of the previous scene's example. It was used separately here, and always in comparison with *Intolerance scene 2*, in order to demonstrate a more personal and emotional moment. When the **angle of the camera** changes and captures the interaction between the three characters (Luke Skywalker, Hans Solo, and Princess Leia), **the music changes from being heroic, with the dominant use of brass, into more sentimental, by using mainly the orchestral strings forming a stronger connection with the characters' leitmotifs**. Also, the rhythmic structure has not been changed, since it is a heroic moment after all, **and new instruments as well as expanded dynamic variations are added** as the arrangement builds up so it can reach a certain peak moment **at the end of the scene** (applause).

A similar process has also been found in the film *Lord of the Rings: The Return of the King*:

In this example, Howard Shore **is developing the main theme used for describing** the Hobbits and the Shire. It is an emotional scene where the composer is using **romanticism with the key role addressed to the orchestral strings in order to** describe the king's bowing, and the rest of the people gathered, in relationship with the four Hobbits and especially Frodo since the camera is zooming in **focusing in** his facial **expressions**.

### **Scene 3**

Moving into the next scene (Scene 3) the following example has been taken from the movie *Spartacus*:

As with the *Intolerance* scene 3, one can observe the noticeable minimal orchestration **so as to** describe **the** nostalgia for peace and humanity. Elmer Bernstein is using the harp and oboe **as his main tools** to accompany the character's poetic scene. What is also interesting is the movement between major and minor chords to contrast romanticism and war tragedy.

An additional example can be found in the film *Star Wars VI: Return of the Jedi*:

In this example, John Williams keeps the background festive score and adds romanticism with the use of strings and **a** vocal choir. The sentiment is being described in this situation with a grander orchestral arrangement, as it is best suited to the scene **which reaches the end of the film**. The harmony is again



moving between major and minor chords following the character's mixed emotional state (Luke Skywalker).

#### **Scene 4**

Considering the fourth and last edited scene from *Intolerance* the following example from the film Lord of the Rings: The Return of the King has been used for comparative purposes:

In this example, and as the film reaches the end, the sense of romanticism is described with a legato expressive theme for the orchestral strings. It is worth noting that the movement between the fourth and fifth chords of the scale contributes to the unexpected and pleasing emotion of the king's character based on the plot (realizing that Arwen is alive). The music, therefore, as well as the picture, concentrates on these two characters' emotional scene.

### **3. Complementary information**

Additionally, and in order to start experimenting with film music scoring combining traditional eastern elements from the specific region, there was a need for researching a number of music examples that would provide me with a cornerstone of the overall compositional aesthetic. Furthermore, it would also enrich my current view on how particular ethnic instruments are performed in real life, an aspect which in my opinion is crucial in understanding music itself and mastering the art of orchestration.

Examples of the audio/visual material that was used for this purpose, and will be discussed further on, are presented below:

As a first comment of the above examples, one can observe the simplicity in terms of harmonic structure. Especially in the above compositions for the ancient lyre, there is a significant tendency in the poetic substance of music.

Supplementary to the above, there is a clear presentation of themes emphasising the similitude between music compositions and songs/hymns. This observation resembles the scoring approach of Alex North in the film *Spartacus* in certain parts such as the poetic scene demonstrated previously.

Additionally, the use of the lute, also widely known as oud, has been found to make a significant contribution not only as a soloist instrument but also in terms of rhythmic structure. It is worth mentioning that the lute, and its constructive variations, was a very important and frequently used instrument in almost every Middle Eastern tradition. In his discussion considering the musical traditions in Ancient Egypt Kolyada (2009, p.146) states:

“Lutes had indeed once been very popular in Ancient Egypt (from the eighteenth dynasty on) and occupied a prestigious position in the instrumental hierarchy. This is obvious even from its name; in ancient Egyptian also means “beauty”, “good”, “nice”.

What is also worth mentioning is the importance of the lute as an accompaniment instrument for vocal soloists. Its distinctive and transformational sound, in terms of performance, was found to be most appropriate on several occasions. An interesting quote, demonstrating the above argument, is presented in Ribera’s research considering the music in Ancient Arabia and Spain:

“Its rhythmic vibrations, sweet, smooth, and mysterious, permitted various shadings according to whether the strings were plucked with the ball of the finger, or with a plectrum, or with or without a tremolo in the fretting. All these qualities made it the irreplaceable companion for the human voice in intimate concerts of chamber music. The lute, moreover, could be easily manipulated by the singer himself, marking not only the rhythm but also the harmony, without drowning the voice, with which it could never compete, although it sometimes imitated it in the gracile smoothness of its tone” (2014, p.189).

#### **4. Synopsis**

Music research provided a further grasp on how composers implement their music ideas and aesthetic angles in a variety of films. More specifically, it has revealed some of the scoring techniques used to articulate specific moments in films similar to those that have been selected for demonstration purposes and further development of the selected *Intolerance* extracted clips. Discovering these qualities in films

also contributed in **creating a larger picture** of how scoring inclinations sculpt through time as well as how composers react to these inclinations and **adapt** their music angles accordingly.

Additionally, it seems to prove the initial argument of **eastern** music implementation acted as a minor segment inside an overall Western music philosophy, used sporadically and merely as an essence of exoticism without providing enough depth in terms of eastern-related physiognomies. Relationship bonds with music traditions and instrumentations also seem rather vague as most of the times this is being translated to a superficial use of Middle Eastern **flavours** in terms of music scales and modes performed by a Western symphonic orchestra.

Therefore, the next chapter will present music propositions answering the above issues in a work in progress formula as there will be a demonstration and discussion of all the stages **realised** in the overall scoring experiment.

## **Part I: The Intolerance Project**

### **B. Building the Music**

#### **1. Introduction**

The preliminary compositional research gave birth to several ideas as described and analysed in the previous chapter. There were a number of useful observations in view of scoring physiognomies that feed the practical work which will be presented further on in this chapter. These aspects include the use of eastern-flavour scales and modes, instrumentation, and the overall practice of both in **corresponding films' segments**.

Additionally, this effort will combine the previously discussed composers' aesthetic choices and implementation methods that will be taken into consideration in order to create a **dissimilar**, more eastern-authentic, picture of the music according to its scenic location.

## **2. Procedural design**

This chapter's construction can be divided into three interconnected parts. The first part will begin with introductory compositions by using selected video **sections** of the film *Intolerance*. These works will attempt to establish an initial exploration of the Western symphonic orchestra in conjunction with influences deriving from eastern music traditions in view of the instrumentation and harmonic development. The scoring methodology will attempt to gradually increase the exotic aesthetic by introducing a number of Middle Eastern implementations including scales and modes that have direct influences with related music traditions **reflecting** the eastern-performed music of the present time.

The second part will test the hypothesis of changing roles between eastern and Western instruments. It will realise the experiment of swapping instruments' roles and evaluate their musical behaviour in the wider context of **audiovisual relationship**. Gradually, there will be an effort to escalate the eastern essence by composing and evaluating scores with increased Middle Eastern instrumentation and harmonic content.

The third and final part **will present the outcomes** deriving from the previous chapters and try to form a new angle in scoring a segment with the exclusive use of Middle Eastern instruments. The use of scales and modes will also be of similar flavour as well as the extra attention given to specific instruments' performance in terms of eastern authenticity.

## **3. Scoring for the classical orchestra**

The initial approach was to compose a score fundamentally **relying in** the symphonic orchestra. With all the covered information gathered from other **people's** work together with the *Intolerance score* version of Carl Davis, I began exploring the possibilities of composing for the classic orchestra with the difference that I felt the need to produce a score that would have a distinctive **Middle Eastern ethnic flavour**.

**As a result, a first attempt was made and is demonstrated in the *Intolerance* clip 2 below:**

In this initial attempt, my basic aim was to experiment with ethnic instruments and scale modes that in conjunction with symphonic instruments would present a short scoring segment practically experiencing and further investigating the relationship between Western and eastern orchestration. All the instruments' performances have been also composed following an eastern stylistic perspective, meaning that symphonic instruments such as the violins and flutes have the unambiguous potential of performing in **eastern-ethnic** style modes, even in a practical example where they are part of a Western music constructive system e.g. in a **complete Western symphonic ensemble**.

During the first seconds of the scene (approximately "00:00"- "00:11") the ethnic percussive rhythmic structure makes a strong statement in view of eastern music orientation. The instruments building this foundation for the harmony to develop are the bendir, frame drum, darbuka and def. Their performance relies on the 'Misket' traditional Middle Eastern rhythmic mode. The extracted percussion score followed by the accompanied audio clip **are demonstrated** below:

The main theme starts developing at approximately 00:11" where the main role has been appointed to the violins performing in an A major Hijaz mode (Phrygian dominant). The background A major chord formation comes from the violas and cellos while the bass strings' pizzicato **contributes to** enhancing the tempo structure performing in low dominant and fifth intervals. Flutes together with the santur support the score by building the in-between bridge of the main theme's repetition. **Below is the extracted score and audio example demonstrating the performing character of the santur, followed by the harp and the introductory kemente:**

The santur has an imperative role implementing performance variations of the Hijaz mode, eventually **contributing to** the increment of eastern music essence. These variations in Hijaz mode are well regarded in the eastern traditional music and can be additionally identified in today's folk music in eastern locations such as North Africa, Turkey, Iran **et.al. In view of the harmonic progression**, these varieties occur mainly between the sixth and seventh interval and usually when an instrument is

ascending the scale. The **santur's** motif in the selected *Intolerance* scene is an example of this amalgamation as well.

Below are the relevant scores, followed by a santur improvisation clip, presenting these Hijaz **mode** variations:

Also, what is worth mentioning is the trumpets' contribution to the main theme's repetition in an attempt to implement the brass element of classic 'Hollywood' instrumentation adding to the gloriousness of the palace's festive scene. **It is worth noting that this is a scoring feature that has been previously identified as a frequently used immersion tool in the earlier preliminary Hollywood films' discussion.**

**At this stage it is important to make a small parenthesis and mention that the santur** will be an imperative part of this study's instrumentation **palette** due to its **unique sounding character** but more importantly due to its ancient Middle Eastern roots and its long history and reputation that still has in ethnic music worldwide. It is therefore considered as a significantly valid carrier of eastern music tradition through time. As Reusch states:

"Originating in Assyria or Chaldea as early as sixth century BC, the santur is a parent of both the hammer dulcimer family and the piano" (2008, p.48).

The santur is also widely known, among others, as santoor, sandouri, **cimbalom** zither **or** hammered dulcimer. Below is a useful link containing brief historical information and instrument's description:

There were **certain** questions and problems that rose through this first scoring attempt. Except for the ethnic stylistic approach and the view of successfulness in terms of immersion and music

appropriateness considering the scene, which is mainly a subjective issue, what was first noted as being problematic was the tempo pace according to the visual. There was much experimentation after this specific observation and it was thought better suited if the tempo **was decreased in speed**. What was also found to be rather hasty was the violins' main theme which was personally **thought of being overly busy by performing too many continuous notes in a restricted amount of time**. It resembled more of a song structure rather than a cinematic scoring experience.

Additionally, the **percussion** section **was considered to be fairly fast in tempo as well**, not entirely successful in building a visual expectation following the scene's grandeur scope. One could argue that this might not be necessarily erroneous, especially if observing it from a composition coherence point of view, but was certainly missing a climax crescendo which could add to **the** overall immersion.

A different challenge was concerning certain decisions that had to be made both in terms of music and picture synchronization. There is a rather problematic jumpy cut occurring at 00:16"-00:17", which was tried to be **dealt with** by scoring the triple note motif for the santur and flutes. After reviewing the scene multiple times, I thought that it would be best if it was **handled** with more intimacy and perhaps a shorter and more dynamic sound, e.g. cymbals, low strings, bass dumbek **or other low pitch percussion, etc.** Looking back at Carl Davis' approach to this issue I noticed that a similar technique had been used; the scene's edited cut has been dealt with tempo synchronization and also accented with cymbals.

As a result, a different version of clip 2 was composed, **putting the previous findings into practice and developing the entire clip's score accordingly**:

In the first part of this clip (00:00"-01:14"), the structure has now changed, especially during the introductory titles (00:00"-00:29") where there is an effort to build up the expectation for the ceremonial palace scene. Percussion instruments have been removed, leaving space for other instruments to slowly build the expectation of the rhythmic structure presented afterwards. It is a similar technique used in the specific scene by Carl Davis as well. In view of the non-percussive elements

the core difference is the eastern musical **flavour** carried out by the santur tremolo and the violins' motif written in E major Hijaz mode.

Below is the introduction's extracted score and audio clip:

Moving further on (00:30"-1:14") we have the main theme's introduction comparable with the one found in the first composition, with a slightly slower tempo speed and with a more straightforward motif performed by the violins. The key has changed from the introductory E major to B major and the violins' motif beginning in Hijaz mode evolves and concludes into a Hijaskar mode with the addition of an Ab note before the end. The harp comes in to compliment the santur which continues its role in adding an extra layer of eastern **colour**.

Percussive instrumentation and rhythmic structure, performed in a slow 4/4 Misket mode, **play** a significant role in the overall aesthetic as it provides the foundation for the main melody to evolve as well as contributing once more in the score's **Middle Eastern** character. In addition, it was found to be appropriate, through trial and error, for the percussive section to sync the tempo with the jumpy film's cut at 00:36" rather than trying masking it or ignoring it.

The soldier/white pigeon scene following next (1:41"-1:50") is using a similar approach found in films like 'Jesus of Nazareth' and the poetic scene **in** 'Spartacus'. Woodwinds, especially flutes, have been used here performing in a D major Mixolydian mode indicating the sense of peacefulness.

During the final part ("1:51"- end) the rhythmic-percussive section returns and the santur introduces the end motif which then reaches the harp finale. Carl Davis' score at this point returns to the main theme introduced in the opening of this scene. In comparison, it was thought more appropriate to introduce an alternative theme **by the santur**, sharing similarities with the one found in the opening scene, but also with the addition of blending in modes such as Lydian, Mixolydian, Dorian, and Phrygian dominant (Hijaz).

Starting with the **percussion** section, the bendir, darbuka, hollow drum, riq and def continue their previous Misket mode performance:



The santur's end motif begins in a D major Mixolydian mode evolving in a Bb Locrian mode passing the melody to the harp which in turn starts in D major Mixolydian reaching **for** the score's **resolution** in D major Hijaz mode. Below is the score and audio abstract of these two instruments:

Following the santur, woodwinds as well as the violins and violas are supportively repeating the same motif, although leaving space for the santur to differentiate by not following **them** to the Bb Locrian mode. On the other hand things are getting more interesting as the brass **instruments** move between the first two chords of the D major Hijaz mode (D major and Eb major).

**It is thought** that the mixture of these two instruments' group results into a harmonically diverse, eastern-oriented music amalgam.

The main approach to this example is similar to the previous one. Scoring for **a lengthier video segment** allowed experimenting more as well as expressing and developing further musical ideas and structures in view of eastern and Western **combinations**. Blending the symphonic orchestra with ethnic instruments such as the santur and a variety of eastern percussion as well as composing in **eastern-flavour scales** and modes was found to be a rather interesting and stimulating experience. And there was also another step forward giving birth to additional questions and development procedures that will be presented and discussed in the next chapter (Transformation).

In addition, although no other ethnic instrument except for the santur has been used here, for methodological research reasons, the arrangement has been produced in a way that **the symphonic orchestra plays a supporting role in the initial aim for a Middle Eastern music character**.

In this video segment there are a few things that need to be noted. Beginning with a view **of** the overall orchestration, the rhythmic construction entails ethnic percussion, as used in previous examples, as it

felt more suitable in providing a more desirable **Middle Eastern aesthetic**. Therefore the main percussive foundation consists of bass and tenor darbukas, kup udu, bendir and zills performing in a slow variation of a Wahde mode.

The considerably slow tempo enhances the score with a certain gravitas and dynamism especially in the king's marriage market entrance scene commencing at 04:30. Mild ritenuto helps **increase** the dramatic effect while building the anticipation **for the scene's development**.

Another point is the score's interpretation in the childish girl's character first appearing **at 00:47"**. **Most times** the score is written by using pizzicato violins, high woodwinds, and brass to follow the nervous characters and overall faster pace of the scenes.

Examples of this approach can be also observed at 1:31-1:36", 3:02-3:37", 04:16-04:30" and 06:11-06:22". In all cases there is an effort **to** provide an eastern **essence** by trying to maintain melodies and harmonies in eastern-oriented scales and modes. This involves predominantly Hijaz, Hizaskar and Algerian modes among others. As an example, below is the extracted score of the last segment (06:11-06:22"):

The character is also being described in a more sympathetic but still playful mixture at 04:50-05:16". In this case, the score is combining **pizzicato strings together** with a solo oboe in view of demonstrating the character's innocence and the act of begging the king. **The score here helps achieving a feeling of sympathy towards the girl's character**. In their analysis considering film music influences and movie characters Hoeckner, Wyatt, Decety, and Nusbaum (2011) point out:

"As the feeling of sadness would increase viewers' certainty of knowing the character's thoughts, the impulse to feel with the character would also make her or him more likable" (p.38).

Further on the score moves gradually from a minor to major chord where the king leaves the scene having signed the girl's independence (approximately until 05:48"). The scene where one can observe

the character's happiness and calmness has been scored with a solo flute and harp performing in a C major Houzam mode 1. This scene's equanimity has a lot to share with the previously discussed Spartacus poetic scene where Alex North is using similar techniques to score a romantic scene. Perhaps not so vividly imprinted, but the use of an eastern-flavour mode (Houzam) combines the previous approach with possibly a better sense of eastern music tradition.

What is also important to mention is the overall attempt to write thematic repetitions that would provide unity and try to follow the characters and plot but without being too emphatically synchronized in a way that could possibly be characterised as mickey-mousing. As Gorbman (as cited in Leinberger, 2002) in her interpretation of film scores' unity states:

"Via repetition and variation of musical material and instrumentation, music aids in the construction of formal and narrative unity" (p.63).

One of the moments in the scene that one can observe the above is from 03:37" until 04:15". The music here interprets different emotions and constant scene changes in four different characters' groups (Auctioneer, bidders, girl, and man in love). It is a musical conversation between oboe and clarinet beginning with the Auctioneer's theme moving between a D major Hijaz (Phrygian dominant) and Mixolydian mode, demonstrating the girl's anger with a Hijaskar mode (03:57"), followed by a resolution in G minor Nigriz mode displaying the man's frustration (03:58-4:05"). These variations can be viewed in the following score extract:

As a final observation, what seemed to work in a rather different way compared to Carl Davis' score is the two characters' (man in love and girl from auction) meeting point (06:23-07:22"). In Carl Davis' version one can observe an overall dramatic and simultaneously dynamic approach. The change occurring especially from 06:56" signifies the transformation in the overall atmosphere, by adding brass instruments in a newly introduced theme, based on the scene's titles. Similar techniques have been used in my version in terms of drama and emotional characters' state especially during the girl's escape scene (06:50-07:00"). What differentiates the two versions is the attempt to develop the specific string's

section with the intention of being more dramatic than dynamic. One could argue that this approach does not follow the exact visual development, but it was intentionally composed in this case to emphasize the opposite; the implied dramatic man's effort to approach the girl.

As Rosar (1994) states:

"A moment's reflection on the phenomenology of musical experience reveals that music is expressive, whether or not one responds to it emotionally. For example, although a piece of music is sad-sounds sad-the listener is not necessarily also sad" (p.154).

In addition, music space for a more energetic arrangement could be created right after the scene's titles, where a military snare accompanied by a darbuka has been added. Once again the overall use of eastern related scales and modes contribute to the general aesthetic approach.

#### **4. Transformation**

'The art of thematic transformation is the practice of modifying discrete units of musical discourse like motifs and melodies, as well as more abstract structures like harmonic progressions or rhythmic patterns, over the course of a piece. This may occur incrementally, with gradual changes constructing apparently new themes piece-by-piece out of old ones' (Lehman, 2012).

The research so far in combination with the previous experimentations of scoring for the classical orchestra has formed a tree of questions and exploring possibilities. Below you can see a diagram pointing out the main thoughts and issues:

Consequently, according to the above plan, the next step was to examine the previously scored scene (clip 3) and try re-recording and replacing several instruments that could be substituted with ethnic ones. Additionally, this attempt was followed by the completion of the entire scene's score. The end result is presented in the video clip below:

The list of instruments that have been replaced can be found in the following chart:

Other than just replacing the above instruments there were also supplementary scoring parts written for some of those in several parts of the clip. In more detail, a new phrase was written for the Middle Eastern clarinet at 00:56"-1:02" contributing to the overall feel of eastern exoticism. At 05:55"-06:11" shehnai flute was used in order to support the specific motif performed by the ciaramella. Finally, at 07:32"-07:53" a ceylon snake charmer flute has been added to contribute an Middle Eastern character to the specific moment. A general observation at that point of the film was that the overall aesthetic of exoticism was missing since it was a part written only for the harp enhancing the dreamy atmosphere of the visual.

The addition of these ethnic instruments together with the replacement of several others previously scored gave a new flow to the entire instrumentation. One can argue that the overall music aesthetic, and even the structure at certain points, is beginning to displace itself from the previous scoring attempts and likewise when comparing with Carl Davis' original score. This blending of instruments has allowed seeing how much of an actual impact traditional instruments can make on the music rather than trying to describe it with other means. Finally, what is also worth mentioning is the significant role of inspiration generated that revealed the next steps in researching and composing music.

Concerning the above, the last part of the particular clip which was not scored before (07:53"-end of the clip) had been reviewed from a different point of view. Although the compositional approach was deeply influenced by the previous points stated above, there was a risk taken into serious consideration as to how the music was going to develop smoothly and blend in with the previous score. Although the appetite was changed, consistency should have been carefully approached and presented.

Therefore, at the beginning of the last clip's segments ("07:53"), there was intentionally some room left for ethnic instruments to be involved. In this way there would be a direct connection with the previous arrangement, keeping consistency but at the same time introducing new and more eastern-related instrumentation in relation to the visual. As the scene refers to the virgins inside the palace,

titled 'Love temple', the score's intention here is to be more chromatic, dreamier and aphaeretic. As Lehman (2012) indicates:

"A creature of many faces, chromaticism can certainly be instantly perceived as exotic or 'other' when presented in some guises (...) But other forms of chromaticism—and, it should be admitted, modality, free atonality, jazz harmony, and other alternatives to common-practice pitch resources—no less extreme against a backdrop of diatony, are recruited with just as much frequency to deliver vastly less obvious effects" (p.34).

Since the overall scene's atmosphere describes relaxation and naivety hence the ethnic **woodwinds, shehnai flute and ciaramella**, are performing long notes as the santur and percussion imply the scenes' character **movement/dancing**. Furthermore, violins and violas have been used for playing the scene's main motif and serving as a thematic **bridge** between the previous scenes and the ones to follow. The last statement becomes apparent **at 09:02"** where the scene changes and the king **approaches** his princess. Here the strings have been composed in order to reinstate gravity by describing the king's emblematic position in the palace.

In comparison Carl Davis is using, as one could argue, a rather typical **grand** 'Hollywood' instrumentation to describe these semiotic processes. A tonal score with **intense** vibrato violins, in combination with the harp, moving between major chords and scales together with high woodwind phrases present a tone of classic romanticism found in several other Hollywood films.

**The next attempt was made by revisiting the first clip of *Intolerance* (clip 1). It began with writing a score that would include all the previous deductions made so far and **explore** new stylistic methodologies in terms of originality and eastern exoticism. The intention was to blend even more ethnic instruments together with the classical orchestra, not only in terms of soloing performance but as a combined mixture of instrumentation composed this time according to each instrument's sonic characteristics. The end result is presented in the clip below:**

Starting with the instrumentation there were a **number of new instruments** implemented, both from sampled libraries as well as actual performance recordings. In more detail, all the ethnic instruments used can be reviewed from the following list:

1. Duduk
2. Eastern clarinet
3. **Shehnai** flute
4. Ney flute
5. Didgeridoo
6. Santur
7. Two Egyptian fiddles
8. Six ouds
9. Three tambouras
10. Three tzouras (serving as a different type of tambouras)
11. Ethnic percussion ensemble (Bendir, Timbal, Darbukas, Bass Tumbek, Riq, Zills)

The piece has a strong overall **Middle Eastern** music character that can be seen especially between 00:22"-00:44" and 01:10" till the end of the clip. The three trumpets **at** 00:22-00:44" performing in triplets have been used to blend a characteristic 'Hollywood' approach, observed in several cases before **such as The Ten Commandments, Star Wars et al.** At 00:45"-01:10", there was an attempt to recreate the scene's dramatic atmosphere in a more minimalistic method. Like in Jesus from Nazareth, **the characters'** emotional state has been described with the use of violins and violas moving in minor diminished chords which is **reinforced** by the clarinet. The difference here is the addition of a duduk which contributes a distinctive eastern charisma to the score.

Having a closer look and starting from the score's introduction, instrumentation consists of the pizzicato strings, duduk and santur. The duduk begins with a seven note motif written in C major Nigriz mode while at the same time the pizzicato strings performance adds pace and anticipation with its background rhythmic character. Contributing to the overall eastern aesthetic, the santur performs in a C major Hijaskar mode. Below is the score extract accompanied by an audio clip of the specific section:

Moving to the next part the **protagonistic** elements here are the ouds, santur and ney flute. All of them are moving around the Nigriz mode with small alterations, such as the implementation of trumpets' triplet staccatos underlining, as mentioned before, the musical mixture and relationship between eastern and Western harmonic structures. Additionally, the pizzicato orchestral strings, **reinforced** by a low octave didgeridoo, continue to keep a harmonically uncomplicated but essential foundation in view of the rhythmic structure.

Moving next, the dominant role passes to the violins and violas, with some decorations coming from the duduk and harp, remaining in the F minor Nigriz mode and chromatically falling into the final scene's outcome in C major Hijaskar mode. The **visuals** here are **present** the princess's sorrow and life and death commitment to the king **hence the use of long legato strings raise the drama** but without being overly sentimental. This works both ways as the strings act also as a bridge for passing to the scene's dramatic end.

Below is the extracted score and audio clip of this specific part:

As mentioned before, the score results in a rich orchestrated C major Hijaskar mode. Background orchestral brass and strings, together with **the** ouds and tambouras' tremolos, build the foundation for the santur and clarinet to lead into the cues' finale.

As an epilogue to this attempt, one could argue that the use of eastern scales and modes, the transformation of classic orchestra instruments, and the exploration and implementation of new ethnic instruments contributed to the creation of new paths for music composition and arrangement. As the



project was evolving the overall aesthetic was moving further away from Carl Davis' score for *Intolerance* as well as to other motion pictures' scores that have been viewed in the previous investigation.

## **5. Pure exoticism**

The final part of writing the music for *Intolerance* had to do with the idea of creating and presenting an even more unique, or even eccentric as one could argue, approach to film scoring. All the previous research and practical experimentations gave birth to the final idea of producing a composition that would consist only of ethnic instruments. In this way there could be a new scoring presentation which attempts to rely more in eastern traditional music aspects, which in turn creates an arguably diverse, if not stronger, connection with the visuals.

As a result, a new clip from the *Intolerance* film has been edited and composed with the following score:

The score in general is moving between several eastern-colour scales with certain moments of vivid harmonic contradiction usually in order to emphasize the visual changes occurring at the corresponding points. At 00:29"-00:33" one can observe a first example of the above statement as the Egyptian fiddles play the central role in changing between the two scenes.

The main theme and its development is performed by the duduk and dilruba. It is written in a C major Mixolydian mode which progresses into a Houzam Mode I returning back to Mixolydian for repetition. Below is the score extract and audio clip of this first part:

The rhythm construction is quite basic and unsophisticated in terms of scoring complexity, as in this way it imparts a certain character of 'old', 'ancient', 'unprocessed' sound. Performance structure has been

built upon a reasonably slow Misket mode which can be demonstrated in the following example, together with the introductory percussions' score and audio clip:

As the scene changes the **protagonistic** role passes to duduk, pivana flute and santur. This musical conversation starts with the duduk and its dominant character performing a motif written in G minor Niavent mode, widely known in the Western harmony as Aeolian mode.

On the other hand the santur's first answer to the duduk comes with a C minor Dorian mode cue which in turn changes onto a G minor Qurdi/Ousak mode (Phrygian mode) completing the duduk's previous phrase and preparing for the C major Hijaskar which opens up the film's next scene.

Reasoning behind the selection of these instruments and modes, especially duduk and pivana flute, is to create a dramatic atmosphere accompanying the '**mountain** girl's facial expression of despair.

The next scene, '**The Priest of Bel-Marduk**', is considered to be one of the most interesting and distinctive scenes in terms of scoring approach. In this case violins have the undoubtedly key role, doubled by the santur, but what makes this part unique is the slurred legato technique used. This enriches the eastern music character to a greater extent which in turn **reinforces** the **audiovisual** connection.

The strings perform in a Hijaz mode, starting in C major moving into an F major, as one can observe in the following extracted score and audio clip:

Additionally, ethnic **percussion** instruments and the Whade rhythmic mode play an essential role in supporting the rest of the instruments' harmonic development:

The next scene describes **the rhapsody warrior singer-poet's** love confession towards the **mountain girl**. The score here is less busy with the main instrument being a solo ney flute in F# minor Nigriz mode. The ney's breathy musical character as well as the choice of a Nigriz mode represents, and somewhat inspired from, the actual poem text as well as the imaginary poet's voice.

Moving next, the visuals suggest a complete change of mood since there is significant movement of the two characters as well as a quite strong temper shown by the **mountain girl**. As a reflection to this, the score changes from the previous mellower flow, created mainly by the ney flute, and becomes more energetic in harmony, pace and **colour**. The word **colour** here **reflects the** intentional choice of **the shehnai** flute and its intriguing frequency response which creates a certain aggression which in turn suits the girl's forceful character. Below is the specific score part together with its accompanied audio clip:

The previous part also acts as a bridge for the next scene's grandeur presentation of 'Prince Belshazzar'.

Following next, the score's rhythmic structure is coming back **strongly** describing the festive, energetic atmosphere evolving around a basic 4/4 Halay mode.

The non-**percussion** instruments also form a strongly dynamic character, vividly eastern in flavour, starting in a D minor Qurdi-Ousak (Frygian) mode developing further harmonic variations between the latter and a D major Hijaz mode in which this part reaches its climax.

Finally, the end scene is entirely **relying in** the violins that have been composed in accordance to the camera focus on 'the priest of Bel' following his jealously facial expressions. Since the camera emphasizes on a single character so does the score **concentrate on** building the character's motif with a homogenous sound created only from the violins. A noted addition is the use of santur **at 04:47"** adding a sense of mystery and excitement corresponding with the priest's malice expression.

As a final point, it is of utter importance to mention that in this case the **microtonal** differences in the slurred legato strings' Qurdi-Ousak performance **play** a substantial role in the eastern sound's signature.

Besides their contribution in terms of eastern exoticism, these rhythmic structures have been used in conjunction with the visual in order to accompany and describe the characters' and overall scenes' movement. This is mainly the reason why different configurations with changed tempo speed have been used. As a result, the opening scene (00:00"-00:51"), the scene beginning with the jealous 'priest of Bel-Marduk' (1:42"-2:19"), and the scene of 'King Belshazzar' on 'the great wall' (3:17"-04:31") **have been described** with different tempo speeds as well as rhythmic variations.

Another aspect that needs to be noted is **the attempt to produce** a score with thematic fluidity in view of the scenes' changes. As a first example, at 02:09", there is an intentional continuation of the previous orchestration, **with the introduction of a supplementary violin theme**, as the scene changes from the 'priest of Bel-Marduk' to the people dancing outside the palace. Further on, at 2:16", the thematic unity reaches its end but not immediately synchronized with the scene's changing. **In all of the above examples** one could argue that the overall flow of music is preserved without interfering with the viewer's overall perception of film montage.

In addition, instant scenes' cuts have been dealt with carefulness and under the same prism of musical fluidity. Examples can be viewed at 1:54", 2:05", and 2:17".

Another important aspect is the use of ethnic instruments compared to the previous scoring experimentations. In this case, the **ouds** and tambouras **have been scored for contributing to the rhythmic structure as well as in thematic variations and motifs**. This is especially noted in 3:08"-4:30" where the tamboura has the opening role of the rhythmic structure which acts as a bridge between the two scenes, together with the later on contribution of the ouds reinforcing it with a variety of **synchronized tempo motifs**. This has a direct connection with **preliminary research findings** and video examples in previous chapters of this project.

Finally, and as a subsection to the above statement of ethnic instruments' use, there was a new introduction of a technique that was used only, or primarily, in the early days of the silent film era. Improvisation has been utilized in several parts of this clip by making a connection, as well as experimenting, with an art that is somehow left behind in the evolution of Hollywood film music. Since

the introduction of synchronized scores, there was little or no evidence found in the particular area. Therefore, I felt the need to re-explore improvisation and embed it, under certain circumstances, in this final scoring attempt.

From "00:58" till "1:40", the above stylistic approach becomes apparent; duduk has the main role performing in a basis of G natural minor scale (**Aeolian mode**) followed by a **shehnai** flute, and a didgeridoo holding a steady G note. The scene also consists of supplementary santur phrases at 1:13"-1:18" and 1:27"-1:40"; **the final one resolves into the next thematic section by performing in a Phrygian dominant scale.**

The next example can be found at 02:20"-02:53 where the **shehnai** flute has the main role performing in a Ukrainian Dorian scale. In this case, the santur has been used again, together with the addition of a lyre harp, accompanying the **shehnai** flute with long **sustained** chords.

## **6. Summary**

The **Intolerance** chapter executed a number of music experiments transferring and presenting influences from the previous preliminary research. By also drawing direct comparisons with the original score by Carl Davis, it has gradually shaped its music form by examining and evaluating each stage of the development process.

As a result, beginning with a less complex procedure in terms of eastern music implementation, the scoring segments increasingly transformed into compound variations of Middle Eastern harmonic modes and progressions, which in conjunction with the percussive rhythmic structures, formed and demonstrated music scores that present a more comprehensive and sophisticated version of the film in terms of eastern **music** orientation.

Gathering information from the previous chapter on scoring approaches helped a great deal in terms of instrumentation as well. The explanation here is threefold; the first gained knowledge aspect derives directly from the composers' interpretation of the films. The previously discussed roles of Western symphonic orchestra and scoring techniques have been inspected and applied in a number of cases in the original composed scores. This most certainly applies to all composed scores with the only exception being the final 'pure exoticism' section in which the overall angle differentiates and moves towards traditional Middle Eastern music paths.

The second part follows the exact opposite, meaning the deliberate absence of Middle Eastern traditional instruments as observed in the previous discussed films' scores. Overall, there was no obvious intent to use ethnic instruments, although there were many cases in which the visual suggested a place or time period the film is related to where ethnic instruments implementation would be agreeable. This was also found to be true considering playing techniques as almost every reviewed case showed no purpose other than using the symphonic orchestra in a westernized conventional way.

The third and final part is related to the absence of strong eastern-flavoured harmonic content. Most of the times the score would benefit from using scales, or perhaps some variations of eastern oriented content, but clearly without really focusing there and developing motifs, chord progressions and scales' amalgamation that actually serve this ethnic type of music. In other words, an eastern harmonic character has been used sparingly only serving as a garnish to the main course which is built based on Western perspectives.

*Intolerance* at the end justified its initial selection, as it was indeed a very strong example of putting together the preliminary research information, theoretic knowledge and practical experience into a new Middle Eastern perspective of film scoring. It is, therefore, believed that the composed music work and related discussion have contributed meaningfully in proving the argument of ethnic music absence and presenting practical scoring solutions that could put the film into an entirely different scoring perspective; a perspective which comes closer to the film's location and eastern music tradition.

This scope will be further investigated in the next chapter of this research in view of the science fiction cinema.

## **Part II: Science Fiction**

### **A. Preliminary Research**

#### **1. Introduction**

Science fiction is a **film** category which has always been intriguing due to the diversity of plots and the open-minded, imaginative variety of life forms and locations. Although quite different in their actual form, *Intolerance*, as well as all films belonging to the silent film era, **shares** a basic principle with the science fiction genre which is the privilege of increased autonomy in terms of scoring procedures and stylistic approaches.

In other words, it is thought that a composer, **from a purely artistic point of view and by taking out of the equation the pragmatic boundaries of producing a Hollywood film's score**, has a wider field of choices and liberties leaving **him or her** with an **increased** sense of space for exploring and experimenting with sounds and harmonies. This is a fact that can be viewed, and will be demonstrated in this chapter, by taking a step back and observing the history of science fiction films and the scoring techniques that have **been formed** and used throughout time.

In that respect, then, one could assume that films that relate, or infer relation, to imaginary exotic places and/or ancient civilizations would perhaps include ethnic music elements and aesthetic methodologies that move away from the conventional sound of Western harmonies and instrumentations. Even more so, if a film is literally portraying a place or culture that indeed existed in the past or has connections with ancient human history.

## 2. Rationale

Consequently, this part of the research initially examined the above hypothesis by observing and presenting the outcomes in a number of related science fiction films. The initial criterion considering the choice of investigated films was based on chronology. The rationale was to examine a wide variety of science fiction films, starting from the silent **film** era through the present day, in order to observe, discuss, compare and evaluate the outcomes, always in conjunction with the initial **Middle Eastern** music angle. In this way, and by examining the evolution of film music through time, there could be a greater appreciation of music styles, scoring tactics and artistic implementations that film composers are using in their scores.

Moreover, the end results were also of significant importance based on the effect they had **on** shaping the practical scoring procedure, since all the collected composing information as well as the proof of the subject's problematic nature, meaning the lack of eastern oriented music idioms **to** a certain extent, created the amalgam of inspiration and knowledge for realising the music.

Following the same procedural technique as the one followed in the previous **Intolerance** project, it then moved into conducting music experiments that relate to the original angle of eastern music idiosyncrasies and created original scores for specific films' segments. This was a method of testing the results of the preliminary assembled information together with the findings that have direct connections to the main issue of eastern music implementation and originality.

Finally, by **gathering** the initial research material together with the creative work's results, it reached the final discussion in order to establish the legitimacy of the results, and proposed solutions, together with the overall evaluation of the initial hypothesis.

The **primary** research methodology and overall perspective of this chapter can be demonstrated in the flowchart below:



### 3. Preliminary composition survey: Part I

Out of the large selection of movies that had been carefully watched over the period of this chapter of the research, there was a final number of nineteen chosen in order to be initially presented and analysed. The titles of the films, in chronological order, followed by some basic information and trailers can be found below:

After observing these films and paying specific attention in view of the scoring structure and semiotic functions, certain key elements were detected and noted so they could form a primitive overall picture of the scores. As a result, tables of main characteristics were created as demonstrated below:

An interesting observation coming from these films' primitive analysis was the immense spectrum of music variety in view of the score. Starting from the silent era which had, as expected, a distinctive colour of earlier classical music composers' approach, film scoring has developed a greater sense of experimentation starting from the early days of audio implementation in films. One can also observe a strong association between instrumentation and technological progress which played a crucial role in the formation of film music as we know it today.

This of course contributed a great deal to the way a composer thinks about composing a film, in a greater sense, and gave new perspectives on music evolution in general. It is an aspect that will be closely taken into consideration and analysed further on in this chapter by taking a closer look at specific films and examples.

Another important overall assumption relates to the absence of eastern-flavour music elements, although there seems to be some experimentation taken place in several films' examples that needed to be further investigated. This lack of ethnic colour and symbolism is missing even in films that have either a very direct visual representation or a strong resemblance of eastern-oriented geographic locations. The overall taste that remained after this initial analytical process was also lacking in terms of ethnic instrumentation and in some parts immersion. The scores that were found to tackle this issue, either in

view of added ethnic instruments or eastern flavours, could be characterised as superficial, habitually covered under the cloak of a grand, polyphonic classic orchestra.

At this point, it is worth mentioning that the last statement is not evaluating a film's score in terms of musical appeal and objective successfulness. This is a quite diverse subject that belongs perhaps in the wider context of film music popularity and human psychology. Nonetheless, emotion in film music is an aspect of great importance and will be discussed within the margins of this research's Middle Eastern music angle.

As a result of the above, there was a greater need created in view of digging deeper into the music processes and of the films' scores. Out of the previous nineteen demonstrated films, a total amount of sixteen was finally chosen to be analysed and discussed to a greater extent.

#### **4. Preliminary composition survey: Part II**

This chapter will demonstrate the music research that took place in a variety of science fiction films. These films are:

- 1. The Day the Earth Stood Still (1951)**
- 2. Forbidden Planet (1956)**
- 3. Planet of the Apes (1968)**
- 4. Fantastic Planet (1973)**
- 5. Alien (1979)**
- 6. Blade Runner (1982)**
- 7. Dune (1984)**
- 8. The Fifth Element (1997)**
- 9. Alien vs. Predator (2004)**
- 10. Avatar (2009)**
- 11. Moon (2009)**
- 12. John Carter (2012)**

13. Gravity (2013)
14. Interstellar (2014)
15. Alien Covenant (2017)
16. Black Panther (2018)
17. Tenet (2020)

### **The Day the Earth Stood Still (1951 – Score by Bernard Herrmann)**

The film's score has a quite distinctive colour that fits the overall cinematic experience of the 1950s era. This early Hollywood style includes features such as excessively usage of vibrato strings, more than often in divisi mode, the melodic character of most themes and leitmotifs, the dissonance in order to add mystery to the context as well as the use of low brass usually for emphasising the dramatic and/or adventurous scenes. The former one in this situation has been a keen scoring characteristic that can be demonstrated below:

What is also important to mention is the use of two Theremin instruments. The Theremin is a rather renowned electric instrument, especially used in the time period of the specific film, which has been used countless times musically addressing the unknown and/or the otherness. Two examples of this aspect can be found in the following clips:

The Theremin can indeed create a mysterious atmospheric background due to its sounding nature. This creative technological achievement can indeed provide the listener with a rather unique musical experience due to its warm and limited frequency response, especially considering the high frequencies, as well as its distinguishing vibrating, sustain sound and legato performance. In her talk considering Herrmann's usage of the Theremin in *The Day the Earth Stood Still*, Leydon (2009) states that 'Herrmann's music had made the instrument's own limitations work in its favour, exacerbating its more freakish qualities through ensemble combinations with other electronic and acoustic resources to best serve the particular narrative goals of the film' (p.39).

It is worth noting that the Theremin has been used in an opposite direction as a humorous, satirical instrument having a protagonistic role in newer films such as Tim Burton's *Mars Attacks!* (1996). Below one can listen to the characteristic, memorable opening titles' theme:

Furthermore, it is worth noting that Herrmann is mainly treating mysterious as well as emotional scenes with the use of either the Theremin, as mentioned before, or wind instruments in combination with middle-high brass usually composed without much of a melodic context. This approach, especially the use of wind instruments, has been found to be similar in many ways considering science fiction films of different time periods. A distinctive example of this can be found in the almost thirty years later on score of *Star Wars IV: A New Hope* by the composer John Williams:

Lastly, two interesting observations were found to be quite stimulating in view of the score's character. The first one is that the overall score written for the film seems to be quite limited in terms of length. Comparing and contrasting with other films of the same time period, either moving slightly back or forward in time, one can observe a certain breath that the film has without being overly composed in each and every moment. This can be also parallelised by the amount of total music written in other categories of films of this time period. These films usually fall into a different group, such as mystery or adventure, but share common aspects in music scoring with the science fiction genre.

The second observation concerns the actual connection between the moving picture and the score. The music quite often works literally in parallel with the film following closely the context and pace of a given scene. This can be observed in the following example:

### **Forbidden Planet (1956 – Score by Louis and Bebe Barron)**

*Forbidden Planet* is a 1950s film that has made its way to the hall of fame considering the science fiction genre and especially in terms of film scoring. Louis and Bebe Barron have created an inspiring, innovative, experimental electronic score that differentiates itself from any other film of its time. It is considered to be the first film score that has been created entirely by using electronic sounds.

In his exploration considering the revolutionary films of the science fiction genre, Lambie (2009) characteristically states that 'there was much that was groundbreaking about *Forbidden Planet*, but nothing quite as daring as the extraordinary score: created by Bebe and Louis Barron, a married couple who pushed the boundaries of experimental music, it was the cinema's first entirely electronic soundtrack' (p.56).

Below there are two video clips demonstrating this approach:

As one can observe the score predominantly consists of electronically designed sounds without any obvious attempt for harmonic structure development. Exemptions that prove the rule can be observed in certain scenes where there is some increased use of pitch variation in the created sounds. One example can be found in the following scene:

The film has certain moments in which the score becomes distinctively repetitive. This occurs mainly during the more mysterious scenes and more specifically just before the action takes place. This can be demonstrated in the following examples:

In conclusion and due to the absence of pitch patterns and physical instruments, there is no sign of intention in using traditional music elements in the score.

### **Planet of the Apes (1968 – Score by Jerry Goldsmith)**

Jerry Goldsmith, one of the most recognizable composers in the history of Hollywood cinema, in this example, scores the film *Planet of the Apes* in a rather unique way. The composer chooses to make a music statement, moving away from the diatonic and chromatic approaches which used to be the norm

in the Hollywood cinema of the 50s-60s, by choosing to use the twelve-note serialism system as his main scoring tool and stays faithful to this approach in the entire film.

Serialism gives the score a distinctive experimental, imaginative, and enigmatic character which is also reinforced by sound design in certain scenes. It is thought to be a bold decision, as serialism in the science fiction genre as well as in the majority of Hollywood productions is indeed very rare, at least in the all-embracing amount which Goldsmith outstandingly uses it in the film.

As McGuinney states 'the music from Planet of the Apes may seem noteworthy today only for its uniqueness and the breadth of imagination that it shows' (p.227).

The hybrid direction of the symphonic orchestra together with synthesised sounds and use of audio effects to impart instruments' character makes itself apparent from the very beginning scenes of the film:

The strong sense of serialism disagreeing intervals is often used within fast-moving scenes where the score's tempo is deliberately increased. An example can be observed in the following scene:

Another feature of the score is the frequent use of strings performing in divisi mode, an aspect that has been also noticed in the earlier days of American science fiction cinema. This, in conjunction with short length percussion hits and the pronounced use of the twelve-note system in the lower keys of the piano, establishes the composer's eccentric approach in building various thematic motifs throughout the film.

A characteristic example of this approach can be demonstrated in the following scene:

As a small parenthesis, piano low notes' motifs, though not typically scored in a twelve-note system, is indeed an instrumentation feature that was found useful to film composers although not particularly apparent in the science fiction genre.

An example can be found in Alan Silvestri's score for the original *Predator* film.

In this case, the composer is using a distinctive low piano repeated motif to build his main theme:

In summary, one might state that Goldsmith is using the twelve-note system as his way of expressing the exotic, the unknown, and was indeed found to be a rather intriguing approach. The film's potential could suggest and support a well-suited range of ethnic instruments, due to the fact that it combines the unknown with primitivism, though there is no evident use of that in 'Planet of the Apes' instrumentation.

Nevertheless, the sense of primitivism does exist through the intriguing use of acoustic dodecaphony. As Fitzgerald & Hayward (2013) state "the use of acoustic, rather than electronic, sounds also complements the primitive nature of the ape society as portrayed in the movie" (p. 37).

Goldsmith's stimulating score for *The planet of the apes* has been discussed and analysed in great depth by a number of academics and musicians of the field. One of the latest, and fully accessible, studies in view of the composer's approach can be found in Vincent Gassi's thesis:

#### **Fantastic Planet – La Planete Sauvage (1973 – Score by Alain Goraguer)**

Inspired from a novel by Stefan Wul, *Fantastic Planet* was found to have a quite controversial approach to film's scoring based on the previous experience of film analysis. **Though not belonging in the Hollywood industry, the film was found to be** quite thought-provoking, artistically inspiring and undoubtedly worth exploring due to its unique nature. In his review of the film's creative angle, Barsanti (2009) comments that 'the film has a haunting, alien quality that makes it stand out even today; there's little dialogue, and the backgrounds and character designs are delicate with a dreamlike strangeness' (p.132).

Though the film's score was not found to contain a great amount of experimentation, if none at all for that matter, its rather exclusively popular character was a rather unique feature in relation to the film's subject and utterly the science fiction category which it falls into.

As with the film *The Fifth Element* which will be presented and discussed later on, *Fantastic Planet* has a distinctive popular character which is closely following **compositional patterns portraying a distinctive sound of the 1970s era**. Thus, the score contains a number of different song-like themes together with band background music performances that consists of popular **1970s instrumentation, with an overall dry mixing perspective**, including the acoustic drums, harpsichord, electric pianos, electric guitars saxophone, mellotron et al.

Likewise, a shared similarity between *Fantastic Planet* and *The Fifth Element*, as will again be demonstrated further on, is that a number of different musical genres **coexist** occurring in different scenes throughout the film. A few examples of the scoring approach can be found in the following examples:

#### **Alien (1979 – Score by Jerry Goldsmith)**

Goldsmith, once again, manages to create a rather unique score in the film *Alien* by using hybrid instrumentation **combining** sound design **with the** symphonic orchestra. It is a harmonically complicated score containing a number of different textures and techniques that contribute a **great deal to** making the score memorable in its own sense. In his discussion considering the composer, Jerry Goldsmith, Dearborn (2013) points out that 'The music is again sparse, and the interplay between score and sound effects is carefully and effectively considered' (p.25).

Starting with memorability, the sense of repetition exists inside the score by using a distinctive motif in several scenes. It is worth noting that this motif **is performed by several different symphonic instruments such as clarinets, oboes, strings et. al**. Below there are a few moments presented where this can be observed:



In the last clip (Clip 4) one can additionally notice the composer's tendency to dress and alter the main theme with a **quite rich chromatic** orchestration. In this case, the motif has been performed by the French horns while the rest of the instruments (strings, woodwinds, percussion) are performing in dynamic articulations (woodwinds runs, strings tremolo, marcato, sforzando) in order to musically express the alien's attack scene.

What is worth noting at this point is the connection that was detected between this music approach and the one that was found in a previous example of the film *Planet of the Apes*, scored by the same composer. Although these two scores belong in different sci-fi genres **with diverse** overall scoring approaches, the above appears to be one of the many characteristics of how Goldsmith is thinking and realising an action and/or mysterious scene.

Goldsmith achieves writing a large amount of score **using combinations** between classical orchestra and sound design. There is a clear direction towards this approach and a sense of experimentation of the sounds created for that exact purpose. This is also a shared similarity of the composer which was previously noted in the film *Planet of the Apes*.

Nevertheless, the music manages to have a darker character rather than an emphatic one, something that should be taken into account in terms of originality. There are times in which the score tries to paint a more abstract picture with bold, anarchy strikes resulting in a dark canvas of mixed colours. This also becomes apparent from the very beginning **introduction** of the film. A few examples of this observation can be seen in the following clips:

There is also a quite interesting point taking place in the last clip (Clip 7) in which the score uses **algorithmic effects**, such as reverbs and delays, in order to transform the sounds. This technique in conjunction with the absence of an overly busy composed and mixed soundscape creates a

certain mysterious and almost horrifying mood that is used to indicate the otherness. It also serves a double purpose by **describing the technology of the time and place in the future** where the film is set.

Last but not least two important findings must be noted. The first is **that** there was **no profound use of eastern-related implementation** observed either in terms of **music composition** or instrumentation. Secondly, it is worth mentioning that the overall scoring length seems to be rather small. Perhaps this is more related to the director and the balance that he might want to achieve in terms of acting, **scenic environment** and scoring. This is an aspect previously sensed and discussed during **the discussion of** Bernard Herrmann's score in *The Day the Earth Stood Still*.

### **Blade Runner (1982 – Score by Vangelis Papathanasiou)**

*Blade Runner* has been chosen for the reason that it is considered to be one of the most inspired science fiction films in the history of Hollywood cinema. More specifically, this is also true for the music by Vangelis Papathanasiou since it is one of the few scores of this genre which has been composed almost exclusively with synthetic sounds available at its time.

It is imperative to mention that this scoring choice reflects the technological metamorphosis of the 1980s. It is a decade that is closely connected with the rise of the production of personal computers and micro-computers, **a fact which is also** reflected in the music industry. There is a huge step towards electronic music since electronic instruments **could now be** accessible to the average user, which began sculpting new ideas and formations in view of all the **audiovisual** media of that time.

Also, and in reflection to the *Blade Runner* movie, the new visual technical capabilities (effects, mixing process and post-production in general) are following parallel paths with the music produced creating a fresh artistic breath to the genre. In essence, the scenes are closely and efficaciously connected with the music which is indeed reflecting the technological **breakthrough** of the current time period.

In terms of music composition, the score provides the viewer with rich polyphonic chords especially in scenes that are set in the outside world. These chords are **most of the time** melodic, an aspect that sets the score away from the dissonance observed in several other science fiction films of the previous three decades. Maybe this also has to do with the very nature of synthetic sounds of the current time period.

As a parenthesis in view of the *Blade Runner* film and explaining the previous statement with more detail by comparing it with the classical orchestra, a personal opinion is that due to the fact that a symphonic orchestra can provide a significantly **large multitimbral** frequency response with extraordinary dynamic range, **manipulating and combining different synthetic sounds result in a denser and fuller sound that comes closer in mimicking the classic orchestra. It seems almost like a philosophical statement that this is the sound of the future symphonic orchestra; a dystopian, technologically advanced and at the same time disappointingly melancholic future.**

**It is also a fact that electronic sounds of the past have been used either in conjunction with the classical orchestra, for example, the previously demonstrated famous Theremin, or would be used utterly in a film but with the intention of blurring the lines between music and sound effects with no intent in the creation of a score with rich harmonic content, e.g. the previous discussed *Forbidden Planet* (1956).**

Thus, in that respect we can observe that the score frequently uses major chords descending in semitone progression together with long slow tempo arrangements developing gradually by adding extra doubling instruments' layers. The score's semitone progression in addition to the stereo field and time-pitch manipulating audio effects, e.g chorus, flanger, delays, creates a sense of dizziness which accompanies the camera's angle and rotation. This can be demonstrated in the following scene:

Another reason that it is thought to be relevant to the overall melodic score's character is the film's plot **itself**. There is no strong sense of the otherness at least in the view of an alien form which humanity has to confront. Nor there seems to be a far-away atmosphere of the unknown and chaotic space. On the contrary, the film has a futuristic anthropocentric meaning. Therefore, **emotional evocation reflects the human perspective and this translates into music written in a more 'understandable', melodic form.**

In the matter of music exoticism, the score has indeed numerous moments with direct references to ethnic sounds and cultures. This is taking place in several different scenes inside the film and has been treated musically with extraordinary stylistic variety. Stiller (1997) in this discussion given the film's score states that 'Vangelis created for Blade Runner a score that closely parallels the visual dramatic elements of the film, and that encompasses a variety of different styles suitable to the varied milieu of the movie's action' (p196).

The use of eastern-colour scales is apparent in many cases as well as the use of eastern vocals and percussion instruments. What is also quite interesting is the use of improvisation in a few scoring moments. Though common in global ethnic music, the use of improvisation does not seem to appear quite often in the cinematic world, even in cases where ethnic music influence is apparent both in terms of harmonic progression and instrumentation. This can be demonstrated by the following synthetic instruments' performance in C minor Naw' Athar mode (also known as Neweser/Navient-Kambir). The sound character shares similarities with the ones found in eastern ethnic woodwinds such as zournas, duduk etc.

Near the previous video clip's end, one can observe the introduction of a female eastern vocal motif performing in a variation of C major Hijaz mode (Phrygian dominant). The variation concentrates in the mode's sixth interval, in this case A flat. This is a quite common technique, especially in Middle Eastern improvisation, in Hijaz and Hijaskar mode as ethnic instruments' performances usually increase the sixth interval by one semitone while ascending, using the original mode's form while descending.

It is also apparent in eastern music tradition in the microtonal performances of fretless instruments, the oud being one example, where the sixth interval, using the C major Hijaz mode as an example, is in between an A and A flat. This has been further discussed and presented with examples previously in the research; it was a technique used in my initial scoring attempt for *Intolerance* Clip 2 where the santur forms a bridge by performing a motif between these modal variations.

The vocal motif becomes clearer a few moments later by increasing its volume and decreasing the added reverb in the mix. Below is the extracted film's clip in addition to an original santur recording demonstrating the **scale's** variation:

The score also consists of an eastern oriented male vocal motif **which** can be found in the next video clip. In this case the instrumentation follows a repeated rhythmic pattern and the harmonic content, assigned to a synthetic woodwind mentioned earlier, moves again around the previously mentioned Naw' Athar mode. The vocal, which also performs in a Naw' Athar mode, becomes mostly apparent during 00:55"-1:10", right after the dialogue stops and about twenty seconds after the actor's line 'Do you ever buy snakes from the Egyptian café?'

Another quite significant moment in the film considering **eastern** instrumentation comes with the addition of a tabla **percussion** instrument, dominantly building the rhythmic mode laying the foundation for synthetic strings and solo flute to perform in an eastern oriented music style.

### **Dune (1984 – Score by Toto / Prophecy theme by Brian Eno)**

The score in the film *Dune* has a quite different and interesting approach. **Although** it is a film that has been discussed and criticized a great deal over the years, it is thought to be worthy of investigation due to its idiosyncratic nature in terms of music. **Colourfully**, in their discussion in view of *Dune's* scoring approach Odell and Le Blanc state (2007) that 'while the main theme by the variable genius Brian Eno is perfectly acceptable, all credibility vanished whenever Toto's painfully pompous bombastic prog-rock drivel crashes it. It manages simultaneously to cheapen and date the film, with quite breathtaking ease (p.46)

The film's score makes a dramatic entrance with the introduction of the main theme:

As it has been observed this main thematic process, as well as its variations including a frequent cut-down version of the first two bars, has been repetitively used in a number of scenes throughout the film. **Most of the time** it is used in the opening of new scenes as presented in these examples:

At most times the score has a rich orchestral character emphasising the picture on dramatic scenes, as it is demonstrated below:

In addition, the symphonic choir is used frequently in order to add a layer of drama on top of the already rich instrumentation.

What is also distinctive, and concerning the above, is the speed at which the score is developing. Despite the fact that Toto use a full orchestra to musically dress the vast majority of the film, there are a number of busy and fast-moving action scenes in which the score does not follow the pace of the picture. On the contrary, the score repeats its main theme in minor variations mainly in view of the instrumentation. This can be observed in the following example:

Another point worth mentioning is the use of sound design in combination with the **symphonic** orchestra. **Although** this is a common aspect, as demonstrated in previous examples, in this case, **what is interesting is the moments where the score is consisted entirely of synthetic instruments**. A characteristic example is shown below:

Last but not least, there is no obvious use of eastern-related scales or instrumentation even though there are many moments in the film in which the score could have the potential to introduce something different in terms of originality, eastern colouration, et. cetera. A characteristic example of this would be the possibility to implement ethnic elements in a number of different desert scenes. Similar cases, although in different film genres (drama/history, war), and discussion on the composers' approach has been previously identified **and** discussed in the films *Lawrence of Arabia* (1962), *The Ten Commandments* (1956)' and *300* (2006). Middle Eastern instrumentation and composition were not the

dominant angles of the composers, although Maurice Jarre in his score in *Lawrence of Arabia* uses scales and modes, **predominantly** Hijaz (dominant Phrygian) and Hijaskar modes, that create an essence of eastern music idioms.

One of the key aspects that make the score memorable, besides the repeated main theme that has been mentioned before, is the use of distorted guitars as a signature sound of the Toto rock band:

### **The Fifth Element (1997 – Score by Eric Serra)**

*The Fifth Element* score is an important paradigm of innovation and experimentation that differentiates itself from the rest of the films chosen. The soundtrack has always been a controversial subject, profoundly critiqued and in some cases described with characterizations such as ‘postmodernism failure’ and ‘decadent fashion show without human content’ (Schubart, 2005, p. 74). Nevertheless, its ethnic diversity and **multicolour** music amalgam was found to be rather intriguing **and useful**, or as Hayward states ‘intrinsically musical’ (2009, p. 91) offering an aesthetically innovative experience. A film which certainly worth exploring, especially in view of the music and how it is connected with the vivid, unusual picture.

Sierra is essentially combining a number of different music genres and techniques in order to provide the viewer with a **polytimbral** and **multicultural** experience. It is rather unique in terms of emotional direction as it manages to create a cartoonish character which eventually communicates with the film's overall imaginative and humorous character. In addition to the comic scenes and script, the score functions accompanying the visuals' vivid **colours** and diversity.

The score also excels in providing a wide variety of rhythmic textures. Its techno like style especially by using electronic **percussion** instruments reflects the artistic, low-fi, futuristic picture:

The composer's experimentation can be also observed in the quite famous operatic scene. Starting with a classical music orchestration with a female soprano as the only performing artist the music serves a

double purpose by transforming into a more popular style by following a second action scene that has been taking place in parallel. During this fighting scene, the composer is blending popular elements, such as synthetic drums, resulting in a **vivid dance-like score**.

This together with the ecstatic performance of the alien soprano contributes in presenting a futuristic blended genre of popular and classical music. Technology plays an important role at this point since the soprano's voice has been sampled, computer-generated and performed in a mode that is almost impossible to achieve with an actual human vocal due to its fast tempo and wide range of notes.

An additional and quite noticeable aspect that can be observed is the frequent reference to song-like structure, particularly when composing ethnic oriented music styles. The sense of **ethnic music character** is strong, not only apparent in the harmony that the score uses, **for example the use of eastern music scales**, but also in the use of the actual ethnic instruments that portray each genre. Hence, we do not observe, for example, a symphonic orchestra performing a score that uses eastern scales to bring out the exotic atmosphere but actually experiencing a more **accurate picture of the genre itself**.

As a first example of the above statement the next video demonstrates the use of ethnic style percussion and rhythmic texture in combination with Hijaskar mode variations, which is particularly distinctive in the clip's beginning, performed by ethnic style violins and accordion:

The next video clip demonstrates the film's **multiple personality** by presenting a different tactic in ethnic style implementation. Thus, this taxi chase scene contains an **eastern-oriented popular song structure** with world music influences. We have the mixture of a Latin music piano motif, accordion, and diverse rhythmic combinations such as heavily processed drums and eastern tumbek setting the ground for the main vocal performance of the Algerian musician/singer Khaled Hadj Ibrahim.



It is also interesting that Khaled, as he is widely known as, is a worldwide acclaimed artist with a long history in world music amalgamations **in composing and performing experiments** involving especially Eastern traditions and Western music methodologies.

This diverse orchestrated **theme** fits well to the highly energetic chase scene as well as to the overall easy-going, **undramatic** character of the entire film.

What is also quite interesting is the intriguing history behind the song's genre called 'Rai' which was banned from countries such as Algeria until the **1980s** and still remains a controversial music style in North Africa. As Al-Deen (2005) states:

'Rai has been regarded as the symbol of cynicism and has become as essential to the identity of the Algerians as the blues was to the Blacks in America'.

Below is a very interesting article by Louis Werner containing historical and musical information considering Rai Arab popular music:

Finally, an additional distinctive example of ethnic music implementation, a reggae style theme with no relation and coherence to the presented score up to this point, can be found in the following airplane scene in which the music literally translates to the presented Caribbean character:

### **Alien Vs Predator (2004 – Score by Harald Kloser)**

In this film the composer, Harald Kloser distinctively uses the classic orchestra together with sound design. His scoring approach is creating a fuller and more impressive-sounding spectrum than the original *Alien* film as well as the newer *Alien Covenant* which is going to be discussed further on.

The composer achieves this music style by relying more on the grandeur of a large symphonic orchestra set, frequently using brass flutter tonguing, strings bowing techniques and sound effects as tools for immersion. Moreover, it is worth mentioning that there is no apparent use of leitmotifs that could be connected with a specific character nor explicit motifs which could be used with the aim of giving the score a more distinctive memorability.

What is also interesting is the obvious rhythmic structure that **characterises** the film in many cases. This becomes apparent from the very beginning of the film in which Kloser uses a set of orchestral percussion in order to **interpret** an action scene of the alien predator chasing a human. This together with the overall use of percussion and drums can be demonstrated in the following examples:

Since it appears to be a quite common technique for composers to describe alien civilizations and the overall **idea** of ancient and primitive **cultures** with aspects that might directly or indirectly expose similarities with any kind of **ethnic music aspects**, **this seems to not be the case** with this film's score.

Even though there are scenes that could directly imply the angle for writing such a score, or adding some musical elements in that respect, there is evidently no actual attempt to follow that route.

These are two distinctive examples to demonstrate this view:

As one can observe, discoveries of hieroglyphs and ancient buildings, **such as the pyramids**, have been musically described with rich cues that contribute to the dramatization of the selected scenes. Simultaneously though, it proves the absence of any ethnic element which might add a sense of authenticity, or even experimentation, to the score.

### Avatar (2009 – Score by James Horner)

*Avatar* is an example of a film in which the score has multiple functions and covers a wide range of different approaches to different scenes. It is not overly adventurous in terms of originality and experimentation but it nevertheless manages to cover a lot of ground by putting the viewer in a certain musical-atmospheric scope when the script dictates it to. All of the above have been **pragmatised** by spinning around a certain core which is no other than a large symphonic orchestra. Therefore, the analogy of the film's score is leaning towards more conventional instrumentation that falls into the Hollywood blockbuster category.

In certain points there is a tendency of moving in small steps by using big orchestral chords and building the harmonic development mostly around the dynamics. This can be shown in the examples below:

What is also interesting is the scoring in heavy action scenes. Horner characteristically uses low drums and brass instruments to give that extra dramatic emphasis, a technique that has been repeatedly observed by different film composers and has been also discussed previously. In the specific film an example of this can be found in the following video:

Another aspect that **characterises** the *Avatar* film score is the repeated four-note motif Horner is using throughout the film. This is a quite memorable motif performed exclusively by the trumpet which contributes to magnifying the importance of dramatic scenes. This can be shown in a combination of scenes in the following example:

**In view of ethnic music implementation**, one could state that the score is well balanced by keeping its initial Western composing angle but also by adding certain aspects that contribute in proving an ethnic scoring orientation or at least the attempt to put the viewer into that mood. It is a fact that James Horner has created this score with the input of ethnomusicologist Wanda Bryant from the California Institute of Arts. A quite interesting article considering this **cooperation** can be found following the link below:

The most distinguishing example of the previous is the connection which Horner is trying to create between the Avatars and the native cultures and tribes that exist today in many areas of the planet. Since some of them are indeed sharing similarities considering the instruments that they use, and the overall aesthetic of their music, it, therefore, cannot be entirely determined from which exactly the composer might have been inspired.

One might suggest that at some points the score carries elements and can be parallelized with certain tribes in Africa, observing the tendency to use rhythmic structures together with solo female vocal or small vocal choirs. At times Horner, usually noticeable in slow motion directed scenes, make use of the above observation to **reinforce** the dramatic atmosphere. A characteristic example can be found in the following video clip:

The previous **ethnic scoring** angle is also reinforced by the visual since there are moments in which the alien tribe is holding hands singing and praying around their spiritual tree. At this point, it is worth pointing out that the music does not seem to achieve an ultimate degree of ethnic-oriented musical implementation since this might not be acceptable for the very nature of the film and also the audience that the film targets to address. In this angle of authenticity, **critics** and reviewers have been quite unconvinced by often expressing their scepticism. In his relevant discussion MacDonald (2004) states:

‘Film music, which seeks to represent indigenous people, might need to explore anthropological and ethnomusicological literature for instances of how music is used by indigenous people, not just how it sounds... If James Horner had considered Pandora acoustemologically, Avatar’s soundscape might have been as captivating, imaginative, and immersive as its visual images’ (p.273).

Some examples in terms of how the composer is approaching the alien natives can be found in the examples below:

There is also a reference to flute music when the scenes are set in the woods, which is the ritual centre of the alien Avatars. It is **worth noting** that the flute, and woodwinds in general, is a relevantly common feature when music **is parallelized** with the woods, trees, rivers **etc.** Also, rhythmic structure is quite evident, with usually a number of different smaller wooden percussion, as well as the strong character **of themes with a** song-structure resemblance.

Examples of this kind of scoring approach can be shown below:

Lastly, an interesting observation that is directly related to the score's orchestration is the gradual build-up of ethnic implementation. Horner often uses a repeated motif as a centre thematic idea on which all the instrumentation is based on and eventually reaching its given climax.

One of the scenes in which this can be observed is the one below:

### **Moon (2009 – Score by Clint Mansell)**

The score of the film *Moon* was found to be quite intriguing. The composer, Clint Mansell, has composed a rather unique soundtrack which differentiates a great deal considering the other science fiction films discussed previously. That is also true considering the film's plot since this film has only one actor, which in the plot development plays two characters, and the overall aesthetic is quite dark and gloomy.

The music comes to agree with the melancholy of the plot. The overall minimal character and emptiness of the sound spectrum emphasize the character's depression, as well as the use of dissonant chords, which describes the relationship between him and his clone. In his discussion of *Moon* score, Johnston (2012) states:

'In *Moon*, music and silence counterpoint Sam's initial loneliness; the lack of silence and change in music once his clone appears matches the more dissonant tone of the character's relationships' (p.20).

Following these minimalistic steps, which **is rather to be** expected, Mansell introduces the piano as his main colour in the palette of an otherwise rich polyphonic, hybrid score. This intention becomes apparent from the film's beginning titles:

Though the use of electronic synthesis is of significant importance in the enrichment of the scenes' technological aspect, the piano was found to play a key role as a core to the rest of the instrumentation which is evolving around it. In this way, the composer magnifies the tension in action scenes and also adds perspective to the characters' sense of **despair** and nostalgia in emotional scenes. This can be demonstrated in the following examples:

Adding up to the previous, Mansell quite often **makes** use of the cello as a complementary instrument to the already introduced piano. This instrumentation movement emphasizes the film's dramatic atmosphere as shown below:

Another aspect that was observed occurring repeatedly throughout the film is the performance of piano right-hand octaves making small semitone movements. This motif repetition is an alternative, more simplistic version, of the main theme which can be found in the film's introduction as presented previously. This altered motif is demonstrated below:

The rhythmic structure is also present at certain moments in the film. Mansell is using synthetic drums and percussion for that purpose, providing an even tenser atmosphere, usually when the scenes are presenting the character in a mysterious, adventurous situation.

This can be shown below:

Finally, there is an additional technique that the composer uses which was found to be rather intriguing and therefore worthy of discussing. Mansell scores a glockenspiel motif which is accompanied by the piano and a static background pad in scenes that are closely connected with the ready-made clones. It is

a musical statement that indicates the raw realization of the truth in the bigger context of newborn life and innocence. This is mixed cleverly with the synthetic pad in order to create a divergent picture between the last and the mysterious, and at some points tragic, progression of the narrative. Ultimately it serves well the overall depressive atmosphere.

**Musicwise** this was found to be a rather inspiring approach, in view of what it translates and how it connects with the actual picture. It is a technique that can be commonly observed in modern mystery/horror films in diegetic and non-diegetic scenes where the innocence is projected with glockenspiel or music box sounds usually in children's characters or objects, e.g. Dolls, clowns, music boxes et al. Some examples of this characteristic are demonstrated below:

#### **John Carter (2012 – Score by Michael Giacchino)**

*John Carter* portrays a more conventional use of science fiction's **films** scoring. It is following a more common Hollywood recipe in presenting the viewer with a sense of magnificence. The style remains the same throughout the film without major alternations and obvious repetitions of motifs. The first video clip is used as a first example of the overall scoring approach:

In order to contribute to the gloriousness of the picture, what was found to be quite pronounced is the use of brass instruments. A rather common scoring tactic in which **low brass enriches the score** by adding the extra weight required for dramatic scenes while high pitched brass, mainly trumpets, with its staccato performances contributes to the increment of climax.

One can observe this in the following example where brass plays a major role in describing the combat scene:

What is also worth mentioning is the similar scoring angle that has been taken in describing more sentimental scenes. In this situation, the strings play a central role in increasing emotional strength. Again, we can observe the big orchestration which has been used in the following:

In terms of scoring outside the Western symphonic orchestra, there are only very few moments that include some hints of ethnic scoring. This happens more frequently in rhythmic sessions but usually with minor length resulting in being more or less unnoticed. A characteristic example of this can be found in the following clip:

In view of ethnic instruments, there is no apparent attempt to include anything within the bigger context of the classical orchestra. In addition, there is no scene that contains any ethnic solo instrument that could be used for that reason.

Similarly, in view of eastern-influenced scales, the score contains just a few moments in the film in which there seems to be an attempt to generate more connected music to the visual. Yet again this seems to be fairly imperceptible because of the masking occurring by the large symphonic orchestra.

### **Gravity (2013 – Score by Steven Price)**

*Gravity* is another characteristic example of the current decade's Hollywood approach to music for science fiction movies. It consists of hybrid instrumentation with both classic orchestra and sound design to have equally strong characters that **coexist** and evolve simultaneously. It is an overall minimalistic approach, in terms of harmonic development and chord progression, as it seems to recycle an idea followed by added layers in order to emphasize it. It feels like an instrumental crescendo beginning with something simplistic enough, for example, a two-note motif, which gradually gets magnified by both dynamics and extra instrument and/or sound layers. Representative examples of this observation can be found in the examples below:



An additional central aspect of the film's score is the way the composer is actually using the instruments at his disposal. One can observe the close connection that exists between the on-screen movement and the music.

In her discussion considering *Gravity* score and the thematic connections between this and the female astronaut character Walker (2015) states comments:

'Along with being anchored in Stone's voice, the soundtrack of *Gravity* is structured so that everything she feels is aurally **reinforced**. We feel the terror of her endangered life through the many closely miked sounds of her physical aloneness, especially her solitary breathing and her isolated voice'. (p.411)

As a consequence, instruments are quite often used in a more unconventional manner introducing performing techniques that create interesting sounding effect. Ultimately this **palette** of creative textures seems to work by increasing the viewer's emotional state as it also shares sonic similarities with the **computer designed sounds** that are used in combination.

Another common characteristic that exists in the twenty-first-century science fiction's scores, as well as in other genres such as adventure and action films, is the repetition of strings **performing in simple ostinatos variations**. This is by far one of the most used techniques to accompany film music, especially during action scenes. The strings performance will typically embrace a two or three-note **motif** which is going to be repeated several times as the overall dynamics rise.

This can be observed in the following example:

### **Interstellar (2014 – Score by Hans Zimmer)**

*Interstellar* is yet another film in which one can observe the close scoring connection between the **classical orchestra and sound design**. The composer, Hans Zimmer, who is widely recognized for his frequent use of computer-generated sounds, produces, in this case, a score that has an overall minimalistic perspective.

In the discussion considering the score's conception Lawson and MacDonald (2018) state:

'As well as Zimmer's trademark ostinato and almost hypnotic, minimalist sounds, he also decided to include some more avant-garde moments. He asked the woodwinds players to make unusual noises on their instruments' (p.130).

A first noted facet is that Zimmer is using very long notes in lengthy cues **contributing** in the minimal tonal character. What is also recognizable is the progression of the simplistic note cues that the score repeatedly uses. This occurs more frequently when the composer needs to introduce a new scene where he uses this movement as a core material **for added layers** to evolve around it.

This aspect can be demonstrated in the examples below:

Zimmer is also using the same repetitive technique, most frequently with the use of a piano, in order to describe the sense of space emptiness and mood of loneliness in a character:

In addition, action scenes have been also found to be represented by music using the same repetitive pattern. Repetition is mostly observed by using minimal chord progressions in a relatively large amount of time.

Also, with the use of a pipe organ, perhaps synthetic, Zimmer is emphasizing the scenes by offering a sense of grandeur and drama due to the instrument's rich harmonic nature. Interestingly, this instrument, or a similar type of organ sound at least, was also found to be used as a thematic foundation in Ennio Morricone's score in *Mission to Mars* (2000).

Examples of the above can be found in the following clips:

As there seem to be no apparent motifs with a more straightforward memorable harmony, nor following classical orchestration or thematic enrichment in that respect, another aspect that seems to be apparent in the composer's scoring palette is the use of **rich chords'** crescendos.

This becomes apparent in several scenes in the film including the one demonstrated here:

Last but not least it is worth mentioning that there is no obvious effort of describing the otherness or the unknown with the use of any ethnic-exotic instrumentation.

### **Alien Covenant (2017 – Score by Jed Kurzel)**

In the film *Alien Covenant* the composer Jed Kurzel is approaching the score in a characteristic minimal viewpoint. The score has a slow pace especially when the scene is set in space. In addition, the frequent use of dissonant chords and chord progression contributes to the overall sense of the unknown and the grandeur of outer space.

This is also a connection that was observed concerning the first *Alien* film (1979) that was discussed previously. **An additional aspect contributing to** this sense is the buildup moments of rich classical orchestration, frequently moving in major chords with augmented fifths that are more clearly distinguished on the strings. This type of approach can be illustrated in the clip below:

In terms of minimalism, the composer is using the piano for creating leitmotifs that are closely connected with specific characters. In these situations, the piano has the main **role performing short** fundamental phrases with a melodic context in order to transfuse emphasis to the scene's expressive state, and ultimately the viewer's appeal to emotion.

An example of this observation can be demonstrated in the video scenes below:

Another scoring characteristic is the strong relationship between synthetic instruments and sounds together with the classical orchestra. This is recurrently noticed in scenes considering the alien species where there is an array of synthetic sounds including rhythmic loops and **wide** stereo background pads covering the soundstage. Additionally, this contributes to giving a more advanced technological sense to the overall atmosphere of the scenes **reinforced** by an assortment of sound effects.

Additionally, there is no apparent use of ethnic instruments or eastern-related music scales or modes. Nevertheless, there is a specific moment in the film where a solo, handmade, flute is being used with the intention of describing a primitive communication attempt between the two androids. The specific choice of instrument performing a motif on a Dorian mode indicates the composer's attempt to relate primitive life with ethnic **music; an important point** that has been noticed in other films as well.

This is demonstrated in the video below:

### **Black Panther – (2018 Score by Ludwig Göransson)**

*Black Panther* is a distinctive case of film scoring in a number of different ways. It has an overall **multitimbral** character but it is always built around ethnic African colour which has a strong presence throughout the film. The last statement is mostly apparent in the drum and **percussion** instruments the score is based on.

The rhythmic structure is very strong and is almost always moving between structures that are **ethnologically emphatic in view of African music authenticity**. A characteristic example is shown in the video below:

What is also quite strong and frequently **observed**, as it is also apparent in the previous video example, is the use of ethnic tribal vocals which is also an aspect synonymous with the African continent. In the specific example, rhythmic structure is also a diegetic part of the narrative.

In many cases, music styles and instrumentations blend according to the visual. This of course is taking place around the ethnic musical core, either in terms of orchestration or composition. The composer is using two methods to approach the score; classic orchestra and sound design. This can be demonstrated in the following video example which contains three different case scenarios inside the film:

A substantial role in classical instrumentation plays the repeated and dominant use of brass instruments. Symphonic brass has the ability to emphasize the picture with its weighty and dramatic tone, most of the times performing in big chords or **intervals of a fourth or fifth** as it is widely used in all genres in film music when describing kingdoms, armies, large civilizations **etc**. This is the case here as well, as it can be observed **at 00:12"-00:30"** and **01:05"-01:31"**.

On the other hand, music transforms into a sound designed style in cases where the visual are set into a more advanced technological environment **as seen at 00:32"-01:01"**.

Considering the vocals, what is also interesting is the decision of implementing a solo male vocal improvisation and using it as a core for generating and **a thematic idea**. This is **predominantly** apparent in the following scene:

There is also a rather informative video of the composer considering the authenticity of vocal section and the music score in general:

Additionally, there is a small segment in the film **where the** music differentiates and uses a **popular song** to accompany a car action scene. This also demonstrates the score's and hence the composer's versatility by blending ethnic parts such as percussion and drums, though heavily processed, in order to maintain the connection between different genres and between traditional and modern popular styles:

As a final notice, it is worth mentioning that despite the fact that the score carries indeed a quite strong African ethnic character and at the same time musically **evolving in an attempt to complement** the visual there is a problematic point that needs to be addressed and this is the fact that the film is not based on or includes any sense of the otherness. There are no alien entities whatsoever and the film is entirely located in the African continent.

Nonetheless, it was worth investigating as it was found to be a greatly inspiring effort of mixing different instrumentation techniques but keeping the central focus in view of locational music authenticity. This is one of the key areas that this score was found to aim for and one of the aspects that validates the connection with this research:

#### **Tenet (2020 – Score by Ludwig Göransson)**

*Tenet* has a quite different scoring approach that relies purely on the use of sound design and heavily processed audio. The composer, Ludwig Göransson, presents a score that has a highly rhythmic and atonal character that seems to follow closely the scenes' development.

Examples of this **are presented** in the video clips below:

There is also an intentional recurrence of instruments and performances with only a minimal harmony present throughout the film. It is obvious that it is relying mostly on rhythmic structures and building blocks of synthetic instruments which combine together to form a continuous movement of dynamics and small pitch variations.

Similarly with the above, the next video example follows the **same** principles only that this time a mixing **sidechain** compression technique has been used **at** about 1:07" which gives the music a highly dynamic rhythmic style.

Audio reverse techniques have been also applied in **an extensive proportion contributing in this way** to the visual sense of manipulating time and space. This has also been **reinforced** by continuous pitch variation of synthetic sounds:

Last but not least, a very important aspect that was found to have a distinctive impact on the score's overall character is the use of distortion. Distortion was found to be a tool used for creating a highly tense and nervy environment. This seems to be an overall aesthetic angle since it is not only apparent in the music score but also in the dialogues as well, often enough in brave proportions.

## **5. Discussion**

The initial assumption that composers in science fiction films do have the privilege of producing scores with a variety of different techniques and aesthetic angles is found to be true. There were several occasions where one can observe the above, with some of the most characteristic examples coming from the highly experimental electronic score in the *Forbidden Planet* and the diverse serialism in *Planet of the Apes*.

These two films have been a great source of information in view of creating diverse composing angles and the next scoring chapter has certainly been inspired especially in view of the alien robot's electronic sounds in the *Forbidden Planet*. *Planet of the Apes* has also provided a wider sound spectrum as to how visually earth-like empty scenery can be approached, especially under the prism of the unknown. This was rather useful and similar aesthetic angles have been personally used **particularly in the following score** for the *Voyage to the Prehistoric Planet* film.

On the other hand, **music** fantasy and freedom seems to be somehow tamed by the trend of each time period. Either intentional or unintentional, supposedly depending on the occasion, composers through the years tend to follow the sound and music signature of the time period in which they are composing for. **Although there is evidence of scores that follow more closely a composer's style, it is nevertheless an aspect that was found to have a strong presence at most times.**

Ethnic music inspiration and motivation comes mostly from the films *Blade Runner* and *The Fifth Element*. Of course this does not, by any means, degrade the importance of tribal music idioms found in cases such as *Avatar* and *Black Panther*, as these two films' characteristics will be used later on in the second scoring part of the science fiction chapter. However, the most significant difference is that the scores in the films *Blade Runner* and *The Fifth Element* do not use the Western orchestra as a grand cloak to cover the implemented ethnic elements. On the contrary, they let these characteristics sit in the frontal row with everything else, e.g. synthetic sounds, hybrid rhythmic textures, helping them to carry on with their **protagonistic** role.

In the next chapter where the scoring will take place, **there** will also be presented in a greater degree how the selected Middle Eastern instruments can be used in conjunction with sound design techniques such as granular synthesis. This aspect derives from this chapter's *Moon* and *Gravity* films as they were found to be quite predominant in the way the composers use computer technology to create new soundscapes that implement in their composition.

In addition, the following composed scores will try to keep in mind, and use at times when it seems appropriate, the fundamental angle of harmony and the use of melodic motifs as inspired from films' scores like the original *Alien* by Jerry Goldsmith. It is of course a personal opinion but it is worth stating that in both preliminary reviews for the *Intolerance* and science fiction chapters it was a scoring feature **that was fading away** through time.



In conclusion, the next chapter will present an amalgamation of the above outcomes that in conjunction with personal artistic perspectives will form and present the newly created scores.

## **Part II: Science Fiction**

### **A. Creating the Score: Part I**

#### **1. Prologue**

After the analysis and previous demonstration of films' segments that took place in the last chapter, it was the time to choose the film, or films, that my research would carry on in experimenting with music composition. This search had by now revealed several key identifications that I was looking for in a film in order to connect it with my current study. These prerequisite characteristics would also play a central role in demonstrating my original score as well as presenting any new findings and artistic suggestions along the way. It was also a mean to evaluate and stay closely connected with the science fiction genre by simply combining all the previous theoretical points and literature review with **the actual practice of constructing a score.**

A substantial aspect of the research, up to this point and based on the so-far gained experience, was found to be the transformations that occur in my personal music ideology adding inspiration in new scoring approaches which in turn sculpted some interesting and unanticipated results. In other words if the methodical procedure had to be reversed and the scoring theoretically had to take place before the preliminary research the end results would be indeed quite different. That was the case with the previous silent era part of the research and that was an expectation, on a greater level I must admit, that I had for this science fiction project as well.

Initially then, and for the above reasons as well as any additional points that were exposed and will be discussed further on, a further preliminary view and examination on a number of different science fiction films took place with the intention of finding examples that will show the capacity of dynamics in view of scoring experimentation.

## **2. Films' introduction**

Out of the films that were observed and re-visited there were two that found to meet the scoring requirements and potentials of new procedures and outcomes. These films are *The Phantom Planet* (1961) and *Voyage to Prehistoric Planet* (1965).

The first aspect which drew my attention in both films was the extraordinary diversity of the scenes. This seemed to be a perfect fit for my initial intentions by providing a wide palette of colours from which I could choose the ones to experiment with and demonstrate my musical thoughts. Additionally, it was found to be a rather important foundation for supporting the rest of the project as it would carry on evolving.

In view of this matter in the first moving picture, *The Phantom Planet*, which mostly takes place in outer space and on an unknown meteor-planet, I was able to find several segments that could spring inspiration and give birth to new ideas. The scenery varies from humans and places on earth to outer space and floating astronauts, to internal spaceship cockpits onto new planets in which alien encounters occur. As a result, there is indeed a substantial variation to potentially create different layers and aspects of music. This can be also briefly observed by the film's trailer:

In addition, what was also rather interesting and helpful was that the movie contains segments of scenes that were common, to a certain degree, with previously investigated films. This was also true in the overall sense of the plot's development. Consequently, viewing and comparing different aspects between similar scenes would be pragmatized in a more effective way.

The latter also gave birth to the initial angle of scoring approach in terms of eastern exoticism. Since a more direct comparison between *The Phantom Planet* and similar films could be drawn, instrumentation and scoring approaches could be re-visited in order to form a better picture considering the composers' stylistic approaches.

A few thoughts that instinctively rise, reflecting the previously examined and congregated information, contemplate the instrumentation, the use of eastern-flavour modes and perhaps the ellipsis of experimentation with new instruments.

The choice of the film *Voyage to Prehistoric Planet* has also been made mainly because of its diversity, but also because of its quite different scenes' set. Most of the film's plot, as well as the selected scoring segment for that reason, is evolving on the surface of planet Venus where astronauts are dealing with unexpected findings and problems that may arise.

The difference, as the title suggests, is also in the nature of the alien species, as it seems like the script has a 'back in time' character, although there is a basic common line between the two films which is the human form of each planet's alien natives. Where the *Voyage to Prehistoric Planet* segregates is in the addition of dinosaurs and sceneries that suggests a planet that looks more like a prehistoric earth. This is also a rather important criterion as to why this film has been chosen since an exotic representation of the ancient and the prehistoric is often a common ground for ethnic music to exist, as it has been demonstrated in a number of cases of films in the previous chapter.

A trailer of the *Voyage to Prehistoric Planet* can be viewed below:

What is also imperative to mention at this point, as a supplementary pre-clarifying note, is that this science fiction chapter is differentiating itself from the previous one as to the procedure that will be followed in view of the scoring approach and structure. Overall, as this is going to be discussed thoroughly later on in the chapter considering the composition structure, I felt the need to explore a bit further and demonstrate the sense of coherence that exists in a film score. This is why the compositional approach will commence on **lengthier** film's segments.

By proceeding this way, except for trying something that separates from previous approaches, will also be given the opportunity to expose any other potential problems or scepticisms that may arise. It is a different angle which I chose, believing in the diversity and uniqueness of the possible outcomes.

### **Supplementary information: Films' plot overview**

#### **The Phantom Planet (1961 – Score by Leith Stevens)**

As a United States space exploration spaceship strangely disappears, another one has been sent with the purpose of discovering the causes and recovering the lost shuttle. After a problematic and hazardous confrontation of a meteor shower, the astronauts attempt to recover the spaceship with fatal results. One of them is being sucked by outer space while the other one, facing operational issues, is piloting and land the spaceship into a peculiar asteroid. There, an unexpected surprise awaits him as he confronts the alien miniaturized inhabitants as well as the planet's idiom to miniaturize him as well. Taken into custody, the astronaut falls in love with a native mute woman. Their story develops through the planet's enemy attacks, an alien race called The Solarities as they want to destroy Rheton (the asteroid-planet) and **steal** its gravitational idiom.

#### **Voyage to the Prehistoric Planet (1965 - Score by Ronald Stein)**

An ambitious human attempt to send a spaceship to planet Venus. Five astronauts and a robot land on the planet's surface in order to explore it. Venus' idiomorphic surface is quite unfriendly to the human astronauts. Their exploration will jeopardize their lives as the planet's surface will prove to be rather hazardous, but they will also be in danger while they experience attacks of prehistoric beasts.

## **2. Pre-composition: Recording & sound design**

### **Introduction**

A decision that has been made from the early stages of this research was to exclusively use ethnic instruments for the scoring of whichever film, or films were selected at the end. It would be a way to receive the baton from *Intolerance* last scoring attempt (pure exoticism) and progress by transforming into something new. This idea was considered to be better realized, and best suited for this purpose, by adding sound design into the equation.

An initial schematic considering the strategy that is going to be followed is demonstrated in the following flowchart:

The more time was passing and the amount of collected information was growing, the more this idea was turning into a need. Science fiction films over the whole magnificent history of cinema have been given me the sense that they belong in a distinctive category in which experimentation and creativity truly exists. This research has enlightened this personal view since there were moments in almost every decade that music alchemy was strongly present, regardless of the film's final outcome **in terms of popularity and/or success.**

After all, we are talking about an art form that describes something that we have not actually experienced before, in a physical manner, therefore fantasy, innovation and spontaneity must exist in multiple simultaneous levels. This is strongly apparent when we are discussing implementing moving pictures with sounds and music; let alone when these moving pictures include technology as one of their primary aspects.

### **Recording ethnic instruments**

The initial part for realizing the above idea was to conduct a series of ethnic instruments' recordings. These recordings would be then processed in numerous ways by using sound design so that the finalized sounds would consist of a sufficient if not large, amount of audio samples ready to be used.

The following list consists of all of the available physical instruments that I had access to and were performed personally by me (in alphabetical order):

- Balalaika
- Bayan
- Bendir
- Bouzouki
- Cajon
- Darbuka
- Def
- Frame Drums (Various Sizes)
- Oud
- Saz
- Stamna
- Tzouras
- Various Shakers
- Zilia

Additionally, below is the list of the rest of the ethnic instruments used from sampled sound libraries:

- Chang Erhu
- Didgeridoo
- Duduk
- Hulusi

- Kemence
- Mountain Dulcimer
- Ney
- Overtone Flute
- Pan Flute
- Persian Strings
- Quanun
- Santur
- Eastern Clarinet
- Shakuhachi
- Vocals (Middle Eastern & Mongolian)

### **Performance techniques**

Performance techniques were a part of another significant chapter in the making of the recorded sounds. The ethnic instruments that I was fortunate to have access to, gave inspiration to a number of new ideas considering the performance methodology. This took place in the bigger picture of recording instruments in such a way so they could then be manipulated in order to give diverse results. With that in mind, there was a lot of attention to detail given in view of each instrument's texture and possible performance which would produce distinctive sounds.

Well established performance techniques in a number of string instruments were found to be rather intriguing in ethnic instruments that are not meant to be performed this way. An example of this would be by using the bow in ethnic instruments like the oud, tzouras or bouzouki. Staccato mode gave one of the most interesting results as well as long notes or chords which were found to be quite useful, especially when putting them under the microscope of granular synthesis, as will be discussed later on.

In addition, different playing positions, variations of performance modes, variety of picks and percussive sounds / rhythmic structures out of ethnic string instruments were some of the added styles used for creating new colours and capture new stimulating resonances.

At the end of this stage, the project ended up with a vast number of ninety-three different samples, out of the many more that have been recorded, all of which have been used later on in composing the score.

All of the recordings and samples together with a screenshot of the actual audio sequencer project can be found below:

### **Recording techniques**

The variety of performance techniques resulted in a new idea of approaching the recordings. Since there were three available studio rooms in which the instruments could be recorded, all three of them were indeed used to record multiple samples of each instrument. The rationale behind this idea was for us, the mixing engineer and me, to have multiple versions of each instrument's, and performance in that respect, reaction with the actual rooms it was recorded in so we could then critically revisit the samples and select which parts to finally **use** and for what reason. Despite the time-consuming experience this seemed to work rather well especially with instruments that had already a distinctive sound in terms of resonance and pitch.

As an example, bowed string instruments' performances usually worked better in the larger room due to its wavelength attributes provided by the delay of the wooden surfaces' first reflections. In this way, the end result had a pleasant airy character due to its cleaner, extended high-frequency response which seemed to work best with some **instruments'** performances. This was also found to be the case for most of the **percussion instruments, or non-percussion instruments** performed in a percussive way.



On the contrary, darker sounding characters were naturally captured better in the smaller rooms mainly due to the curtain walls and carpet flooring. This small room quality seemed to work better for capturing a warmer, rounder sound such as the sound of a bouzouki's body.

Another aspect that played a significant role in capturing the desired sound was the microphone placement techniques engaged before the recordings. It was a luxury that he had an array of different sounding microphones in our disposal, something that significantly helped with the procedure by saving time in order to achieve the desired results.

A characteristic example that was found rather interesting in view of the strategy behind it was the recording technique employed in the instruments tzouras and bouzouki in their respected bow performances. Since the initial concept behind this was to design some of the recorded sounds with the intention of creating a dense atmosphere or creepy sound effects, what was found to work best was placing a small diaphragm condenser microphone above the performer's head pointing from the ceiling down the bow so it would, in such way, give a certain 'height' placed sound due to its phasing relationships with the room. In addition, in this way, we could avoid a large amount of the actual wooden body of the instrument so we could end up with a crispy, squeaky sound that could then be manipulated accordingly.

Respected recording techniques as well as a wider choice of room tones, placing the microphones further away in the room etc., took place in the recordings of melodic phrases that were used with the intention of keeping their actual sonic characters.

Photographic material from the recording sessions as well as a few pictures of the actual instruments can be viewed below:

Also, for demonstration purposes, it was thought to be rather useful for the reader to have a more authentic picture of how a number of these instruments actually sound when they are performed in

their own unique culture-related mode. Therefore, a number of additional ethnic instruments' recordings were also pragmatised in order to present the above.

The performances consist of free improvisations in the following instruments' list followed by the corresponding audio material:

### **Sound Design**

Recorded instruments needed to be presented in a more imaginative manner by altering their sonic attributes. Thus, sound design techniques were employed in order to achieve the desired result. Out of these techniques, I can positively say that granular synthesis was found to be the most **ground-breaking** and immersive. Through this procedure, I was able to get deeply into the very foundations of each micro-sound so I could manipulate it, transform it and in certain cases combine it with others so I could end up with a unique sounding result.

Granular synthesis was also used as a **procedure in sound effects editing**, either to create or mix a sound. A characteristic example is the use of granular reverb especially in mid-high pitch instruments as it was observed to pronounce and project the sound in a rather intriguing respect that could not be achieved otherwise.

Also, a major part of granular synthesis was in the construction of the abstract, background sounds. Again, its contribution in this case was invaluable.

There were a number of other mixing and sound designing techniques involved in this effort. Frequency modulation synthesis (FM synthesis) was often used when experimenting with instrument's waveforms as well as ducking mixing practice which is especially famous for its sonic attributes considering the low frequencies.

A further detailed demonstration of the sound design approach together with **audiovisual** examples will take place in the following chapter considering the construction and presentation of original film scores.

#### **4. Presenting the score: Part I**

##### **Background context - Rationale**

As it was briefly discussed before the overall tactic of composing original scores for science fiction films is quite the opposite than the one used in the previous **Intolerance** chapter. For comparative purposes, and as a reminder, the technical part in scores' structure for the Babylonian story of the film **Intolerance** started by cutting the chapter into smaller pieces demonstrating several musical aspects that were observed and drawing comparisons with other related scenes found in different films. This procedure took place before the actual writing of the score.

In the case of science fiction film music, the opposite route was thought to be more appropriate for a number of good reasons. First of all, and as the research **had** reached its first practical point **of music composition**, there was a clear need to investigate a number of different films and get to know several different composers' approaches. By observing how composers have tackled several occasions during the history of the science fiction era was an indispensable lesson in understanding the methods and **evaluate the need** for new music experimentation. This is one of the main reasons why the previous analysis did not take place in parallel with the actual composition.

The above also gave the right direction as to why and how I should proceed with creating the sounds for my scoring palette. Through observation, I was able to sculpt my opinion on how to suggest new ideas, both affecting the sounds' conception but also the composition approach, that will play a central role in differentiating the produced music.

An additional motive was the conceptualisation and realisation of a music project which would be unique in terms of eastern exoticism from its very beginning. This again was an outcome coming from the preliminary research and analysis as it gave birth to the idea of writing a score that would purely consist of two elements, ethnic instruments and sound design.

Another important reason is coherence. Selecting lengthier segments of the two films seemed to fit perfectly in view of writing scores that can dynamically demonstrate a greater degree of sounding rationality. Furthermore, from a composer's angle, this was quite helpful in terms of musical expression. It felt it was providing me with the opportunity of having a greater amount of space in which I could express artistically, sculpt my viewpoints and face any potential issues that may be revealed. Additionally, the end result could ardently provide the viewer **with a clearer picture of the** harmonic development and overall sound aesthetics.

After the music had been written, I could then begin questioning and re-evaluating my experiment by magnifying the score, dividing it into smaller segments and comparing them with a variety of examples **that share common visual characteristics.**

### **The Phantom Planet – Score**

The following video segment of the film was chosen **for scoring purposes** mainly because of the diversity of scenes that are taking place in a noticeably small amount of time in view of the film's total length. It begins with a mechanical problem with dramatic results which is taking place outside the spaceship, moving into a scene where one of the two astronauts struggles to pilot and eventually land the spaceship on a meteor, concluded by the astronaut's discoveries on the meteor's / planet's surface.

The film's section together with the original score written by Leith Stevens is being demonstrated in the following video clip:

Below is the same clip introducing the newly created score:

Before proceeding with the discussion of this scoring approach, it is worth including a number of audio examples of the sound design procedure which took place in a number of different instruments and sound recordings. These files have been extracted from the original sequencer project, therefore, have been created, mixed and used specifically for this video project.

These are demonstrated in the following interactive table:

### **Original version (Leith Stevens)**

The original score by Leith Stevens is using a number of shared techniques, especially concerning the time period in which it was composed. Starting with the strings, one can initially observe the overall dramatic character which has been dressed with vivid vibratos and glissandi performance modes. The description of mystery and unknown has been achieved with a composition that deliberately avoids the use of third intervals, **in both chords and harmonic progression**, in the majority of the instruments used. The latter is also taking place in repeated motifs that are usually developing **in intervals of a fourth or fifth**. The orchestration is quite busy with a strong sense of simultaneous movements considering the relationship between the woodwinds, strings and brass.

Observing the presented film's segment in a linear time mode, a first interesting observation is taking place at 01:27" where the astronauts are opening the spaceship's exterior hatch, unexpectedly discovering the mechanical problem. It is quite unusual to see that the score is not following the semiotics of the moving picture, which has a rather strong character at this particular point. Stevens prefers to continue developing its previous, mild, motif consisting of what appears to be a xylophone and flute.

**Moving on, the next interesting point commences at 02:06"** where one of the two astronauts loses his senses. Once more in this situation, the composer chooses not to implement something new in order to emphasize the scene. The score carries on with its character progression in low strings' intervals

of fourths and fifths, resolving in a chromatic counterclockwise movement in the scene where the other astronaut is trying to move him inside the spaceship.

Indeed, there is a strong sense of coherence in the score but at times it felt it was passively skipping important features occurring on the screen. This is also strongly represented a few moments later (02:42") when the astronaut is being hit by an asteroid, loses his control and ends up floating helplessly into deeper space. The score is handling the picture using a very gentle approach, with the variation of adding some extra layers in low woodwinds, which seems to miss the chance in creating, perhaps, the proper excitement for the viewer. Again, there is a general flow in the music's character but there appears to be no use of variation in harmonic development or dynamics.

This is the same principle that embodies the next scene starting at 03:28". The main role here has been given mostly to the harp and high woodwinds, especially flutes, creating in this way a dreamier, fantasy atmosphere rather than focusing on the drama of the character. These changes occur from 05:20" until 05:55" where the astronaut is attempting an emergency landing on a meteor. At this point, one can observe the implementation of a distinctive dissonance by the introduction of dramatic cues in strings and brass, which emphasises the scene's adventurous nature.

Moving onto the next scene where the astronaut sets foot on the meteor-planet, Stevens returns to its previous instrumentation approach of having a **main thematic idea**, developing mainly in a **unison performing** xylophone and flute motif. This changes when the astronaut starts feeling unwell, by implementing harp glissandi and string tremolos.

Astronaut's flashback occurring **at** 07:28" signifies the implementation of sound design in the score. What appears to be a Theremin, which was a quite common and accessible electric instrument at that time, is providing a sense of mystery and movement which connects the constant vibrato pitch with the floating video effect of the picture.

Another observation worth mentioning can be found at 09:03" where the astronaut regains his conscience facing the microscopic, anthropomorphic inhabitants. In this example, the composer is using a vast amount of dynamic articulations in all the instruments available (sforzando, marcato, et. al.) making this one of the most dynamic moments considering the sound aesthetics.

Lastly, the astronaut's miniaturising (09:59") has been represented with a glockenspiel fantasy-like pattern in conjunction with a number of background strings' bowing techniques and clarinet motifs. This is then followed by the distinctive vibrato, high pitched sound of the Theremin which follows the astronaut's anxiety since he realizes that he is now the same size as the planet's inhabitants.

#### **Preliminary abstract version (E. Chouvardas)**

This section of the film was composed with the intention of being an experimental abstract score which, as discussed before, has been created by using eastern ethnic instruments in conjunction with a variety of sound design methodologies. Furthermore, eastern influence and implementation has a rather strong and vivid character that will be demonstrated in several cases scenarios, reflecting accordingly with the moving picture's context.

There are several moments inside the score in which there is an evident character of eastern exoticism by using ethnic instruments that have not been overly processed with the intention of not losing their initial sonic signature. The use of santur is a characteristic example of this approach as it can be observed in several cases during the first scene in which the astronauts attempt to fix the damage.

The scoring approach considering the starting scene set outside the spaceship has been inspired from previous analysis of science fiction films where a variety of composers use woodwind instruments in a number of cases in order to musically express a mysterious scene. The procedure was to create a sound designed soundscape by using ethnic woodwinds, so it could be used as a background musical context in order again for additional ethnic winds, e.g. the hulusi, to sit in front by introducing a simple harmonic motif. This has also been reinforced by an eastern female vocal which seemed to fit perfectly and increase the quality of the dramatic atmosphere.

The next and most dramatic outcome of the rescue effort is being presented when the **rock** hits the astronaut (2:40"-03:13"). This is a moment where it was thought better to describe it with a simple crescendo of two combined eastern-related modes. The motif begins in a Phrygian mode resulting in an Ionian mode and is performed by an eastern female vocal in combination with a pan flute. What is also added in the instrumentation is the taiko drum **introducing** a rhythmic pattern to increase the density of the upwards progression harmonic crescendo. The above tactics seemed to **give a satisfying result concerning the use of music dynamics in conjunction with the scene's development.**

The next interesting scene commencing at 03:28" has been dealt with the initial idea of focusing on the astronaut's despair. That is the reason why the eastern vocal has again the primary role, followed by some woodwinds that are taking place at 04:15". The scene's context, as well as the music, changes in approximately 04:50" when the astronaut is starting to pilot the spaceship and looking to safely land it on the meteor. Different vocals are also present but now inside a busier conversation of sounds. There are several sound designed tremolos at the back, especially the ones coming from tzouras, balalaika and oud, as well as the use of percussive woodwinds and a lyra harp. The end landing has been musically dressed with didgeridoo and duduk performances on an eastern hijaz (phrygian dominant) mode.

During the astronaut's landing on the planet's surface, there is a distinctive sense of exoticism provided by the santur's low notes performance. This has been followed later on by the taiko drums during the flashback scene. The latter **was** composed with the intention of giving a sense of movement and excitement rather than using more typical stylistic approaches such as nylon harp glissandos or pitched percussion's dissonant notes, e.g. the glockenspiel, vibraphone, xylophone **etc.**

**At** approximately 08:17", in the scene where the astronaut retrieves his **senses**, there is an introduction of a different sound design technique which was not used up until this point. The motif is coming from an Irish whistle which was mixed with the implementation of granular reverb. This gives a distinctive sonic quality to the reverb's tail by extending not only the reflections of the modelled space but also a part of the actual sonics of the whistle itself. What was also found to be **quite intriguing** was the rich



metallic character which seemed to fit the picture's purpose where the astronaut first encounters the miniaturised humans.

This particular sound is also being demonstrated below:

This was also part of the effort to present an ethnic instrument in combination with sound design, which signifies technology, in order to connect visually with the primitive nature of the inhabitants. It is worth noting that this was also an approach that had been previously observed and discussed in several different cases of science fiction films.

From that moment on, and during the next scene (09:06"-09:45"), where the planet's inhabitants have been revealed to the viewer, the score has a busier orchestration and a stronger sense of eastern instrumentation development for the exact reason discussed previously.

Moving on, considering the gravitational shrinking that occurs in the main character, beginning at 09:58", there is an intended lack of eastern music flavour. This is one of the most important and peculiar scenes of the film which sets the ground for most of the films' plot to evolve. It is a moment that I wanted to approach **with a greater sense** of fantasy, thus the use of lyra, but also to give an effort to enhance the **mystery atmosphere**. Therefore, there is the intentional use of many different elements such as santur glissandos, pan flute's flutters as well as a tam tam percussion in order to give a certain rhythmic perspective. This is also a moment in which my scoring approach comes into an agreement with the original composer's intention, with the difference being **the use of ethnic instruments that were envisioned to have the protagonistic role**.

Finally, the last scene, where the astronaut realises that he has been miniaturised by the planet's gravitational idiom, has a rather definite exotic character. It is worth mentioning that the specific **thematic part** has the most ethnic instruments' performances inside the score. This has been intentionally accomplished in such a way as it was an effort to musically follow the plot since the

astronaut was now just like all the rest. Therefore, and as a more generic note, the music intentionally and gradually transforms from being more abstract into more **eastern-exotic**, signifying the sense of primitive culture. This has been pragmatized in three phases; the first one starts at the beginning of this video segment, the second one emerges during the first appearance of the miniaturised humans, and the third one with the realisation of the astronaut's reduced size.

### **Irish Whistle - Granular Reverb Example**

Below is the same clip introducing the newly created score:

Following the same procedure as in *The Phantom Planet*, the larger number of sound designed audio files, together with their raw versions, are presented in the table below:

### **Original version (Roland Stein)**

There is a rather strong sense of resemblance between the *Voyage to Prehistoric Planet* and *The Phantom Planet* scoring approach. Both films bare a quite distinct music **colour** found in the 1950s–**1960s** era of science fiction cinema. The difference in which the composer, Roland Stein, distinguishes himself is mainly the complexity and fullness that he achieves in several cases in his score.

From the beginning of this film's segment, one can observe the intricate musical conversations between **the low and high brass instruments**. There is also a quite apparent movement of the instrumentation since the tempo is in harmony with the scene's action. **The music style** here, as well as in the rest of the film, can be characterised as fairly **atonal** with often and continuous intervals of fourths and fifths especially apparent in brass and woodwinds.

During the next scene, where the astronauts are sending the robot to help them with retrieving their spaceship, and at about 01:04" the instrumentation resembles numerous occasions of other science

fiction films that have been visited before. The use of low brass together with low-mid woodwinds has proven to be a strong and recognisable tool in scenes where the main subject is spinning around the sense of mystery and anxiety. This scene has been written with a continuous and coherent character without experimenting or introducing any instrumentation or dynamics' changes. Even in cases of re-appearance of potential danger, for example in the 01:13" dinosaur scene, the music seems undisturbed in relation to the moving picture.

The above is also true in several other cases in the film. One of the most apparent is at 02:26" where the astronauts discover a large brontosaurus. Even if the scene implies for a grandeur score to be present, the composer is simply choosing to bypass this visual event perhaps in sacrifice for the music's overall consistency.

Moving further on, one can, once more, observe the similarities that exist between **science fiction and other genres** considering this specific point, when the given scene dictates the introduction of dramatic music sequences. Thus, in this case, the beginning of the characters' drama is reflected in the divisi strings followed up by low-mid woodwinds. This is particularly pronounced **at** 03:25" with the introduction of the character's line 'let's rest, we've very little oxygen left us'.

Another interesting aspect that sets this film apart is the use of an airy female vocal commencing at 05:14". The composer intelligently connects the diegetic with the non-diegetic music following the plot where the astronauts are stopping in a location in order to search for a woman's voice which one of them claimed to have heard.

As a final observation in the waterfalls' scene beginning at 06:59", there is an effort to present a richer sounding composition with increased dynamics and instrumentation. This has been achieved to a certain degree, although it falls short in terms of musical variation.

Stein chooses to remain in a single note and although the scene has multiple pictures with multiple potential functions, there seems to be no apparent attempt to follow this nuance.

### **Preliminary abstract version (E. Chouvardas)**

In the case of the *Voyage to Prehistoric Planet* film the same scoring procedure as the previous one has been applied with the addition of presenting a more emphatic combination between dissonance and melody. This was a realistically achievable goal because of the distinctive contradiction that existed between scenes.

Starting with the first scene, the dinosaur attack has been composed with the intention of not withdrawing from an action scene approach, as this is essentially the scene's nature. Instead, it was recognised and approached as one with the only difference being the instrumentation which, as always in this entire project, consists purely of ethnic instruments. As a result, there is a strong rhythmic structure in which everything builds around it, including the qanun and baritone balalaika that replicate the rhythmic pattern and **introduce** the main motif. This is developing in a crescendo mode by adding together smaller painting strikes of santur, qanun and taiko sticks.

In the next scene **commencing** at 00:46", there is a completely different approach presented as this scene describes the procedure of sending the robot to help with freeing the spaceship. Sound design character was intended to be quite pronounced here, as opposed to the previous one, as it is the **first scene** that emphasizes technology. In addition, as opposed to the original film composer's approach, the important aspects in relation to the picture including the segments that were thought to differentiate in a considerable degree from the rest of the visual were **decided to be treated with increased musical emphasis and variation**. Therefore, the added danger **subscene** occurring at 01:12" has been dealt with the analogous music implementation.

The next sub scene's music approach (01:26"), demonstrating the astronauts' effort to disengage their spaceship, presents a pronounced eastern exotic character by introducing the strong **upfront** character

of a duduk motif. This is accompanied by several smaller sound design layers of instruments, producing the background music context for the duduk to take place in.

Moving onto the next scene beginning at 1:54", where the astronauts are wandering on the planet's surface, sound designed music has again the central role of providing an abstract, mysterious atmosphere. This has been reinforced by a few ethnic instruments, used more in this case as sound effects, at 02:00" and 02:20".

The next brontosaurus' encounter scene was composed with the intention of providing a fuller, more exciting sound to the picture, as it was suggested by the picture itself. The distinctive use of a major chord corresponds to the greatness of its size but also to the pleasant atmosphere portrayed by the astronauts' smiles. There are also moments where I felt appropriate to include instruments and specific notes that should be used as a reminder of the hostile planet and the overall bizarre location. Distinctive moments where the above occurs can be observed at 02:36" and 02:40". In these cases, the above idea has been realised with the help of a santur.

Considering the next scene starting at 03:12", the music signifies the beginning of a difficult, as it will prove to be further on, situation considering the two lost astronauts' survival. An eastern female vocal together with low drum hits has been used in this case in order to provide the score with the appropriate accentuation of drama.

Moving further on, at 05:20" which is the scene where the astronauts hear the strange female voice, the composition strategy was to employ an array of different instruments, both manipulated and raw, so I could create a large, emphatic, melodic major chord which will reinforce the scenes' implied question about ancient human existence. An added layer that contributed in that respect was a semitone up Mongolian men's choir, signifying the astronauts' enigmatic state. Opposite sex equals contrasting pitch note. → REMOVE?

The waterfalls' scene was found to be, as mentioned earlier, one of the most dynamic scenes in the film. Consequently, it was difficult to bypass the instinct which dictated the flow of the sound, before the score was conceptualised and composed. The music has multiple layers in terms of instrumentation but also a strong character considering the scene's camera changes.

The smaller **subscenes**, including the first grand opening, imply a small visual crescendo as they move from showing the waterfalls to a closer view of the running water, to the robot's feet, resulting in a further away camera viewing angle screening the robot on cataracts' top cliff. This also occurs before the screen gives any visual reference to the astronauts. As a result, the composition develops a **dynamic** one chord crescendo resulting in an additional chord (07:27"), **reinforced** by an emphatic eastern female vocal. Here again, it was intentionally planned to express this music angle by using both designed and raw sounding ethnic instruments.

The next scene commencing at 07:52" signifies the beginning of a survival struggle for the two astronauts. The music carries the baton from the previous scene with the help of a bridge consisting of two ouds. The score changes its character at 08:07" **with an added minimalistic performance consisted of low and high taiko drums**. Here again, and because of the drama's gradual escalation, the composition builds another crescendo **by combining dynamics with added instruments**.

In the final scene, beginning at 09:00", the viewer is presented with the final act of the two astronauts' survival attempts. The scene is now inside a cave where the two characters are barely breathing. The score here attempts to create the sense of tragedy by using a simple, slow-paced, motif, again, combining both synthetic and physical sounds.

Additionally, what was thought to be interesting was to end the scene in an emphatic, magnifying and vivid way by following the last 'I await your orders' robot's cue. This was a way to describe the ironic ending of the astronauts' desperate **efforts to get help** and the robot's incompetence to mathematically interpret and comprehend the request.

## 5. Presenting the score: Part II

Through the discussion of the previous abstract scoring experiment in both films, and as an outcome that leads to the continuation of this exploit, it was believed that an extra effort should be given in view of the clarity of this musically ethnic approach. Although perhaps a bit contradictory **in terms of audio visual relationship** especially in view of the first film *The Phantom Planet*, the idea that came into life was to increase the focus in the score's eastern character by composing extra cues for a number of instruments and **modify** the already created motifs accordingly.

Added level to the sense of an increased **eastern-ethnic** focus would also be the slightly different approach considering the audio mixing perspective as it was thought best this time to provide a more centered and **upfront** image by decreasing the depth of field in which the instruments had been placed. By making these moves the desired result would be a clearer sound of ethnic elements, more focused and distinct **by not overly concentrating in heavily processed and designed sounds**, that would form a score with improved definition contributing to the overall level of eastern music aesthetic.

In any case, it would be an extended experiment in further combination between **synthetically processed and well-defined acoustic recordings of ethnic instruments**.

Consequently, two newer versions of the selected films' segments were composed:

These re-composed and re-edited versions present an indeed more vivid and more solid case in terms of eastern ethnic **colouration** and authenticity. In view of personal critical thinking considering the end result, I must admit that concerning *The Phantom Planet*, the score sounds quite experimental and perhaps a bit bolder, always in conjunction with the visual.

Although the score has been composed with prevailing ethnic instrumentation in mind, with the addition of heavy sound design processing, there are nonetheless scenes and moments where this ethnic scope might be more appropriate providing a more satisfactory music result.

An example of this last statement can be found in the scene commencing at around 08:00" where we have the presentation of anthropomorphic, miniature-sized, asteroid inhabitants. In this situation, the score's ethnic angle can provide the picture with a sense of primitivism describing and giving the impression of an ancient in time, technological **unevolved** culture.

On the other hand, the *Voyage to Prehistoric Planet* visuals are already overwhelmed with the presentation of primitive, dinosaurian creatures. This together with the scenic environment (lakes, volcanoes, deserts **etc.**) makes the film a more appropriate candidate to support more **colourful** and **traditionally authentic** ethnic approaches which can in turn relate and contribute to the 'prehistoric' title of the film.

By committing to this strong ethnic character and by creating these two altered scores, the **audiovisual** results formed a new direction in this research topic. **Consequently**, it was decided for further exploring in view of the originality and contribution of this ethnic approach that it would be a worthy step to commit into the development of **reverse research methodology**, this time by comparing the newly created scores for *The Phantom Planet* and *Voyage to Prehistoric Planet* to other known films' scores.

In order for this new angle to be original and truly contribute something new to the already discussed pre-scoring films' exploration, it was thought appropriate to proceed into the division of each video clip into smaller titled chapters. In this way, the comparison that will take place could be more relevant and focused considering the musical character of specific scenes that could potentially be found in other films.

As an extension to the last, it would then be valid to present in more focus other composers' approaches discussing the relationship and/or connection that may or may not have in view of these two scored films.



Thus, both films' video clips were edited, both audio and visual, and recombined into two new title divided versions:

In order to get a clearer picture and help with the following comparative analysis, the full titled clips were divided into smaller parts containing each chapter:

## **6. Comparative exploration**

### **The Phantom Planet**

Chapter I ('The Accident') was divided into two **subcategories**/connotations that corresponded to the visual and to the films' exploration results.

### **Mission to Mars (2000 - Score by Ennio Morricone)**

Morricone's unique approach in the genre of science fiction films **is appearing once more in this problematic nature scene** where the astronauts are trying to fix a problem occurring inside and outside the aircraft. This has been achieved with the uncommon use of a pipe organ, **performing typically in descending chords**, which plays a **protagonistic** role in this music cue.

As the scene and music develop, the composer **reinforces** the pipe organ and paints a larger and fuller instrumentation picture by adding the symphonic strings at 01:20". This is also the moment where the visual moves outside **presenting a broader angle and more distant picture of** the aircraft and space.

Gradually, Morricone is adding more symphonic elements such as the trumpets and trombones duplicating the strings' short attacks (02:30"-02:55) as well as the French horns doubling the pipe organ's main motif (03:00"-end).

A similar situation in view of the music approach was found in Jed Kurzel's previously discussed score for *Alien Covenant*. The composer introduces a three-note chord motif scored for the woodwinds which are being accompanied by soft pianissimo notes of strings and brass that gradually build up both in dynamics and **reinforcement** by doubling the main three-note motif.

Ennio Morricone is approaching the scene of the astronaut in danger with classical romanticism, a signature of the composer's style and quite similar to the rest of the music written for the film. Long legato strings performing in a D minor scale in a characteristically rich melodic cue that emphasizes the dramatic character of the scene and charge it with emotional serenity and sadness.

This character slightly changes, considering the pace of the music, in about 01:05" where the composer transposes the score into an A minor key, changing the strings' long notes to rhythmic chords **reinforced** by **the** timpani and introducing a solo flute cue in order to describe the rest of the crew efforts to find a solution and save the astronaut in danger.

On the other hand, and in the next scene commencing at 01:43", we observe a change of the previous romantic character and a movement towards atonality always following the differently dramatic atmosphere of the scene where there is a desperate and unsuccessful attempt of the astronaut's wife to save him. The sense of mystery has been dealt here with tremolo strings laying the way for a woodwinds' repeated interval of ninths which is resulting into a big and impressive atonal cue of the entire symphonic orchestra.

The rest of the scene (02:13"-end) has a slow, minimal in changes, character where the orchestra remains in the previous atonal chord while the composer adds the harp and **the** piano repeating the chord adding in this way to the mysterious and shocked characters' reaction. Interesting is also the addition of an electric bass octave **motif at** 02:25" which gives the sense of tempo in this otherwise minimal motionless cue.

### **Gravity (2013 - Score by Steven Price)**

Steven Price is dealing with the astronaut in danger issue from a quite different perspective. First and foremost the scene, as well as the rest of the score, consists of an amalgam of symphonic orchestra and sound designed instruments. Due to the nature of the scene which is more action-based than the one in the previous *Mission to Mars* example, the score is considerably more aggressive and rhythmic in character.

The main distinguishing aspect is the use of a two-note motif working as a foundation for several synthetic sounds to evolve, often usable as building blocks effects and tools to increase musical tension. This is a compositional stylistic approach that has been followed in the majority of the film, as discussed earlier in the research.

### **Passengers (2016 – Score by Thomas Newman)**

*Passengers* composer Thomas Newman presents a quite interesting and unique musical opinion in this small video segment which describes the protagonist's loneliness. First of all, Newman's approach is highly melodic and minimal; he uses four individual elements in order to achieve this emptiness but without being atonally mysterious since the film's connotations connect firmly with the importance of human feelings and interaction. These musical elements are a synthesised background pad, the grand piano, a solo woodwind, and symphonic strings.

The synthetic pad creates a permanent background texture by using a fifth interval in which the piano develops its minimal chord progression motifs choosing, together with its conversation with the woodwind, the moments where the emotion is leaning towards happiness and amazement (major chords/scale) and on the other hand towards sorrow and loneliness. It has the feeling of the untranslatable word *charmolyphi* which is a strong human feeling that simultaneously includes both joy and sorrow.

The symphonic strings are entering the score with big chords whenever necessary to **reinforce** the importance, and usually the grandeur feeling, of the picture. This can be seen at 01:51", 02:25" where in both cases the camera's perspective moves further away from the character showing him floating in the empty, vast, surrounding space.

Nevertheless, what makes this scene's music quite unique, according to this research and until what has been investigated up to this point, is the use of the woodwind and its relationship with the piano. The score is believed to have a confident direction towards the use of eastern scales and performances and this was found to be indeed a rare case among the science fiction genre.

From the very beginning of this video scene, we hear the **idiosyncratic woodwind glissando performance**, almost like an eastern clarinet performance, while the piano sits in between Western harmony and eastern influences by often using chord progressions like D major to Eb major. The last is a strong suggestion of the two first chords in Phrygian dominant scale (Hijaz mode).

Additionally and in relation to eastern music influence, Newman is making an even stronger comment in his music at 02:14" where he introduces an ethnic flute, possibly the ney, to begin its own conversation together with the classic piano. What is also quite important in this decision is that the composer chooses to make this move in a highly dramatic and emotional scene where we see a close-up of the character in tears. Nevertheless, Newman chooses not to break his connection with *charmolypi* and keeps his composition blending with Phrygian dominant and minor chords.

### **The Martian (2015 - Score by Harry Gregson-Williams)**

In the film *The Martian*, one can observe a completely different scoring approach comparing to the previous 'Passengers' film. In this situation, the loneliness has been **musically expressed** with a combination of sound designed instruments together with a symphonic strings section.

It is a strongly and confidently hybrid cue in which synthetic instruments possess the role of rhythmic structure, making a **solid** connection between the music and the action-based atmosphere, while symphonic strings are there to enrich this loop-like synthetic background with harmonic context by their slow, simple legato notes performing in D minor.

One could say that in this way the composer seems to relate these two worlds, acoustic and sound designed, by connecting the symphonic orchestra to the character's psychological state whilst making a bridge between synthesised sounds and advanced technology scenic environment.

There is a quite interesting podcast discussion with the composer itself deconstructing the film's score:

### **Journey to the Far Side of the Sun (1969 – Score by Barry Gray)**

A similar scene considering the character's flashback was found in the previously discussed British science fiction film *Journey to the Far Side of the Sun*. In this case, the composer, Barry Gray, is using a hybrid composition, the classic orchestra with synthesised instruments, leaning more into sound design and using it as his main tool for building both a mysterious and **nervous** atmosphere.

Important additions in his score, considering the use of the classical orchestra, are the high violins' repeated trills articulation and the harp glissando which is synonymous in many genres, especially of its time period, with dizziness, vertigo, flashback et. cetera.

## Voyage to the Prehistoric Planet

### Red Planet (2000 – Score by Graeme Revell)

Revell's score in relation to the wandering of astronauts, which is in this particular situation on Mars, is using a minimal approach in his instrumentation of both synthesised and symphonic instruments. In most cases throughout the film, as well as in the video clip above, he presents a considerably empty and lean composition with strings and brass long notes usually performing in a simplistic motif.

This uncomplicatedness in music corresponds to Mars' scenic environments, with vast red deserts and mountains, as well as acting as a tool for increasing the level of mystery in the current scene.

On the other hand, Revell is introducing a sound designed rhythmic arrangement commencing at 00:10" acting as a foundation for the rest of synthesised and acoustic instrumentation to develop. There is also a dominant key double note reinforcement, like a heartbeat, connoting to the viewer that something is not right.

### Moon (2009 - Score by Clint Mansell)

In parallel motion with the above *Red Planet* example, Mansell follows the same overall principle in the largest amount of the film, with an abstract score with heavily processed moving sounds that keep transforming in the background in conjunction with the classical piano's minimal phrases that add to the film's dramatic character.

This is also where the two approaches of Mansell (*Moon*) and Revell (*Red Planet*) respond to the different films' character altogether with the first one being a one-person sci-fi drama whereas the second one being an action-based adventure.

### **The Last Days on Mars (2013 - Score by Max Richter)**

*The Last Days on Mars* video example does not seem to drift apart from the main scoring personality found in the two previous films. A hybrid score here is being presented with minimal harmonic development especially in the classical orchestra which is steadily performing in a static key.

There is also a stronger connection in scoring approach with the *Red Planet*, given the fact that they belong in the same sci-fi action-adventure genre, which is noticeable by the synthesised sound arpeggiator, metrically looped, that connotes a mysterious tone and builds an underscore sentiment of something going wrong.

### **Interstellar (2014 - Score by Hans Zimmer)**

Overall the same in character was also the score in *Interstellar* score by Hans Zimmer. The wandering and discussion of human astronauts in the planet's surface have been musically described in this case with a steady C major chord with the leitmotif of C major triad to C major diminished fifth and C major augmented fifth (Gb-G-G#) assigned to the violins and moving around in slow-paced variations.

### **Planet of the Apes (1968 - Score by Jerry Goldsmith)**

In this small segment, Goldsmith retains his serialism scoring character and uses different articulation performances in order to connote the human character's amazement of cataracts' visual grandeur. As a result, we observe rich background brass moving chords followed by high string legato motifs.

As always Goldsmith's angle is far from being described as static, repetitive and uninteresting, a signature of the time period films' music, but also a synonym of the composer's scoring character.

### **Mission to Mars (2000 - Score by Ennio Morricone)**

In this situation, Morricone remains faithful to his overall melodic scoring angle. The specific cue has a strong sentimental character without any hints of atonalism to perhaps connote the vast, empty, enigmatic planet. As a result, the scene's grandeur does not suggest **any danger or sense of mystery to the viewer.**

The composer's tendency towards romanticism gives the human astronaut characters a heroic/majestic dimension especially with the addition of the female choir that becomes quite apparent at about 00:22".

#### **John Carter (2012 - Score by Michael Giacchino)**

In this example, Giacchino blends percussive rhythmic cues together with symphonic instruments painting a music picture with richer ethnic character and pace. Although a quite different situation compared to previous films in view of the **plot** and genre this film falls into, *John Carter* score continues in its glorifying music path and it is worth observing in this case scenario because of its musical diversity, always comparing with similar films' scenes.

Nevertheless, ethnic elements are politely implemented without being overly vivid or eastern-authentic which would perhaps break **the sound monopoly of the symphonic orchestra.**

#### **Gravity (2013 - Score by Steven Price)**

#### **Interstellar (2014 - Score by Hans Zimmer)**

These two films can be used together in this case as a combined example since both composers are tackling this issue with a quite common philosophy. Minimal is thought to be **the most appropriate characterisation**, with a propensity of leaving the picture talks for itself. Both composers are creating their scores from an obvious hybrid perspective with **long sustained chords**, not too harmonically profound, **and minor/slow thematic progression.**



One of the few differences is perhaps the use of piano in Hans Zimmer's *Interstellar* scene, charging the atmosphere with a bit more dramatic, empty, lonely personality.

### **Alien Covenant (2017 - Score by Jed Kurzel)**

Additionally to the already discussed *Alien Covenant*, Jed Kurzel's score has something different to offer in this case.

While his instrumentation consists of both sound design and the symphonic orchestra, one can observe a balance between the two and a sense of **coexistence** where these two musical aspects collaborate and talk to each other.

This makes its initial appearance from the very beginning of the scene where there is a connection between the frequency responses of a background synthesised pad and high pitched violins. This, in turn, results in a motif introduction by the **cellos and contrabasses**, continued with an answer of D major augmented fifth motif (Bb – A – F# - D) by the violins and violas. This choice of notes suggests a mysterious and at the same time ostentatious feeling that follows the scene's world distant perspective.

Another proof of the composer's continuous dialogue between sound design and classical orchestra is a few seconds later where he expands the **strings' motif** (00:23") together with the implementation of a pulsating, synthesised repetitive pattern. **As an overall statement, the score** was found to be less repetitive and more imaginative in terms of music development and harmonic complexity.

### **Red Planet (2000 – Score by Graeme Revell)**

In this example, Revell is building his score gradually as the scene progresses. In the beginning, the composer relies entirely upon the strings' section. By finishing his first chords' progression (00:34") a music conversation initiates between the **low contrabass** and high pitched violins signifying the starting

point of his building cue that connotes the tragedy and agony of astronauts' running out of oxygen. More elements, especially designed sounds, are being added as the time runs out (01:20" - end).

Clearly, at this point, the composer is building his score by blocks, triggering elements collectively to create tension as the scene's dramatic character rises.

What is also worth mentioning is that Revell is using **stinger sounds**, both synthesised and real, to achieve this result and this is mainly the fact **with the implementation of** fast percussive/drum sounds.

### **Approaching the Unknown (2016 - Score by Paul Damian Hogan)**

In a different situation and mostly describing the despair rather than the character's agony, Paul Damian Hogan chooses to score with a palette of long, expanding, harmonic orchestral chords. The music that corresponds to the character running out of time is not so immediate and attacking as in the previous *Red Planet* example but so is the visual since his death is not a matter of a few seconds.

Also, the dialogue's nature, the character's voice sound, and the **unenergetic and dramatic visual** suggest something calm and tragic that relates to the self-realisation of his condition. As a result, a smoother, quieter in terms of dynamics and pace, **score character** is thought to be more appropriate and justified.

## **7. Summary**

The overall procedure and final results in this first science fiction chapter were found valuable in view of presenting original experimentation with eastern instruments and their potential practice in situations that are far out of their typical use, especially in film music. Sound design together with eastern ethnic

structures, such as scales/modes, instruments' performances and assembled harmonies, was indeed a combination not recognizable in other science fiction films reviewed. This was the rationale behind the reverse supplementary research, meaning after the scores had been realised.

The **audiovisual** connection between the highly processed sounds seemed to work successfully, as positively and somewhat unexpectedly the initial sounds' processing results were found to be. In that respect, and especially in the first version of the film *The Phantom Planet*, the score has an idiosyncratic abstract character which contributes greatly in describing principally the emptiness/massiveness of space.

Furthermore, the combination between the latter and the implementation of more **upfront**, less manipulated, eastern instruments, gave the score a distinctive ethnic character but keeping the balance between the vivid ethnic colouration and the more synthetic composition. Especially in parts such as chapter III: 'A strange rock', there is significant attempt to blend the unique sounding physiognomies of the unaltered implemented ethnic instruments, an example being the use of a low-pitch didgeridoo, together with the granular synthetic process in a way that the end mixture is almost indistinguishable between the two.

In the case of the *Voyage to the Prehistoric Planet*, the visuals dictated a small divergence in the overall scoring perspective. The music in this case has an even more harmonic personality, when compared to *The Phantom Planet*, due to the fact that the surrounding environment is more complex and contains significantly more life forms. In other words, in *Voyage to the Prehistoric Planet* we see an alien location with **continuous visual motion** consisted of a variety of plants, underground smokes, polymorphic surrounding sceneries and dinosaurian creatures, in comparison with the emptier, 'colder' comet scenic environment of *The Phantom Planet*.

What is also imperative is the variance in view of the aliens' morphology. This is a feature that has greatly influenced the scoring procedure. Firstly, and **in association with** the above, one of the main differences between the two films is the overall motion speed, which relates directly to the alien forms.

*The Phantom Planet* has an ominously slow and static character while on the other hand *Voyage to the Prehistoric Planet* has a more energetic and fast, action-like, personality. This translates to the score accordingly; on the one hand, in *The Phantom Planet*, the motifs are quite long in development and slow in tempo. This together with the overall synthetic textural background creates an appropriate atmosphere of the scenes to evolve. On the other hand, in *Voyage to the Prehistoric Planet*, there is a profound implementation of rhythmic structures and faster moving motifs that imprint and impersonate the visual pace.

The previous **audiovisual** connections raised the question on how composers deal with different alien morphologies and how much the visual dictates the path which a composer is following in view of his/her applied techniques and aesthetic methodologies. This, as well as the important **audiovisual** link with the directly presented, or implied, scenic environment was a new aspect which formed as a question out of this and the previous chapters combined. Therefore, alien forms exploration was thought as a natural continuation of this research, therefore valid and beneficial, always in combination with the initial eastern-ethnic perspective.

## Part II: Science Fiction

### C. Supplementary Research: Alien Forms

#### 1. Prologue

During the initial study considering the science fiction chapter of this research, there was a need that was starting to grow in relation to the visual description of the alien forms. As the preliminary research started to take form and shape its perspective, questions rose in view of the relationship between music composition, instrumentation and the overall cinematic experience which seemed detached at certain points. Of course, this, by all means, does not apply to every occasion; nonetheless it is an observation that was noticed in a number of film examples so that it could justify its meaning and more importantly its research validity.

What is also important to mention, for clarification reasons, is that the above thesis is by no means diminishing the effectiveness of the original scores in relation to the final emotional outcome of the viewing experience. Nonetheless, it was a quite apparent aspect that fed the need to focus a bit more on this subject, as it was thought as quite important extension of the previously discussed problematic nature of science fiction films in view of Middle Eastern related music idiosyncrasies.

#### 2. Rationale

For this task, there was a number of new films that, as well as many previous ones that have been revisited with this new focus in mind, have been examined and will be discussed further on. It is important to state that the choice of films is based on a number of important facts. At first, and as a more generic point, it was imperative to have enough examples of each examined case, which will be presented further on in the films' categorization, so that it could prove the validity of the initial question. Therefore, the primary chronological formation of the films thought to be an effective way of

starting this supplementary study, as it has proved its significance in the previous research found in the science fiction and *Intolerance* chapters.

Secondly, each generated category of alien forms was representing the outcomes of numerous similar films that have been reviewed and included in the research. For example, the films *It Came from Outer Space*, *Target Earth* and *Devil Girl from Mars* could all be used as models to represent similar findings in several other films of the 1950s such as *The Monolith Monsters* (1957), *This Island Earth* (1955), *Plan 9 from Outer Space* (1957) among many others. Similarly, the same viewpoint applies to *Independence Day*, *Sphere* and *The Abyss* in relation to films such as *Species* (1995), *Star Trek: Insurrection* (1998) et. al. Consequently, the outcomes' significance and range of similar applied techniques is what justifies the selections.

Another aspect is the films' reputation, importance and contribution in the formation of a specific genre. An explicit example of this position is the *Alien* series, and in particular the first *Alien* picture, as it is highly regarded as one of the main films which defined the course of future science fiction horror films.

In his discussion considering the body horror establishment in the Hollywood cinema, Bramesco (2017) states that 'Alien still stands as the film's crowning achievement over 35 years after the fact, a sublime fusion of the gory and the unsettling'. Bramesco's view, together with an additional interesting article considering the *Alien* film's contribution by Mekado Murphy of the New York Times, can be found by using the following links:

Finally, perhaps the most important and self-explanatory reason behind the selection of specific films is the apparent appropriateness in view of the initial hypothesis. This means that films like *Stargate*, *Alien vs. Predator* and *John Carter* fully justify their assortment due to their visual scenic nature that most of the times directly presents or implies a connection with ancient civilizations, either associated with human cultures or alien forms.

### **3. List of films / Categorization**

The list of films that had been studied and will be discussed is the one below (in chronological order):

After watching the films and taking a few preliminary notes, it was obvious that a strategic plan should be constructed in order for the discussion to make sense and of course without losing connection with the main research angle.

This decision was made after the many problems and questions that have arisen such as ‘What is the connection between an alien civilization and music?’, ‘How do composers mix sound design with the classical orchestra, in which situations and why?’, ‘How does the music change between sci-fi genres and are there any main scoring characteristics in each genre?’ etc.

Of course, the core subject remained the same in view of the extent to which ethnic music has been used, the situation and specific or general context that has been used in relation to the visual and the degree of depth considering the connection and/or experimentation with eastern ethnic elements.

At first it was thought best that each film should be discussed separately but as the research was reaching further to the actual characteristics of each film’s score, and depending on the genre, a form of categorization started to appear which would be really supportive not only in the preliminary analysis but also in the final results that would have been drawn.

Although scores differentiate from each other in several different areas, there were key elements found connecting and grouping them together forming in such a way a pragmatic communication in the overall construction and feel of the music.

Consequently, the initial list of films was separated and assembled in the following categories (each group in chronological order):

## **Action - Horror**

1. Alien (1979)
2. Aliens (1986)
3. Predator (1987)
4. Alien 3 (1992)
5. Alien vs. Predator (2004)
6. Prometheus (2012)
7. Alien Covenant (2017)
8. Underwater (2020)
9. Sputnik (2020)

## **Action - Adventure - Mystery (Hostile Aliens)**

1. It Came from Outer Space (1953)
2. The Angry Red Planet (1959)
3. Independence Day (1996)
4. Sphere (1998)
5. Cowboys & Aliens (2011)
6. Pacific Rim (2013)
7. Independence Day: Resurgence (2016)
8. Skylines (2020)
9. Invasion (2020)



### **Action - Adventure - Mystery (Friendly Aliens)**

1. Close Encounters of the Third Kind (1977)
2. Enemy Mine (1985)
3. The Abyss (1989)
4. Mission to Mars (2000)
5. Arrival (2016)

### **Action - Adventure - Comedy**

1. Mars Attacks! (1996)
2. The Fifth Element (1997)

### **Robotic - Form Aliens**

1. Target Earth (1954)
2. Earth vs. the Flying Saucers (1956)
3. The Day the Earth Stood Still (2008)

### **Anthropomorphic Aliens**

1. Invaders from Mars (1953)
2. Devil Girl from Mars (1954)
3. Stargate 1994)
4. The Arrival (1996)
5. Dark City (1998)

#### **4. Exploration / Aesthetics**

##### **Action - Horror**

This category predominantly consists of one big group of the 'Alien' films franchise starting from the original *Alien* produced in 1979 and stretching through the 2017s *Alien Covenant*.

The musical interpretation of alien species and scenes' environments share some common characteristics that are presented in the table below:

##### **- Alien (1979 – Score by Jerry Goldsmith)**

##### **- Aliens (1986 – Score by James Horner)**

##### **- Alien 3 (1992 - Score by Elliot Goldenthal)**

These three first films of the *Alien* franchise share a number of features when comparing Goldsmith's and Horner's scores in view of the description of aliens and alien scenery. One of the most apparent being the symphonic orchestra's **expanded dynamics** following the video relationship with scoring crescendos, strings marcato and bass flutter most vividly used when representing action scenes. It is worth noting that **symphonic brass instruments have a leading role creating** a dominant atmosphere in most scenes as it is widely used throughout the entire film. The latter together with the **overall atonal character contribute to** the overall atmosphere of the hostile, terrifying alien species.

*Alien 3* follows the same overall scoring structure as the two previous two films, **predominantly** in aliens' close-up scenes (video 1). In addition, Goldenthal **differentiates** his angle introducing high pitch, fast moving percussion, mixed in a dry and wide perspective, when describing the 3D graphics alien's first-person camera perspective (video 2).

##### **- Alien vs. Predator (2004 – Score by Harald Kloser)**

*Alien vs. Predator* is a quite interesting blend of **the** two films, both in terms of the script and the scenery always in connection with how it has been described by the music score. This is also a film that

has been discussed before in terms of Closer's overall scoring approach. This section will present an additional focus on the alien forms and their scoring connotations.

The film has a very strong and clear character considering the plot and location as it is referring, or implying to, the building of pyramids, ancient ruins and civilization, rituals **etc.** It visually blends all these aspects together with both the 'Alien' and 'Predator' species which was found to be a perfectly relevant example and a forthcoming opportunity to experiment with scoring and present the findings in more detail, something that will take place later on in the research.

When musically **observing** both 'Aliens' and 'Predators', Closer's point of view meets the previously discussed films in quite a few key aspects. **The chromatic scoring style of course is quite apparent and expected, as it is observed in the majority of the horror films genre.** Frequent dynamic changes, rich-sounding full symphonic orchestra, rising crescendo cues are all there but with the addition of even more harmonic sections throughout the film **and especially in long action scenes.**

It seems that **the latter** creates a form of connection and interaction **between humans and alien species** due to the nature of the film's narrative and chronological periods included. In this aspect, it is worth noting that this is the first 'Alien' film which is taking place on planet Earth which is an undoubtedly interesting point considering the increased harmonic nature of the score.

Another interesting facet of the score is the use of synthetic sounds. Sound design is less used, at least in terms of length **and simultaneous use** with the symphonic orchestra, when compared to earlier films of the franchise but it makes a strong and dominant appearance when presented as a frequent section within a scoring cue.

This is being presented, commencing at "00:09", in the following video:

An additional meeting point of this film and other films such as the original *Predator* (1986) and *Aliens* (1989) is the use of the snare drum in order to describe the military human characters. As it

happens with those two films, in this situation the snare drum has been used for a similar reason, signifying the beginning of a joint forces operation only this time **to** differentiate visually because of the 'Predator's' and human's bond.

It also feels and looks more tribal, since during the specific scene the human character uses the **Alien's body parts as weapons and shield**. This has also found to be something that slightly contradicts the selection of the symphonic orchestra's snare drum.

The following video includes this observation at "1:32":

Although the film has a number of visual references to the history of mankind, with a viewpoint of ancient cultures, as well as the actual connection that may exist between 'Aliens', 'Predators' and the human race, the composer presents no obvious scoring approach **towards a more ethnic music direction**. This is apparent both in instrumentation and harmonic structure, e.g. eastern-colour scales and modes **or** ethnic instruments' implementation.

#### **- Prometheus (2012 – Score by Marc Streitenfeld)**

#### **- Alien Covenant (2017 – Score by Jed Kurzel)**

Moving forward in time, *Prometheus* score by Marc Streitenfeld and *Alien Covenant* by Jed Kurzel add a freshness of thinking especially in view of the aliens' musical interpretation. Beside the common angle of symphonic orchestra motifs and transitions (*Prometheus* video 2 and video 3), there is an obvious tendency of both composers to use more processed sounds that are heavily manipulated, scored in a minimalistic way which **reflects the description** of the alien species. Although there is no apparent use of ethnic instruments in both films, the scores' music character together with its intended harmonic uncomplexity succeed in capturing and transferring the feeling of an ancient alien, human-like civilization with societal characteristics (*Prometheus* video 1, *Alien Covenant* video 1).

In the case of *Alien Covenant*, Kurzel uses a simple three-note chord in horns, sound designed or heavily processed, and intervals of fifths in a stylistic way which serves the implied time-based nature of the picture.

### **Underwater (2020 – Score by Marco Beltrami & Brandon Roberts)**

Moving furthermore in time and reaching closer to today's 2021, we can observe a film that shares similarities with the *Alien* franchise in terms of extraterrestrial horrific creatures, only this time the plot is based around the earth's deep ocean. In most cases there is a combination of a symphony orchestra with sound design as well as fast-performing synthetic textures that contribute to an anxious, pressurized, claustrophobic atmosphere in accordance to the scene.

The difference in *Underwater* is the way the composer is using his synthetic sounds' palette which is in a quite different way as all the previous films' examples. One of the things that set this scoring approach apart is how emphatic the use of repetition in background textures is, the synth sounds' arpeggiators, and how minimalism is used on several occasions to describe the emptiness of the character's dramatic feelings and/or the vast hollowness of the ocean's depths. These aspects can be demonstrated in the following videos:

This hybrid scoring style often **uses brass single notes as dramatic sound impacts** connecting with the visual appearance of underwater aliens. Always in conjunction with heavily process and sound design, this can be demonstrated in the following example:

An interesting aspect is also the use and manipulation of tempo-based synthetic sounds that increase or decrease their repetition curve and frequency characteristics depending on the pace of the actual scene. This presents a new angle in action scenes increasing **their intensive atmosphere**.

In some cases **the designed sound can** be relatively percussive and atonal (video 3) and in other cases offer a **background textural motion**, much similar to a strings' repeated ostinato performance in a classical orchestra, constructing the appropriate foundation for orchestral brass and strings to take part with their long scored notes (video 4).

#### **- Sputnik (2020 – Score by Oleg Karpachev)**

Although this film may drift from the initial research angle of Hollywood productions, nevertheless it seemed to serve as a very good example indeed considering the latest alien, horror film genre. One of the most diverse and distinctive features that sets this score apart is the use of **bending, glissandi notes** to create tension and mystery. The use of this composing technique is even more apparent in brass instruments as it is demonstrated in the two following examples:

In view of the previous observation the following example presents the same technique but in a more aggressive, repeated pattern due to the **intensive action nature of the scene**:

What is also very strong in character is the use of distortion. This is also a technical connection found between this score and **the** previously discussed *Tenet*. It certainly contributes **to** making a significantly more aggressive sound, creating a feeling of musical vertigo **especially in cases where instruments' speed and repetition is fast**, as is the case with the previous video example. **Additionally**, big-sounding drum hits emphasize the sound distortion and **glissandos** even more in a more generic view of the **music character**.

Alien and human communication is in this case being scored by using only synthesized instruments. In most cases, there is an abstract, slow-moving, and steady in view of the **harmony structure** synth pad, or a combined number of them for that reason, which covers the entire scene's score. This can be demonstrated in the example below:

### **Action - Adventure - Mystery (Hostile aliens)**

This is a quite different category of films so as was expected the scores were found to have quite a few different features as to the ones in the previous horror genre. By visiting and observing this selection of nine films there was a variety of points made considering the composers' scoring approach specifically **in relation to alien species**. The music characteristics that found to be common between them are presented in the table below:

Perhaps one of the most significant changes which reflect directly to the actual genre and perhaps has the most strong impact which dictates the rest of the instrumentation is that almost all of the observed scores are significantly more harmonic in their very nature.

This connects respectively to two important facets of the films. The first one being the fact that in most cases the film's location is set on planet Earth, or at least the majority of the scenes are referring to a human war against aliens which makes the films' character to be rather human-concentrated with alien species being described as invasive enemies.

Secondly, the fact that in the majority of films' plot the human race survives and wins this war, or attack, of the alien intruders.

The last one sets the path for an overly praising music score **which consequently is** emphatically harmonic, **at least in view of the more dramatic scenes**.

**- It Came from Outer Space (1953) - (Score by Henry Mancini / Herman Stein / Irving Gertz)**

**- The Angry Red Planet (1959 – Score by Paul Dunlap)**

*It Came from Outer Space* and *The Angry Red Planet* are two classic film examples of science fiction scores of the **1950s**. One can observe the distinctive sound of the Theremin (*It Came from Outer Space* -

video 1) together with the **chromatic** cues of the symphonic orchestra being more minimalistic and slow in development in the case of *The Angry Red Planet*. The **timpani**, brass and high pitched scored violins have again the **protagonistic** role in the instrumentation of both films:

During the research there was some interesting background information found considering the creation of the score history for *It Came from Outer Space* and the reasoning behind the three major composers credited work. The following link leads to the related article:

**- Independence Day (1996 – Score by David Arnold)**

**- Sphere (1998 – Score by Elliot Goldenthal)**

These two selected films are demonstrating the overall scoring orchestration of science fiction films during the 1990s. The scores serves well as a confirmation of the previous statement that sci-fi action-based films during this time period were closer to classical and **neoclassical** music tradition. The composed music includes a full symphonic orchestra arrangement with full-range dynamics, once again relying mostly on the use of brass for this particular task, an overall melodic character and no evident inclusion of sound design when specifically describing the alien species.

In the case of the *Sphere* film, the absence of synthetic or heavily processed sounds could be also parallelized with the nonappearance of advanced alien technology, computers, **etc.**, which is frequently associated with the use of sound design in science fiction films.

The music description of the aliens seems to be moving within the music character margins of the films. In other words, the scores try to keep a harmonic character without being overly atonal and/or experimental. This is an aspect that differentiates action-based science fiction films from the previous examined horror-centric ones.

The following examples demonstrate the previous points:



- Cowboys & Aliens (2011) - (Score by Harry Gregson-Williams)

- Pacific Rim (2013 – Score by Ramin Djawadi)

- Independence Day: Resurgence (2016) - (Score by Thomas Wander and Harald Kloser)

These three films of the 2000s move away from the overall neoclassical character of the previously mentioned films and add new features that move towards a more modern, atonal territory. We can now observe high usage of different string bowing techniques, together with extensive dynamic brass crescendos and marcatos providing the score with a more aggressive character.

What is also worth noting is the strong character of synthetically designed sounds that are used usually in tempo-based rhythmic patterns creating a highly energetic sense of motion. This is a feature, used predominantly in *Cowboys & Aliens* and *Pacific Rim*, which most of the time commences and triggers the action scenes of the films and usually resolves in the sonic grandeur of a symphonic orchestra cue.

These observations of hybrid scores can be observed in the following examples:

*Skylines* is a quite diverse film example presenting a couple of new interesting features in this film category. Before starting the discussion considering the score, in view of the alien species, it is important to mention that this is a case in which a film can belong in more than one of the divided categories. More specifically, it could also be a part of the next category of sci-fi films which belong to the same genre (action-adventure-mystery) but where the aliens are not hostile.

Consequently, this is a feature which indeed might affect the film's score, as will be presented later on, due to the fact that the film's plot is based around friendly relationships between human and aliens but also includes action scenes with hostile ones. It is quite interesting to see the findings on how the composer chooses to deal with this uncommon scheme.

Perhaps one of the most curious characteristics of the score, in view of the friendly alien, is how the composer chooses to deal with emotional scenes. There is a tendency to maintain stability in view of the overall tempo-based synthetic score even in scenes where a composer would have an obvious

opportunity to add romanticism either with an overly harmonic and busy instrumentation or by using perhaps a more modern approach with rich synthetic instruments' chords and simple harmonic progression.

Perhaps one of the most representing examples of this approach can be viewed in the following scene:

Another aspect that characterises the film's score is the frequent use of portamento sliding notes creating certain acoustic dizziness with the intention of reaching for higher dramatic levels. It is a technique that was also reportedly found in high use in the films *Tenet* and *Sputnik*.

These last two videos also reveal two more interesting features. First and foremost the examples suggest a quite strong character of a hybrid composition using sound design and symphonic orchestra. This is something that occurs in most parts of the film as well. Secondly and specifically in video 4, we have the introduction of electric distortion guitars (00:31") which is a step towards a connection between modern film music and rock/metal music, a rather different music genre or at least difficult to meet repeatedly in cinematic scores. One of the few films that had this feature and has been visited in this research was *Dune* with its score composed by the rock band Toto.

Going a step further towards the rock/metal direction, major fighting scenes between aliens have an even more emphatic use of this genre as it is shown in the following example:

#### **- Invasion (2020 – Score by Igor Vdovin)**

*Invasion*, the sequel to the first movie *Attraction* (2019), is a Russian science fiction film which was found to be very interesting and worth investigating and discussed considering the composer's, Igor Vdovin, scoring perspective. Although it is one of the moments in this research that the material drifts from the initial angle of Hollywood based films, it is, nevertheless, worth including it here as an example of the musical combination of techniques that were not found to work together in such a way, at least in American films based on its time.

The basic scoring idea is one; the composer moves around the main theme, a specific leitmotif of the alien species, and builds the entire score around this idea. Now, this is not something new as this was

quite the norm in earlier stages of Hollywood sci-fi films, with composers like John Williams, Jerry Goldsmith, James Horner et. al. **creating** leitmotifs in almost every character, in almost every sci-fi film they have scored. The fact that during the passage of time this technique has been altered, which is something to be discussed further on, makes this film's revisited approach important to include and discuss.

So, as a first example, Vdovin makes his motif idea apparent from the very beginning of the film:

Additionally, and what was found to be rather important as well, is the composer's intention of **revisiting and developing the theme but without forgetting to balance it with the modern sound of films belonging in the same time period.** What this means is that he uses his simple eight-note motif as a core to build an expansive, modern, hybrid rich-sounding score consisting of the symphonic orchestra and sound synthesis.

The result of this repetition of the eight-note motif and its variations **is a score that is musically memorable; a feature in film music which gradually fades away and will be discussed further on this thesis.** Vdovin stays loyal to this approach even in scenes **that are quite diverse** in their own nature. One key example can be found in the below emotional scene:

A supplementary example of **this motif can** also be found in the next scene. This time the composer is **approaching it in a rather** unexpected, musically harmonic, and calm in terms of dynamics, manner contradicting with the nature of the visual, or at least a more common approach of it, which suggests a strong, military-based weighty score.

There are indeed certain times in which the *Attraction* score awakened the memory of films' strong leitmotifs such as the nine-note theme of the first *Alien* (1979) film composed by Jerry Goldsmith.

#### **Action- Adventure - Mystery (Friendly aliens)**

### **- Close Encounters of the Third Kind (1977) - (Score by John Williams)**

During the first appearance of alien forms, John Williams is using a **chromatic approach** to create a sense of mystery as the humans are anxiously waiting to see what will come off the spaceship's door. Since there is no obvious alien hostile character suggested in any previous part of the film, the composer chooses not to overly use low pitched instruments such as low **orchestral** brass, for the reason that he wants to achieve a mysterious atmosphere translating the humans' **anticipation** and amazement drawn to their facial expressions.

What is also interesting **is the frequent portamento brass performance** as well as the use of choir; two elements, **both performed in soft dynamics**, that act as extra layers to this enigmatic scene.

High brass crescendo at 00:55" finally resolves to the alien's appearance where there is also a connection with the main communication of humans and aliens five-note motif performed by low brass **at 01:03"**.

The appearance of smaller in size aliens **at 02:00"** signifies the introduction of high woodwinds, celeste, and harp as these higher in pitch instruments provide a fantasy colour palette that corresponds to the visual representation of the numerous small extra-terrestrial.

### **- Enemy Mine (1985 – Score by Maurice Jarre)**

Maurice Jarre's vision considering the music score written for describing the alien form is leaning more towards romanticism which is indeed a dominant feature inside the film but also a **quality** of the composer's music compositions in general.

**Jarre is using a hybrid score for the human and the alien characters.** As a result, we have the marriage of two musical worlds; the human world, in which Jarre is using the symphonic orchestra, and the alien

world where he uses designed instruments. The meeting point of these two worlds is the romantic character of the score reflecting the film's **overwhelming** romantic nature.

During the alien character's initial appearance, the composer presents a hybrid score with softly performed **chromatic** cues reaching for the mysterious atmosphere of the visual. Unstable in pitch sound designed instruments are also a contributing factor in view of the description of **the** otherness.

**What is also important to mention is the existence of a six-note alien's leitmotif** starting to build at around 00:08" as presented in the following video example:

The overall romantic score approach can be viewed in the following video:

Here one can observe the meeting of the two worlds as mentioned earlier. A fully romantic classical approach considering the human character with starting woodwinds expanding into passionate legato strings, followed by a big pause from 01:40" to 2:10" in order to create the path for passing onto the synthetic, romantic cue of the alien. In view of the last, the composer exchanges the strings and woodwinds long notes with lush pads and crystal-sounding synths accompanying the alien's singing with **rich chords progression** but not in a particularly familiar/overused sequence.

This mixture creates a romantic feeling of a different, alien world with Jarre **musically stating** that this is perhaps how a sensitive and highly emotional alien song might **sound like in** terms of music harmony.

Reaching the scene's end, the composer **reintroduces** the symphonic orchestra which in conjunction with the synths, creates a blended, harmonically expressive, score that **reflects the intensive** emotional **camera switch** between the human and alien characters in tears.

**- The Abyss (1989 – Score by Alan Silvestri)**

**- Mission to Mars - (2000 - Score by Ennio Morricone)**

*The Abyss* and *Mission to Mars* are two films scored by two world-renowned composers specifically recognized for their distinctive romantic character. Both films scores have an almost absolute instrumentation relying in the Western symphonic orchestra.

In view of *The Abyss*, the underwater aliens are initially presented in vivid blue and pink emitting colours and the composers reflect this visual picture by using major chords, a slow pace Lydian mode with long notes, and choir to have a protagonistic role in creating a mysterious atmosphere. The score also consists of synthetic sounds, not so frequent and prominent, as can be seen at the beginning of the following video clip:

What is also worth mentioning in the previous video example is the important role of the harp and flute contributing to the creation of this fantasy non-violent, peaceful, and wandering atmosphere.

This is also the case with the next example where the use of the harp, flute, and this time high violins Lydian mode contribute to this mysterious but calm nature of the alien presence.

As with Alan Silvestri, Ennio Morricone in *Mission to Mars* creates a highly emotional and memorable score. Below is a distinctive moment which focuses on the peaceful alien's nature where there is visual storytelling considering the aliens' origin and how they are the ones responsible for the creation of life on planet Earth.

**- Arrival (2016 – Score by Jóhann Jóhannsson)**

Jóhann Jóhannsson presents us with a rather different approach considering the primal reaction of seeing an alien existence. In the first scene, where the visual presents the alien spaceship, the composer introduces a simple four-note motif performed by a slightly detuned, and faintly pitch moving, flute. What is thought he is trying to achieve is a notion of ancient, uncomplicated in formation but unknown as to how evolved it may be, civilization judging from the picture where the director presents us with a

simplistic, rock-like material, elliptical **spaceship**. It is a highly artistic scene with this grand, odd-shaped, standing object accompanied by the wave's visual parallelism of the clouds covering the valley.

The background atmosphere has been built with unison octave layers of synthetic instruments that seem to be centred by an acoustic piano loop, designed with heavy processing in order to sound stretched and reversed.

Considering the first appearance of the alien species, simultaneously signifying the first human contact, the composer continues his minimalistic atonal approach which seems to be purposely used considering the slow pace of the visual. This music cue has a vividly hybrid and abstract nature, with high strings undefined in terms of pitch and overall tonal characteristics, **creating certain dizziness** to the atmosphere in its effort to describe the unknown, mysterious communication between the alien and human characters.

The composer finally arrives at a more static tonal point, starting building at around 02:28" in which he uses a three-note motif (I-V-VI) in a rising and fading out motion.

### **Action - Adventure - Comedy**

#### **- Mars Attacks! (1996 – Score by Danny Elfman)**

*Mars Attacks!* is a film that was mentioned earlier in this research in view of its comic, cartoonish character and its distinctive, sarcastic use of the Theremin.

Specifically, in view of the aliens and the leitmotifs used, the composer Danny Elfman introduces the Theremin as his main musical tool in order to describe the mysterious, skeleton-like cartoonish Martians. The score in general, as well as the Martian's leitmotif which follows them throughout the film, consists mostly of the classical orchestra with a few added synths as a painting touch to the overall atmosphere.

One example can be observed in the following, debut Martians' appearance, example (00:22") as well as the use of Theremin and the score's overall symphonic orchestra style:

Once again, it is worth remembering the massive popularity of the Theremin especially in the Hollywood sci-fi era of the 1950s. Two characteristic film examples that have been discussed earlier were *The Day the Earth Stood Still* and *It Came from Outer Space*.

#### **- The Fifth Element (1997 – Score by Éric Serra)**

Although reviewed earlier considering Serra's ability to create a provoking and heavily criticised, multicoloured score, it was very interesting getting a bit into more detail in view of the alien robots' first scene. This decision occurred by watching how the composer is dealing with the score in this specific moment as the scene is set inside an archeological site in which the alien robots land to uncover an ancient secret. This scene was also thought to be a great opportunity to compose an experimental score and discuss the results further in this research.

Serra is approaching the scene starting with ethereal synth choir (00:00"-00:31") progressing in minor chords describing the landing and walking of the alien robots. As it develops, and more human dramatic reactions take place, the composer adds a vivid divisi high strings motif (00:32") until the first part reaches its end for the actor's cues to take place (01:00"). Sound designed pads, low in pitch, add to the mysterious atmosphere until 02:08" where we have again the use of a synthetic choir chord, rising gradually in dynamics, followed by the violas (02:28") and cellos (02:43") which again have been used with the same intention of adding a harmonic motif increasing in that way the sense of drama, emphasising the importance of the visual.

In terms of ethnic elements involved and due to the visual provided appropriateness, there is no obvious tendency towards that direction although it is worth mentioning that the violas motif at 02:28" start in a



Mixolydian mode which, under the overall score's circumstances, it can be thought of as an eastern-influenced sounding element.

### **Robotic - Form Aliens**

#### **- Target Earth (1954 – Score by Paul Dunlap)**

#### **- Earth vs. the Flying Saucers (1956) - (Score by Mischa Bakaleinikoff)**

These two films represent the overall popular aesthetic of the sci-fi genre of the 1950s. The alien robots are described in an atonal style score which is highly busy in terms of instrumentation and harmonic development with low brass notes as a dominant tool for creating gravitas followed by the symphonic high strings, quite often used in tremolo, aggregating the sense of drama.

In the case of *Target Earth*, Dunlap is mostly relying in the use of the characterful Theremin together with the brass and woodwind instruments as demonstrated at 00:43". The score is not experimental by any means, and, as to be expected, it does not contain any strong evidence of eastern scales and/or instruments which of course reflects the film's location.

#### **- The Day the Earth Stood Still (2008) - (Score by Tyler Bates)**

This remake of the classic sci-fi film *The Day the Earth Stood Still* (1951) takes on the same principle in terms of the film's plot and general scenic location but an entirely different approach in terms of scoring, and especially in view of the alien forms.

There are totally two different kinds of alien forms in the scene, and in the film in general; the first one appears in the film's starting moments and has an organic form as the second one, which is the dominant alien character in the movie, has the form of a gigantic robot. They are both mentioned here as they are both presented with a quite different scoring method by the composer, Tyler Bates.

In view of the alien spaceship's first appearance, which is presented in the form of a giant sphere, the composer introduces a highly synthetic score with an upfront character of an ethereal, high-pitched,

synth choir. This has been used with the intention of creating an exceedingly mysterious atmosphere as the scene follows the amazement of human scientists approaching the alien spaceship. The music composition builds progressively its intensity and sense of the unknown as it follows closely the picture which gradually rises and **finally presents the spaceship's massive size.**

What also helps in that respect is the addition of a high-pitched rising **strings'** cue signifying the beginning of this visual crescendo by also having a quite interesting impact in music as it changes the tonal score's character, up to this point, into dissonant and unsettling. These observations can be viewed in the following video:

In the second video example, **one can observe** the classical orchestra presentation in a not too aggressive and overly mysterious tone starting with a small in length A minor motif performed by the violins and violas. Additionally, the composer chooses a pure and calm solo vocal cue to musically **accompany** the strong white lights coming off the spaceship; the expectation of the alien's appearance, and the contact with the human scientist.

This purity of white together with the solo vocal and overall softness of the composition suggests a peaceful atmosphere, a harmless alien form.

What is also very important to realise is the scene's contradiction and how Bates manages to translate that into his score. On one side we observe an increasing tension in the diegetic world with armed forces taking place and getting ready to react to **any potential hostile act.** This is a dialogue crescendo that emerges fading in from the beginning of the video and reaches its climax with the alien's gunshot at 00:53".

On the other hand, concerning the non-diegetic world that the score belongs to, the composer is focusing purely on describing the movement and connection between the human scientist and the alien.

As a result, the viewer is emotionally charged in this highly dramatic scene by using an expressive, dynamically soft, music cue while all the built-up tension has relied on the diegetic human dialogues.

After the cues' conclusion (gunshot at 00:53"), the composer chooses to remain in the human-alien connection angle and continues developing his music idea by adding low strings at 01:00" to increase the dramatic sequence which describes the alien's death falling into the scientist's arms.

Moving into the second alien which has the form of a gigantic robot, Bates is utterly changing his approach by moving into an atonal, aggressive, highly dynamic sound-designed score. This is showing the intention of ferociousness; the consequence of human hostility on the impliedly non-violent alien. High pitched sounds and strong synthetic character are the main scoring characteristics of the alien robot.

### **Anthropomorphic Aliens**

#### **- Invaders from Mars (1953) - (Score by Raoul Kraushaar)**

#### **- Devil Girl from Mars (1954) - (Score by Edwing Astley)**

Although it is an independent film, *Invaders from Mars* is a classic example of the 1950s as to how composers dealt with the idea of extraterrestrial humanoid creatures on Earth. The score's neoclassical character is quite apparent throughout the film with endless short cues of strings, brass, and woodwinds enriching every scene at any given moment with an overly dramatic, and almost mickey-mousing, music character.

Moving away from tonal music and avoiding any apparent harmonic structure which would suggest either a major or minor chord/scale, Kraushaar is presenting the aliens from a relatively similar angle as the one found on many classic action-adventure-horror films of the decade; these films include some of the earlier discussed *Target Earth*, *Earth vs. the Flying Saucers* as well as other titles from further back on the research such as *The Day the Earth Stood Still*.

On the other hand, *Devil Girl from Mars* score, although following the same path as the previous *Invaders from Mars*, offers some new variations which differentiate the composer and his point of view considering the humanoid alien. In view of the structure, we can now observe the construction and development of a distinctive leitmotif of the alien woman form which follows the character from the beginning of its appearance through the end of the film.

An additional aspect of this leitmotif is the use of timpani following the visual pace of the screen. The above followed by a three-note motif conversation between the brass and woodwinds together with a sense of space between performances formulates a diverse musical experience that follows a marginally dissimilar path of the one having consisted of the usually busy and harmonically fast-evolving orchestration.

#### **- Stargate (1994 – Score by David Arnold)**

*Stargate* was one of the films that were found to be rather interesting and worth investigating due to the fact that the film's plot and location has a direct reference to eastern civilizations and the connection between them and alien species. It is also relevant in terms of historical context since the visual suggests an ancient time period in which the eastern human race is still relatively primitive, in its initial stages in terms of evolution.

For these reasons, the film presents a perfectly pertinent opportunity to explore in terms of eastern scoring approach, implementing eastern-ethnic instruments and music traditions. Additionally, it serves well as an audiovisual bridge between the previous *Intolerance* project together with the more evolved science fiction genre.

To begin with, Arnold's approach in describing the human form, both ancient and present, works by composing a tonally harmonic score with rich instrumentation cues using the entire music palette of a large symphonic orchestra. This can be demonstrated in the following video and particularly between 00:00" and 00:20":

One added note is the use of a snare drum rhythmic structure which connotes the military operation. A commonly used instrument by **composers for describing** the human armed forces, as found and discussed in many sci-fi films' cases before.

After the first segment of this video follows the first appearance of the aliens' spaceship; an obscure pyramid **technologically evolved judging** from its divided sections and in between lights. In this first presentation, the composer chooses to **alter** the harmonic tone of his composition and begin a new dissonant cue by using a drum stick performance together with low strings and brass that resonates to the initial amazement of both the viewers and the films' human characters.

The score moves back to its previous character as soon as the scene **follows the** humans approaching the pyramid. **Inside the pyramid, the score** continues to have the same nature even when the first armed guard hits a human soldier. The only addition to that moment is a rising brass **chromatic** chord to emphasise the attack.

Action scenes between soldiers and guards inside the pyramids continue to be described **in a chromatic** style which is increasing its **atonal** character depending on the severity of the scene. Therefore, **to add** to the mysterious nature of some scenes considering the aliens, Arnold is introducing high pitched violins that are mostly used in both bowed and pizzicato **styles**:

From this example we can also observe the importance of symphonic brass as this together with the high pitched strings contributes once more in increasing the dramatic atmosphere and in this particular case, they are both used to build up a dynamic crescendo cue **which reflects the visual build-up resulting** into the dramatic presentation of the armed alien guard.

At this point, it is important to open a small parenthesis to this musical investigation and mention the connection between the alien guard and ancient Egyptian figures. As true archaeological findings

suggest, the masks' design which this film is presenting belong to the ancient Egyptian god 'Anubis'. Anubis was the god of death, underworld, afterlife et. cetera.

Therefore, we see the connection of the ancient god 'Anubis' with the hostile intentions of the films' alien guards whose outfit includes the same jackal-headed helmet together with a combination of armoury and weapons that suggests technological advancement. These visual features also contribute main idea of the film's plot that the pyramids, hence ancient civilization and its evolution, were created by alien species.

Overall it was found that experimentation with ethnic elements, either in terms of composition or instrumentation, was not apparent even though the visual indeed suggests that such an approach would be approvable. As a result, this gave the prospect, as mentioned at the beginning of this films' discussion, of using this as an example of demonstrating a few points in terms of scoring originality, experimentation, and eastern authenticity; aspects that will be discovered and presented further on in the research.

Moving back to the film's score, we are eventually presented with the main alien, humanoid form, character. This is quite an interesting moment in musical terms as we have the introduction of a few new features that contribute to Arnold's scoring perspective.

Perhaps one of the key elements is the presentation of a specific leitmotif which corresponds to the anthropomorphic alien leader. This eleven-note leitmotif is introduced at around 00:27" by the low brass instruments and it is, after its initial presentation, being repeated and sculpted throughout the film.

Building around the leitmotif we observe the inclusion of a classical choir that is performing in short, attacking vowels and syllables irrelevant of pitch and/or harmonic structure.

At about 01:09" we observe the commencing of a new dramatic cue as the scene changes insight and focuses on **unraveling** the military human character's commands/intention of destroying, what considers to be, hostile alien enemies. This scene's sub-set is resolute by exposing the human-made bomb. The composer is choosing to **manage** this situation with a harmonically emotional, romantic cue which is written exclusively for the violas and violins.

This romantic scene's **subsection** ends by 01:37" where the camera focuses on the alien guards and signifies the beginning of the music cue where they gradually take off their masks and reveal their human-like faces. This reaches its end with the final revelation of their king/leader. **Musicwise**, Arnold turns again to his alien leader leitmotif which is continuously manipulated; by using it as a central core he builds a crescendo cue with forte brass used for reaching its climax at 01:59". What is also worth mentioning is that at exactly that point Arnold is adding a secondary violins' motif, starting high and moving backwards in semitones **progression**, which also uses repeatedly in variations and in conjunction with the main aliens' leitmotif.

#### **- The Arrival (1996 – Score by Arthur Kempel)**

*The Arrival* score by Arthur Kempel follows a different perspective from the previous films examined. The composer chooses a more harmonic angle which takes place in the majority of his scored scenes. The same principle applies to alien species as well.

The first alien's visual appearance, which progressively transforms into a human form, has been dealt with moving minor chords performed by the symphonic strings allowing for the low brass instruments to move around a thematic context which increases the scene's dramatic atmosphere. This can be demonstrated in the following example:

The sense of mystery and the unknown has been transported to music exclusively with the use of a classical orchestra **with no apparent** evidence of experimentation in terms of sound design and/or ethnic **colour**.

### **Dark City (1998 – Score by Trevor Jones)**

*Dark City* is a quite unique case in this **subcategory** of alien species as it belongs to a different genre having a strong film-noir atmosphere occurring in a fantasy, mysterious world set in a human city. It's dark, almost claustrophobic, nature translates into a different perspective in terms of the film's score and especially when concentrating on humanoid aliens. Their overly white and bold faces together with their entirely black in **colour** outfits and their hidden underneath the city's surface community contribute to creating a thrilling, mysterious and dark visual experience in which the composer responds accordingly.

As a result, and starting from the musical description of the alien's society, one can observe Jones' interaction with this dark picture by creating an abstract, atonal background with high pitched strings in a not so constantly moving position together with some implementation of sound designed instruments (00:44" to the end). In most cases, there are no apparent uses of specific leitmotifs other than the performance modes of instruments and the orchestration of specific scenes' locations and characters, e.g. the aliens' underground community.

In action scenes, the anthropomorphic aliens are treated with the same angle in mind, with the main difference being that the composer changes the soft mysterious atmosphere into a more dynamic and rich in terms of instrumentation.

Most frequently Jones is using a certain synthetic percussion or drum to begin an action scene followed by an expanded symphonic score with busy orchestration to develop the scene and gradually increase its dynamic character. An example of this can be seen in the following example:

The music composition does not change its atonal style but is being emphasised with short, and highly dynamic in attack, brass, and strings that in turn follow the **distressful running, fighting, and escaping** scenes of the human **protagonistic** character.



## 5. Discussion

As an introductory statement, it is important to open a small parenthesis and by defocusing from the specific subject observe that by moving back in time, at least in Hollywood's science fiction cinematography, film music seems to be more confined and closely attached to specific composing angles. Hence the realisation of relationships in different categories of sci-fi film genres, which suggests a common musical language, is the very same reason that in turn deforms the recognition and need for the initial classification. This was found to be a rather important finding in terms of film music progression and how different movies and composers were able to shape and form new categories of music scores through time, most often moving in parallel with the evolution of audio technology.

Considering the latter and observing it from a chronological viewpoint, one can observe a strong connection between alien forms and the use of sound technology throughout time. Each technological breakthrough that has received the respected popularity seems to be attached in the films' scoring structures as well. Examples include the use of Theremin in the 1950s for adding that extra sense of the alien other, the electronic sound synthesis of the 1980s presented in the *Blade Runner* film and the hybrid scores of the 2010s and on, in films such as *Cowboys and Aliens*, *Prometheus*, *Sputnik* and *Underwater*.

One can also observe the overall tendency of composers in certain science fiction subcategories. Two of them were found, according to the previous categorization of film, to be the most profound examples of the above statement; action-horror and action-adventure-mystery (friendly aliens). Firstly, considering the first category, there is a dominant use of the symphonic orchestra and an overall aesthetic of a Western neoclassical composing angle. What is pre-dominantly used is the classic orchestra's wide dynamic range in frequently used crescendos usually performed in vividly atonal harmonic structures. This of course blends agreeably with the audiovisual relationship in a science fiction horror film, when using the symphonic orchestra as the main scoring tool, as the implementation of tonal harmonies would yield results that may not fit the visual and might end up with an oxymoron result, perhaps moving dangerously towards parody.

In view of the second category (friendly aliens), the general aesthetic was exactly the opposite of the previous action-horror division. Composers in this area are using their romantic character to score motifs **consisting of** tonal harmonies appropriate to the visual. There were also cases found, such as the scores for *Enemy Mine* (Maurice Jarre) and *Mission to Mars* (Ennio Morricone), were composers where possibly selected because of their expertise in **neoclassical** romanticism. This is an aspect that will be taken into account in the next scoring chapter as it usually creates a certain bond between the viewer and the picture especially if that is accompanied with memorable themes and motifs.

Considering the latter, a rather important observation is the gradual detachment with memorable themes and motifs as we move forward in time. This is also true **regardless of** the category a film falls into. This can be proven by taking a look at the history of the *Alien* franchise. One can observe that in the first *Alien* film the composer, Jerry Goldsmith, is building the score around a central motif, as mentioned earlier, leaving in that way a personal trademark that is strongly attached **to** the film. Moving through time, although scores are following the steps of previous examples, tend to fade out the obvious representation of explicit leitmotifs.

As we reach **the present** day, there seems to be the notion in composers to concentrate more in building the scores for specific moments/scenes, rather than undertaking each film as one unified entity. Yes, the composers' personality is there, most of the **time**, but this seems to be vaguely misled by the inclination of writing explosively impressive and aggressive sounding scores in terms of dynamics, distortion, sound design **etc.** As a personal opinion, it seems that in certain cases the absence of understandable motifs and themes translates to lack of focus **resulting in** diminished immersion which in **turn** lessens the memorability of the score itself. This is particularly evident **as time passes** and can be found in the latest examples of films such as *Tenet* and *Sputnik*.

On the other side, there were **movies** like *Moon* where the lack of focus in leitmotifs was personally considered to be a successful fit due to the abstract nature of the film and the sense of emptiness, both

scenic and psychological, that was trying to achieve. So in conclusion, it really depends on the type of film and the artistic intention of the outcome.

The way the previous statement in particular feeds the next practical work is basically the attempt to keep a balance between memorability and abstract scoring while achieving a healthy relationship between the visual, the symphonic orchestra and eastern ethnic instruments. This, among others, will be a significant attempt particularly in the case of the film *Alien vs. Predator*.

## **Part II: Science Fiction**

### **D. Creating the Score: Part II**

#### **1. Introduction**

During the previous supplementary exploration and discussion, there were a number of educated results that gave birth to new ideas concerning the continuation of the research and shaping of this next chapter's perspective. As a result, this segment will concentrate on the practical experimentation and construction of new scores particularly in view of the alien species and its musical representation in conjunction with the corresponding visual.

Out of all the previous films that have been visited in the previous supplementary research chapter, there were four that **drew** immediate attention concerning the research's initial ethnic perspective. For clarification purposes, the word 'immediate' here refers to two basic facets.

At first, this corresponds to the screen's visual character which is either fairly direct in terms of geographic location or implies eastern locational physiognomies. Secondly, the interaction that the visuals have with the music and its lack of eastern **ethnic** character, especially when put into the equation the first point of scenes' **geolocational** scenic environments, either realistic or imaginative.

As a result, these four films that were chosen for the above reasons are the following:

### **SCORING FILMS**

- 1. Stargate (1994 - Original Score by David Arnold)**
- 2. The Fifth Element (1997 - Original Score by Éric Serra)**
- 3. Alien vs. Predator (2004 - Original Score by Harald Kloser)**
- 4. John Carter (2012 - Original Score by Michael Giacchino)**

At this point, it is of great importance to mention that an additional key reason for this films' choice was because they provide a connecting bridge between the science fiction genre and the previous silent era's **Intolerance** project. The two main aspects of this connection, as they have individually discussed previously, are the films' eastern scenic similarities and the ancient time period that all these films are referring to, or inspired from.

These two features also increase the sense of validity given the fact that the visual would probably correspond more appropriately to ethnic oriented music composition. This might have a more comprehensive and satisfactory result when comparing to the first part of the science fiction scoring approach which was focusing more on discovering the potential use of ethnic elements in two films containing less strong eastern related images (*The Phantom Planet* and *Voyage to Prehistoric Planet*).

## 2. Films' scoring procedure / Realization

### 1. Stargate (1994)

Below is a graphic chart presenting the categorized instruments used for *Stargate* (1994) scoring:

This is the scored video segment that will be discussed further on:

*Stargate* film has been found drawing direct visual comparisons with eastern, maybe to a certain degree ancient, cultures in the greater area of Egypt as this is something that has been pointed out in the previous discussion considering the film. It was thought to be a very good example indeed of how science fiction and eastern cultures can be combined in film music since its plot is based around the theory of extraterrestrial civilization, pyramids, and the more generic subject of human origin and creation of the world.

Scoring this video segment has tried to address these issues and **follow** the visuals with a music composition that is using both the classical orchestra and ethnic instruments, leaning more towards the second. The classical orchestra has been used mainly for its rich and supportive musical weight giving a more dramatic **dimension to the score** and emphasizing in parts of the scene where it was thought to be appropriate to use it in such a way. It is an effort **to balance** these two musical worlds in a way that it may not be so one-sided or even experimental as this may have resulted in a more hybrid, sound-designed score **that would not possibly result in a clear audiovisual relationship, bearing also in mind the demonstration purposes of the Middle Eastern music implementation angle.**

Nevertheless, there are a small number of synthetic sounds inside the score that play a supportive role. Therefore in this particular situation sound design has been used with the intention of emphasizing and increasing the sense of mystery. This is obvious from the very beginning of the clip, starting at around 00:04", where an extra layer of a synthetic ethereal pad has been added together with the high violins consistent *con sordino* and the expressive bass strings' short portamento notes.

As the composition evolves this has been strengthened by adding an extra layer of **violin** tremolos commencing at 00:12". This gives an extra increase in tension and enlarges the background support for the front staged qanun and harp's development.

Ethnic instruments become intentionally apparent with the starting conversation between a soft hammered santur and a nylon string, fingernail performing, qanun. The role between them changes at 00:18" where the santur trills support the qanun and harp's descending progression in F# major Hijazskar mode. Below is the extracted score demonstrating the previous points discussed:

In view of the rhythmic material, ethnic percussions have been scored in a slow Sufi tempo mode variation in order to accompany the rising grandeur scene of the alien leader's entrance. The slow pace correspond accordingly to the slow characters' movement walking down the stairs. Commencing at around 00:32" it was thought again that the initial angle should be kept, meaning that the central role should be given to an ethnic-oriented structure and secondary/supportive role to the classic orchestra and/or sound designed instruments.

The instruments used here are the bendir, tombeks, kup udu, darbuka and def.

At the same a time a new motif begins to develop in an F# minor Locrian mode by the santur, duduk and violins. The motif has an intentionally strong rhythmic character which makes it blend agreeably with the percussion. It completes with the santur performing in an A major Hijaz and Lydian mode combination. It is worth pointing out that the duduk was used throughout the score, mostly performing in single notes, providing a foundation for the qanun and harp motifs to develop.

The change from F# minor Locrian to A major Hijaz/Lydian signifies the human bomb exposure as it describes the soldier's hostile intention as well as the surprise demonstrated by the scientist's acting expression.

The qanun and harp meet again in a joined performance motif commencing at 01:23". This cue has been composed in order to correspond to the visual tension build-up as this is the point where the

armored/masked soldiers reveal their human-formed faces, gradually leading to the apocalypse of their highest in hierarchy leader.

This cue has been composed in order to describe this visual contradiction. It is an attempt to musically express human characters' confusion which occurs as the unknown alien soldiers reveal gradually. The classic harp and qanun continue to develop the motif based on a playful combination of Aeolian, Dorian, Phrygian and Hijaskar modes as the classic orchestra's string ensemble and female choir moves in parallel without having an obvious eastern colour, as this role has been completely assigned to the qanun and harp. The use of the female choir (01:23") signifies the beginning of the rising crescendo end cue. It is also used as a tool for increasing the sense of mystery which gradually, from pianissimo to forte, resolves to the scenes' grand finale.

The end result expresses the attempt for a dual development approach, articulating both worlds with different musical contexts; ethnic instruments, with constant scales' changes increasing the mysterious atmosphere, connect to the human-form aliens while the classic orchestra reflects on the captive humans. Below are the extracted scores and audio clips of this section:

The same principle continues further on as this video segment reaches the end. The final crescendo, both visually and musically, has been scored with the orchestral brass holding the weight of the scene's importance (alien leader exposure) together with the santur tremolo and ethnic percussion hits used for raising the dramatic level.

## **2. The Fifth Element (1997)**

*The Fifth Element* was a challenging opportunity to score for a film that already has a quite divergent and multicoloured music character. The main angle here was to retain this vivid aspect but using it inside a created eastern character score. This had been achieved principally by the introduction of dissonant elements that circle around the main harmonic motif written for the violins, qanun, ney and didgeridoo.

Apart from the mysterious atmosphere, combination of score themes with divergent peripheral motifs served the visual contradiction between the peculiar, almost cartoonish alien robots, humans and the surrounding archaeological scenery. The intention was to provide a somewhat balanced score, in terms of gravitas and humor, keeping always in mind the film's nature and of course the foremost overall eastern ethnic perspective.

As a result, the first scoring attempt occurred by exclusively using ethnic instruments that are presented in the diagram below:

Below is the score extract and audio clip of this first segment:

The basic rhythmic structure has been scored mainly for the two low pitched frame drums, performing in an ultra-slow Misket mode, having in mind that it should describe the round alien robots' size, heaviness, and almost difficulty in walking movement. That is the core reason why only a couple of ethnic drums were chosen for this purpose since a higher pitched instrument or especially a percussion ensemble would be too grand, complicated, and overly dramatic. It was also a window of opportunity considering the music experimentation that would take place with the later on implementation of the classical orchestra.

Although every scoring attempt in the entire research has been realized with having in mind not only the visuals but also the dialogues that in most cases is difficult to isolate and mix together with the newly composed music, in this situation, there was an exception at 00:54"-01:20" where dialogues were managed to be extracted and separated from the original video. Going through a bit more technical details since the film's version had a 5.1 channel separation, the centre/dialogue channel could be divided from the rest and with a bit of mixing engineering process was able to be cleaned from any background music elements and therefore used efficiently in conjunction with the new score.



Making this possible delivers a noticeably increased immersion taking into consideration the viewing experience as it supports the narrative but also **provides supplementary** sound information considering the sound and pitch variations of the actors' voices. This is in particular quite interesting when paying closer attention to the aliens' voices since its low pitch as well as their English language accent gives an extra layer of perception of solemnity and supremacy.

The last observation seemed quite interesting in respect to the plot and **geolocation** since there is an evident influence **on** the sound of vowels, pitch steadiness, and clearness as well as length and emphasis of certain letters with an example being the letter 'r' (rrrrrr). It is, linguistically, an idiosyncratic effort to sound more 'eastern', more 'exotic' in terms of ethnic colouration and that was found to be a valuable observation worth including in this video clip.

An additional **noteworthy** musical aspect is the recording of an eastern female solo vocal performing in a Boulseik (Harmonic minor) mode. This has been highly influenced by similar implementations of ethnic vocals mainly observed in the previously reviewed *Blade Runner* film.

This was recorded with the intention of adding a more spiritual atmosphere especially **at** 02:00" where the alien robots reach the ancient statue in the middle of the room. This signifies the beginning of a new musical segment that follows the picture's majestic and revealing scene of the so-called 'fifth element' which is of course unknown at this stage to the viewer as to what it actually is.

Nevertheless, its importance is apparent from the camera's viewing angle as well as the priest's amazed facial expression accompanied by the character's cue 'The fifth element'. This is the reason at this exact stage **why** a new music motif, dynamically rising and rich in terms of instrumentation, is being introduced. The qanun tremolo and ney flute take the leading place in the first half performing in a A major Locrian followed by a Sabah (Aeolian mode2) scale while the female **vocal adds a slightly different perspective** by performing in a A minor Algerian mode. Reaching the middle of the motif's development, the duduk sits in the front row with a strong and clear character of an A major Hijaz mode leading the way to the score's ending.

Below are the extracted score and audio clip of this segment:

The next stage to this example presents experimentation of the classical orchestra in performing in a mimicking way in view of the previous ethnic oriented score. Out of all the ethnic elements only the female vocal was kept at this stage and this is because of its unique and irreplaceable sounding character. Below is the new clip's version as well as a graphic representation of the instruments' changes:

This classical scoring example has a quite **different** character when comparing to the previous ethnic attempt even if it wasn't found to be as interesting and diverse. It is only natural and expected to end up with such a result since there is an apparent lack of eastern **colour** due to the absence of all the unique sounding and performing features of eastern ethnic instruments.

Nevertheless, the end result has a certain quality due to the **contrasting** character of scale modes, ethnic instruments' performance attributes, and the sound of a **symphonic** orchestra. A result that was found equally apparent in all previous films scored in this particular composing sequence.

It also felt that somehow this scoring version lacked the depth and dominant character of the previous ethnic one. In order to balance this, extra brass instruments were scored and mixed in a new enhanced version:

The third and final version of this video clip includes a blended score of both symphonic and eastern ethnic instruments. As with previous film examples, this contributes to a more balanced and full sounding score.

One example can be demonstrated by listening to the added weight of the combination between the ethnic and classical percussive elements shown in the following score extract and corresponding audio clip:

On the other hand implementing these two approaches portrays a challenge in view of blending a rich-sounding Western instrumentation together with the ethnic **colour** of eastern music tradition.

It is obvious that there is an attempt to lean more towards the ethnic composition character rather than making the classic orchestra too obvious and **upfront**. It was thought that following that route would yield more interesting and out-of-the-ordinary results that at the same time would have a rich-sounding character. This seems to work well and it is most apparent during the final sequence commencing at around 01:49" with the commencing of a gradual scoring crescendo stretching through the end of the scene.

It is **worth noting** that this is a point in which a quite interesting amalgam of eastern oriented scales is taking place. On the one hand the qanun and ney flute are progressing in a Locrian and Sabah (Aeolian mode2) mode while the orchestral strings are supporting the female vocal's A minor Bouseik (Harmonic minor) mode and in turn progressing through A major Locrian and Hijaskar to finally reach to the common path of A major Hijaz. This is a quite diverse and lively combination which seems to work adequately enough to the corresponding scene.

Below is the strings' score extract and audio clip of this section:

### **3. Alien vs. Predator (2004)**

*Alien vs. Predator* is an additional film example where there is an obvious visual connection between ancient on-earth human cultures and alien species, as discussed before. That is also one of the main reasons why the film had been chosen to experiment with and serve as a demonstration in terms of ethnic implementation in film music composition.

Of course, the plot's historical location (ancient pyramids) played a major role in this decision as well. It is a film example that shares a lot of similarities with *Stargate* although the scoring approach is quite different due to the fact that they fall into two quite divergent film categories; *Stargate* being an action-adventure science fiction film and *Alien vs Predator*, as it is with the entire *Alien* film franchise, being an action horror science fiction film.

One of the key aspects before writing the score was to keep a strong ethnic character throughout the selected clip but without making it excessively harmonic in a sense that it could respect the film's nature. Such a decision would also be applicable if one was to entirely remove the ethnic angle and produce a score using any other stylistic approach, for example composing for the classical orchestra with or without sound design implementation.

This statement is also apparent from the original scores of David Arnold (*Stargate*) and Harald Kloser (*Alien vs. Predator*) as well as the overall previous discussion considering the categorization of science fiction films in genres.

As a result the first score created by using mainly ethnic instruments that are presented in the table below:

Below is the video clip of the first created score:

Percussive structure is quite straightforward **commencing at 00:15"**, setting the ground and pace of the tempo but without being overly dramatic. By that way it unobtrusively enhances the visual rather than drawing attention to itself. Although the modest beginning includes three boodams, one bendir and one tumbek, the moment where there is an obvious intention to make the percussion apparent is in bar **thirteen (00:40")** where the second tumbek introduces a Sufi mode following the womens' sacrifice scene. This is also one of the reasons why the darbuka, as well as boodams, bendir and tumbek to a certain extent, are mixed more **upfront** in the room.

Below is the segment's extracted score and audio clip:

Sound designed instruments were used essentially for two reasons. First and foremost it was thought, artistically, that a rational connection should exist in the score between the ancient human race and alien species.

Therefore, and in order to achieve this association, the use of synthetic instruments seemed appropriate due to the fact that there is an apparent technological aspect, in particular, considering the alien predators. In the provided video clip this is presented by their spaceships (00:30"), laser beam weapons (01:10") and self-destructive mechanism (01:23").

Secondly, this decision seemed to work well in terms of sound continuity-fluidity. In view of the orchestration and particularly applying sound design techniques such as granular techniques *etc.*, it was thought best to keep ethnic instruments' natural transients' attack rather than trying to expand and stretch their sound characteristics.

Alternative mixing methods had been explored by using audio effects and time-stretching algorithms but *it was* eventually decided not to take that route because of the unnatural and masked result which lacked the dynamics, definition and recognition of the physical instruments themselves. For that reason, extra synthetic sounds were used and seemed to work better in this particular situation.

In this second version, the use of symphonic orchestra attempts to combine eastern flavour with the Western philosophy of film scoring. Consequently, this can make the audience feel more familiar providing, *consciously or unconsciously depending on the listener*, a comfortable identified aesthetic but simultaneously without losing its initial ethnic angle and hopefully its unique sounding characteristics.

Orchestral strings react and bond together with ethnic instruments increasing the enigmatic scene's atmosphere. The score begins with a solo ney flute, orchestral strings and a synth pad. The last two set the environment for the characters' mysterious exploration inside the pyramid, hence the atonal strings'

semitones' part together with the synth's glowingly repeated A note. On the other hand, the ney flute's performance in A minor Bouseik (Phrygian) mode signifies the ethnic character, setting also the time to an ancient period, of the discovered hieroglyphics.

Below is the introduction's extracted score and audio clip:

String ostinatos also contribute to the expansion of dynamics **at 00:53"** where the symphonic strings support the rhythmic structure leaving space for the brass instruments to **reinforce** the main four-note motif performed by the qanun, santur, oud and accordion.

The four note motif has been composed with the intention of avoiding harmonic complication, even in the scenario of implementing eastern modes' variations; being something simple enough that could be a synonym statement to raw music expression which in turn signifies the plots' suggested hypothesis of time and place. It is also **worth noting** that this simple four-note motif has been scored bearing in mind that it could be potentially used as a thematic leitmotif for the alien forms throughout the film, either 'aliens' or 'predators' or even both with perhaps a certain variation degree.

In all cases, choosing the specific instruments did manage to provide the desired eastern ethnic character although, as mentioned before, there was no obvious intention in practicing eastern oriented scales-modes or even microtonal performances.

Finally, the **percussion** end segment consists of a variety of added instruments such as extra boodams, frame drum et. Al. that doubled by the taiko sticks, anvil and gong construct a dynamic crescendo cue which extends to the end of the scene. The mode used here is a variation of the Azari in 4/4 as demonstrated in the following extracted score:

### 3. John Carter (2012)

The aliens' home location in *John Carter* film has a distinctive atmosphere and thought that it would be appropriate to connect with eastern traditional instruments and music. As it is visually apparent there are a number of aspects that correspond, or at least seem to be related to a certain degree, to eastern geographic locations as discussed before.

The composition in the first video clip demonstrates an absolute ethnic scoring approach which consists of the instruments presented in the table below:

The bendir, bass darbuka dhol drum, and def have been used to construct the main slow 4/4 cifteteli mode. It seemed appropriate to create a rather heavy and slow tempo texture **so as to** correspond to the sluggish and weighty pace of the alien desert animals. This also parallels to the picture's architectural constructions, alien tribe appearance and the more generic morphology of the ground and living conditions.

In combination with the cifteteli rhythmic structure, the harmonic development of an E major hijaz mode was intentionally used for the beginning of the scene, as this mode creates a sense of grandeur given the fact that visually the picture zooms out and shows a landscape of, what it seems or feels to be, a very old civilization. Immense buildings, ruins, and walls around the city which seems to be in the middle of a desert contribute to this picturesque, impressive view.

It also contributes to a greater sense of dynamism in view of the alien tribe. This seemed to work well in conjunction with their external appearance as well; face harshness, a combination of leather and metal lightweight armory, big necklaces and shoulder weapon holsters are a few visual examples that indicate a warrior-type community which in turn implies a dynamically strong music character.

The E major hijaz mode progresses into an A minor bouseik (harmonic minor) mode, which is formed by the relative fourth scale of the E major hijaz, signifying the alien leader's entrance. The following score extract demonstrates the ethnic instrumentation realizing the previous points discussed:

The following second scoring attempt presents a quite diverse approach. For experimentation reasons, ethnic instruments and performances were replaced by the symphonic orchestra. In this way, a direct comparison could be drawn between the previous ethnic score as to how **effective**, original and experimental the music can be as well as how much of its original eastern ethnic character can be retained when using classical instruments performing an ethnic oriented score.

Results were found to be rather motivating. One might say that there seems to be a strong sense of unexpectedness due to the fact that the symphonic orchestra is not usually associated, at least in Western culture films, with rhythmic structures like Cifteteli or vibrant eastern modes such as Hijaskar. In general, and as it stands with 'John Carter' film as well, there is a more apparent Western harmony familiarity which possesses the vast amount of scoring time and usually attempts to move towards ethnic music orientation, in this case **in view of Middle Eastern flavour**, in the form of small injections used parenthetically and not predominantly.

Below are the score extracts for both pitched and **unpitched** symphonic instruments together with their corresponding audio clips:

As interesting and asymmetrical as this version of the score was found to be, it is irrefutably lacking the eastern music tradition scope of the first one. I must admit that if scoring for the classical orchestra was the first move of this film's scoring experimentation, with eastern music qualities always in mind, results might have been fairly diverse and perhaps more towards a musically predictable Western harmony.



On the other hand, and if the ethnic score had not taken place first, inspiration for such symphonic instrumentation would not be so colourfully expressed, at least not in the same level as it resulted to be. As a personal experience, it is more than often true that music tools and sound palettes have a direction of their own, influencing and driving the music inspiration accordingly.

The third and last score combines the first two and it is an attempt to bring the two scoring philosophies closer together.

The classic orchestra was used mainly for keeping the rich and wide frequency response, especially of the low strings and brass, and in such a way adding weight to the instrumentation. All of the ethnic instruments were used here as well, keeping the sense of eastern music atmosphere as vivid as possible. Below is the score and audio demonstration of this percussion and tonal instruments' combination:

### **3. Summary**

Scoring for these four films was indeed a challenging experience. In the case of *The Fifth Element* it was rather important to keep the balance between seriousness and humour although the scene itself contains enough information in order to create a score with the correct balance. Even if the film imparts many different ethnic elements, as discussed before, the newly composed score seems to successfully provide a different and, if one might argue, closer to the visual music scope concerning the selected video segment.

It could also be an example where the most of the scoring body could be on par with this approach while still keeping the in-between implementations of other ethnic styles of music, as in the original film's score. In all case scenarios, I believe that it would certainly be something considerably new to experience as a viewer.

In the other three films, the composition techniques have an even more apparent visual connection which makes the suggested scores work well in terms of the audiovisual relationship. This is especially

apparent in *Stargate* where the majority of the scenes are located around ancient Egypt. Of course, this applies to *John Carter* as well, as the desert scenic environment/aliens' home has a dominant character in the entire film.

Although a different film in character, *Alien vs. Predator* shares the same ideology with *Stargate* which is based around the theory of the world's creation by ancient aliens. Therefore, the film holds a strong visual connection with ancient human cultures, especially in parts such as the one chosen in this chapter for scoring demonstration.

In that respect, the audiovisual relationship appears to be quite balanced, even though this is a strong, dynamic scene which most likely would have been dealt with a grand orchestral cue. Nevertheless, the emphatic rhythmic nature of the Middle Eastern percussion together with the simple motif carried from the ouds and qanun gave the score a dynamism which is thought to work successfully in relation to the visual.

In conclusion, one might say that these scoring attempts manage to adequately present solutions that increase the overall sense of eastern authenticity in ways that have not been found to be apparent in the majority of cases previously visited and reviewed.

## End Discussion

### 1. Evaluation

Travelling through time and experimenting with ethnic instruments and compositions in film music was indeed a very intriguing and **multicoloured** experience. Going through a number of different cases, observing and taking notes on several case scenarios and filtering results by their connection, diversity or originality shaped a new breath of inspiration as well as several stages of scepticism considering the overall perception and approach of the Hollywood film industry and Middle Eastern music traditions. Having always in mind the initial angle of eastern-ethnic instrumentation, this research is believed to have reached a certain point where it is justified to state that the presentation and experimentation in silent and science fiction films, within the area of eastern ethnic music, is at minimal levels throughout the entire history of Hollywood's cinema. This, in turn, makes a valid point for the creation and contribution of the new original scores that have been composed for each research's example.

Starting with the silent era and the film *Intolerance*, it was indeed an example of contradicting **audiovisual** material if someone is to look at it from a music authenticity perspective. Through researching and studying other examples of the era, and having in scope the original *Intolerance* score by Carl Davis, one could form an even stronger opinion on ethnic music absenteeism, even when in a film as such the scenic location and overall visual strongly suggest the use of it.

I am not stating here in any case that Carl Davis' score is inadequate and of lesser importance, quite the opposite, but looking at the score in terms of **ethnic relationship** and **audiovisual** connection **it is quite apparent that the composer has used a particular Western harmonic philosophy which does not differentiate itself much from the music written for the silent era in general.**

Examining other films throughout the century also left a strong sense of absence adding at the same time more variables into the equation of new scores' development that would manage to present at least something different in terms of **eastern-ethnic music association and originality. Composing experimentation remained mostly on the realistic/acoustic side of the fence, trying to keep a clear and**

understandable character so that the music experience focuses on the performance and the sounding qualities of the instruments.

The Babylonian story in *Intolerance* has been approached with complete respect as to the time period, ethnic location and cultural philosophy. Reaching for a new angle of scoring such a film, although moving backwards in time for researching instruments/scales etc., was a procedure purely created by connecting the Middle Eastern and Western worlds together. That was also one of the main perspectives when this study's flow reached the scoring experimentation of the classical orchestra reacting with ethnic instruments. In this attempt, the Western symphonic orchestra tried to embody eastern music aspects, not to act as a tool or extra layer.

Like Goldsmith's dominant twelve-note approach in *The planet of the Apes* (1968), this music experiment of *Intolerance* moves in a similar way in terms of focus and dedication, predominantly by using eastern harmonies and having the symphonic orchestra's instruments perform the closest possible to the philosophy of ethnic articulations. In all cases the end result, whether it is effective or not as this is quite idiosyncratic and understandable, is thought to be at least contributing in terms of originality, diversity and authenticity.

Moving to the next part, which is the first chapter of the science fiction genre, the research turned into a different perspective in view of constructing the score. Always bearing in mind the initial angle of eastern music traditions, the scope due to the genre's nature turned to the construction of abstract scores consisting of ethnic instruments. Considering the science fiction films, the research's result through time revealed a greater scope of composing experimentation with films like *Forbidden Planet* (1956), *The Planet of the Apes* (1968), *The Fifth Element* (1997) et. al. moving out of the ordinary norm of their time.

Additionally, one can detect the propensity of other sci-fi films to follow the trend of their time period or try to explore and stretch the potential of existing sound technology. A few examples of the previously discussed films would be the dystopian *Blade Runner* (1982) with Papathanasiou's

grand synthesised score, Toto's rock band popular approach in *Dune* (1984) and Ludwig Goransson's *Tenet* (2020).

Last but not least, the research identified and presented the tribal-influenced ethnic elements used as a foundation in creating the score in James Horner's *Avatar* (2009) and Ludwig Goransson's *Black Panther* (2018).

The musical diversity which was discovered embodying the science fiction genre together with the wide range of imaginative plots and scenic environments demonstrated in these films led to the decision of opening the initial angle's spectrum and trying something different by creating synthesised sounds and compositions of ethnic instruments.

The two films that were chosen to experiment with, *The Phantom Planet* (1961) and *Voyage to the Prehistoric Planet* (1965), had the same perspective of bending eastern-ethnic instruments by using sound design techniques creating in this way a highly atmospheric cloud of music that could accompany the sense of the otherness. Although both scores were distinctively time-consuming, due to the studio recording sessions, computer sound design and heavy multichannel mixing, the end result is an interesting hybrid blend of synthesised and acoustic ethnic instruments.

A personal opinion, as mentioned before in the research, is that the score for *Voyage to the Prehistoric Planet* was found to be more compatible with the visual due to the term 'prehistoric' and the scenic environment which sets on an alien planet inhabited by dinosaur-like creatures. On the other hand, the second attempt of *The Phantom Planet*, which had a more vividly eastern character than the first one, was not always found to construct a strong connection with the visual, at least not in every scene. Nevertheless, and as being part of the experiment, it certainly gave a different perspective when dealing with space-related sci-fi films and also helped sculpting the next scoring step which was the *Voyage to the Prehistoric Planet*.

In other words, one could not be apart from the other as they were part of the same process. Overall it is thought that both films contribute in providing a different perspective considering the composing angles and scoring procedures in sci-fi films as well as demonstrating the potential of ethnic instruments when thinking out of the box.

The last, and supplementary, chapter to the science fiction exploration had been created by the need to categorise this cinematic diversity and focus on alien species and the approaches that composers are following depending on the science fiction **subgenre** (action, horror, mystery **etc.**). This next setup had been realised by the need of setting a musical soundstage between the regular **use of synthesised instruments, closely related to implied advanced alien technology, and acoustic instruments, e.g. symphonic instruments**, and its connection with more emotional scenes and character's connotations.

Through the supplementary exploration and presentation of new as well as already discussed sci-fi films, always in view of the new focusing angle of music related to alien forms, there were four cases that have been found rather interesting in the way that they implement music **which reflects the** scenic environments that have a direct or indirect relationship with eastern morphology. **The one common characteristic** for all of them was the lack of an ethnic scoring character, both in terms of instrumentation and/or tonal progression. All four new scores provide an unconventional, more vividly eastern-oriented path to constructing scores that combines ethnic and classic orchestra in order to enrich the audience's sense of grandeur and realism.

During this experimentation, procedures **led** to creating multiple versions of each video segment. This was a process followed in order to demonstrate how colourful a score consisting exclusively of ethnic instruments can be, how the same score would sound **if the ethnic performances were replaced by symphonic instruments**, and how a combined version of the two could sound. Which one is more suitable for each film and each occasion is, of course, a matter of personal opinion.

The core objective of this effort was to demonstrate, through research and examples, the absence of ethnic material in scenes that do imply and justify its potential use, and to provide these scenes with scores that have a tighter audiovisual connection in terms of location and eastern ethnic music aesthetics. In cases where the films did not directly point or implied such an audiovisual connection, experimenting and creation of ethnic sounds' amalgam and harmonic context utterly resulted in a diverse sonic personality differentiating from the norm.

## **2. Practical issues / Problematics**

During the entire procedure of this research, there were a number of technical issues that occurred. Perhaps one of the most significant and practical problems was the inability to completely isolate the film score from the rest of the mixed sound. There was a significantly time-consuming effort to find video segments of films that could be used as examples that fall into the same category of scoring approaches, demonstrating the discovered points and at the same time have an as clear as possible music representation without being overly clouded by sound effects and dialogues.

The above problem was even more complicated in older films such as *The Phantom Planet*, *Voyage to the Prehistoric Planet*, *The Day the Earth Stood Still* et. al. This occurred due to lower overall sound quality as well as narrower, sometimes mono, sound stereo field.

Concerning problems about films' audio mixing, there was a key feature that helped in creating better quality video clips making for audibly clearer music examples. That was the case in science fiction films that had a 5.1 multichannel embedded audio. In these situations, I was able to extract all channels and then remix the final result into a new video clip. Therefore, the centre/dialogue channel's volume, as well as all the surround channels, were lowered down in volume so that the main left and right channels, carrying the stereo recording of the score as well as some of the sound effects, could be clearly audible. As a result, there are several cases inside the science fiction chapters that followed this procedure.

Another problem concerning the sound was the opposite; the inability to completely isolate the centre/dialogue channel, cleaning all the rest sounds mixed in the centre, so I could proceed with versions of the scores that had been mixed with the implemented dialogues. There was only one case, which has been discussed earlier, in which I had the ability to keep part of the dialogue due to the absence of the centre channel's music and effects. This was a part of scoring for *The Fifth Element*.

This problem was of major importance, principally due to the following reason. All of the personal scores provided in this research have been composed bearing in mind not only the visual of each scene but also what is happening in the dialogues. This aspect does not only concern the exact script that the actor is performing but also all the individual vocal chromaticisms that may imply connotations not easily detectable when for example the dialogues appear in the form of subtitles.

An enhanced option would be of course subtitles for the hearing impaired but again this is not always accessible and entirely successful.

Moreover, this was an even more problematic situation in films with lesser sound quality; as it was quite the opposite case in silent films, in particular *Intolerance*, because of the absence/silence of any diegetic sounds.

As a result, even if the music has been composed with all the above in mind there were a few cases in which this could not be efficiently demonstrated in its full potential.

### **3. Complementary discussion**

It is true that each time period in film music has been found to present its own musical character, not in every case but at least in a considerable amount which can be thought as a leading trend. Starting from the silent era's romantic period and stretching through the 1960s, Hollywood's pragmatism and appreciation of film scoring went most of the times through the filter of classic romanticism and **neoclassical** composition methodologies. This together with the use of **certain** instruments that gained their attractiveness **and popularity** due to their bizarre-sounding personality, **e.g.** the Theremin, created certain stylistic trends that were followed in a considerable amount of film music scores.



Experimentation with **music and sound** techniques has indeed existed but only in a few rare cases such as *The forbidden Planet* (1956) and the later on *The Planet of the Apes* (1968). Popular trends were obviously **digested** easier by the audience as it would also pose an easier and **perhaps** quicker procedure of completing a film score in a possibly tighter budget **and/or** deadline.

The rise of computer technology and industrial production of synthesisers and personal computers had a huge impact, marking a new era in scoring realisation and composers' approach to science fiction film music. Except for entirely new and innovative sounds that had entered the cinema, such as Papathanasiou's entirely synthesised *Blade Runner* score (1982), composers were equipped now with new palettes of sound colours that **led** them into new inspirational paths in view of their film scoring style.

As a result, we observe the immaculate propensity beginning in the late 70s, early 80s, in which composers like Jerry Goldsmith, which was known for his previous radical music ideas such as the twelve-note system in *The Planet of the Apes* (1968), create film scores such as the original *Alien* (1979) with a combination of synthesised and symphonic instruments leaning away from traditional harmonic approaches, mostly apparent in aggressively horrific and mysterious scenes. The **atonal** blend of new and old instruments' sounds has at this stage a new place in cinematic music, getting gradually synonymous with the sense of mystery and horror.

This is an aspect in film music that has also been observed through today's current year of **2022**. Gradual technological evolution together with consumer's affordability in music computer products played a major role in the sculpting of film music and especially in popular Hollywood box-office films. Research film examples such as *Moon* (2009), *Gravity* (2013), *Tenet* (2020), *Underwater* (2020) as well as many others, revealed and confirmed this parallel path between music and technology. **This is an aspect** that did not only affect the overall scoring sound type and quality, but also the constructive and creative path of music composition itself.

This last statement is connected with the changes in the type of music that the composers choose to write for science fiction films. As mentioned before, until the mid-60s, classic romanticism together with

the **neoclassic** approaches created busy and continuously moving soundscapes which was more or less the norm in science fiction films' scores.

Going through the technological changes in the 70s-80s, we can observe a reduction in music complexity, at least from a harmonic point of view. As time passes, and as we enter the 21st century, we observe the transformation of composition techniques and the introduction to music building structures **relying in** vertical systems. The term vertical refers to scoring structures by adding blocks of music, usually sound designed instruments, creating a more harmonically minimal, or static, composition, not in terms of dynamics but in terms of music tone complexity. Though static and minimal **in that respect**, usually these scores exceed pitch and dynamic variations as well as rhythmic structures.

As an overall statement and taking a step back in order to see the bigger picture, the music seems to rely more upon the technical metamorphosis of sound, with its frequency and dynamic **characteristics** affecting the connected scene. In a number of modern sci-fi film cases, this has been found to match the corresponding visual. We observe more camera close-up in characters, slow motion dramatic scenes, filmic environments that connote **despair**, pessimism, loneliness, malfunction, dizziness, emptiness, a tendency **towards grey chroma screen filters**, absence of vivid **colours etc.**

Representative examples supporting this argument can be found in previously discussed films such as *Gravity* (2013) *Arrival* (2016), *Underwater* (2020) et. al. Inevitably, repetition is another feature that is the quite apparent and logical result of vertical composition. Repetition relies not only on the overall cue, but also on individual elements that construct it.

#### **4. Philosophical insights**

This research inevitably gave birth to **personal skepticism and raised questions in a variety of issues** encountered during its development; both in terms of focusing on **eastern-ethnic** approach and in a general development wider context. **The above, indeed, formed in conjunction with the first and foremost leading question considering ethnic authenticity and percentage of creative use of it, as the study presented in a number of different films' cases.**

Beginning from the last chapter's end in view of the technological evolution and its influence in science fiction films' scoring, a two-part question arose considering the state that we are now in the year 2022. Does indeed music experimentation rely today, or through recent years, on sound design and technological advancements that relate to that, and if that is true up to a certain extent, does convenience and accessibility in such technology is responsible for this monopoly?

To answer this question one must again look back in the history of film music, and in particular in the science fiction genre, and once again remember the undeniable connection between film scoring and technological development. Yes, indeed we live in a time where we are surrounded by high technology items that are highly accessible and easily consumable and that is also the fact in overall music production. This can indeed explain the reasoning behind the concentration and high usage of sound design in film music. The problem here is that this cannot entirely answer the question of harmonic simplicity, sense of randomness, abstract atmosphere and absence of profound themes and leitmotifs; perhaps not looking at it directly.

One possible answer that could also relate to technology is by taking an even further step back and with a wider perspective have a look over societal structure and especially interpersonal relationships. Maybe a part of answering the initial question is the fact that interpersonal communication and everyday communal interactions are being greatly realised through technology, and in particular through mobile devices and social applications, web-cameras and text messages. Perhaps this has created a sentimental gap, especially in younger groups of people, and expresses this absence of harmony and overall structure in today's science fiction films' music as well.

Popularity and high consumption, being the prototype direction of social mass products, could have also created a highly consumable model in film music, especially when taking into consideration the level of economic and social success that an upcoming film might have. Adding to that, film production companies that target highly consumable sci-fi films could also have a strict and contained timetable which may, or may not, leave proper space for a composer to develop and express his full potential. This could also be another reason behind the repetition of modern scoring techniques and approaches in the science fiction genre.

This scepticism of course can be the part of an entirely different research subject concentrating on music psychology of modern societies in conjunction with the film music industry, but in this case, it could serve as a potential explanation of the loud absenteeism of harmonically memorable sci-fi scores **as observed in** earlier film composers such as John Williams, Jerry Goldsmith, Alan Silvestri, James Horner, et al. This can be also supported by the previously mentioned historical fact that every art and its according movement, has been created and filtered throughout human history by the social circumstances occurring at any given time period.

**On the other hand**, there are certain examples, as discovered and presented in the research, in which there is an apparent attempt to reach for the exotic by implementing ethnic instruments and rhythmic structures. Two of these cases were found in the films *Avatar* (2009) and *Black Panther* (2018). Nevertheless, this also raises a question considering the location each film is referring to or draw inspiration from and generates scepticism in view of the Middle Eastern musical angle of the research. Both mentioned films are focusing on tribal traditions; either this is evolving on an alien planet which is the *Avatar* plot's location, or more straightforward presenting the African continent which is the case in *Black Panther*.

As a result, in both these cases, the music follows the visual and it is indeed closer to music traditions than other sci-fi films that are located or have **implications of** other geographic locations. So the basic question is why have the African continent and/or the more generic tribal characteristics of a given society and its relative music traditions been translated and transported into sci-fi film music in a more realistic way when compared to other Middle Eastern cultural societies? In addition, why have films and scene examples such as the previously discussed and scored *Stargate* (1994), *The Fifth Element* (1997), *Alien vs. Predator* (2004), and *John Carter* (2012) have been musically dealt with a decreased level of sound and instruments' **geolocational** realism?

One possible answer to this problem would be the familiarisation and appreciation of Western cultures in view of certain music traditions and the misleading disorientation in others. It is a historic and commonplace pragmatic fact that Western culture, especially American as this discussion concentrates in Hollywood, is strongly influenced by African culture tracking back to its very societal

formation. African music and its traditions have been an undoubtedly important element in the history of the American continent's cultural evolution.

Even if traditional African musical aspects have transformed and been embodied with other kinds of music traditions through time, **nevertheless**, the cultural connection exists and there is still music information tracing back to the roots. A simple example would be the familiarisation of sound and its translation when an American citizen listens to African tribal drums/percussion. Additionally, the entire American continent is also rich in tribal societal history (American Indians, Cherokee, Apache, Inca, Moche et. al.) **and carries rich music traditions that bare a lot of similarities with the African ones.**

On the other hand, Middle Eastern music traditions may pose a problem in view of Western cultures' interpretation, especially in film music. This is where the moving picture and its political angle come into the foreground. Terms such as 'Western orientalism', 'exoticism' and 'fetishism' have been thoroughly discussed considering their meaning and the influence they can have in today's cinema. Hollywood productions due to their massively global impact are beyond doubt helping with shaping and even establish cultural portraits and their physiognomies. In his discussion considering the Hollywood cinema and stereotyping of Muslims, especially after the 9/11 incident, Senanayake (2021) states that "Hollywood which has become a flagbearer of Western cinema, plays an important role in constructing identity and images including the stereotyping of Muslims" (p. 64).

By combining the above with this research's findings one could argue that Western orientalism in the music of the science fiction genre is accomplished by the non-existence of eastern-related music itself. This has been demonstrated and discussed in a number of cited films, including examples of scenes where, once more, the Middle Eastern location is either fairly straightforward or in some situations strongly implied. Nonetheless, there is one core issue at this point that is worth mentioning. Taking into account this resulted absence and the previous point of the visual cultural construction of stereotypes, they both contradict the discovered visual and their conceivable connotations. Science fiction, being perhaps one of the most open-minded cinematic genres, did not appear throughout the research to present a certain stereotype in view of Eastern societies and cultures.

Subsequently, there is the hypothetical/rhetorical question of music scoring itself that focuses on music as a human expression of feelings and emotions, and not necessarily as a political statement. If we suppositionally accept as a fact that Western superiority and stereotyping antipathy towards eastern cultures do exist inside the science fiction genre would we then, if we could magically reverse this outcome, end up with different approaches in film scoring itself? In other words, and as a more straightforward example to that, would Michael Giacchino have constructed a different version of his score to *John Carter* (2012) if there was a better appreciation of Middle Eastern cultures and not false created stereotypes? Or on a different situation considering political beliefs, influences, and controlling of the masses, would Bernard Hermann have presented us with a diverse scoring character in *The Day the Earth Stood Still* (1951) if the United States of America were not in the middle of the Cold War era with the Soviet Union and the film did not "reflect the fears and anxiety of the Cold War era and nascent atomic age" (Pfeiffer, 2019)?

If we then focus exclusively on the outcomes of music composition, always in relation to the studied sci-fi genre and not the entire scope of Hollywood's film music, would it be a rather large difference in the final outcome considering each case?

As a personal opinion, I would argue that this would not be the case, at least in the majority of composers and in view of their stylistic scoring approach. In the opposite direction, if that was true and composers are indeed helping in creating political stereotypes through their music, we would possibly expect a more vivid diversity between composers' scores and between films belonging in the same genre. Moreover we could well observe new trends in film music depending on the geographic location and/or cultural idioms a film could be based on. On the contrary, and in view of its Middle Eastern angle, this research provided the exact opposite results, meaning the absence of music elements that could reflect eastern music cultures and traditions, at least in the cinematic areas in which the study took place.

On the other hand, perhaps the truth might be somewhere in the middle and film composers reacted, react and will keep reacting based on their human beliefs and influences of the time period in which they have been called to express their own creativity. This can lead to a certain translation/opinion that

"the moment we recognize to what degree film music shapes our perception of a narrative, we can no longer consider it incidental or "innocent" (Gorbman, 1980, pp. 183).

A different thought is how ready might the vast majority of Western population be in order to comprehend and accept a more eastern-related tone in Hollywood productions? Of course, this communicates with the previously mentioned political issues of cinema creating false stereotypes and social behaviours. If this **is true to a greater extent**, it might negatively reflect social opinion and openness in music as well as being responsible for the level of appreciation and implementation of **music** authenticity in film scoring. As Wingstedt et al. (2010) in their discussion considering the meaning of music in films and connections within the social environments state "The context may be more or less clear, but from a social semiotic point of view it is impossible to think about music without a social, cultural and situational setting including also the 5 multimodal interplay involved in any musical performance – be it live or recorded" (pp. 4-5).

The last could also connect to the ultimate goal of the Hollywood film industry; the financial and social success of a film. What are the criteria and how might these be firstly shaped by the industry itself? How does this reflect the composer's autonomy and to what extent this can affect his/her work? If we accept the fact that Hollywood's film industry practically or theoretically promotes the superiority of Western civilization creating distorted images of eastern cultures and traditions, how much space is really available for ethnic experimentation and what would be the compromises in authenticity in a hypothetical film scoring situation?

It is quite important following these rhetorical questions to not forget the impact of Hollywood film productions and the number and diversity of people they can reach. As Greenspan (2013) in his discussion in view of various musical styles and connection with wide audiences states "despite differences in stated or inherent aims, and despite differences in financial structure, the effect that Hollywood studios have on the American public with regard to music is surprisingly similar to the effect the great museums have with regard to art" (p. 73).

## 5. Epilogue

Music as an art form is **shaped** by, and follows meticulously, the social-cultural time period of its time. It is undoubtedly an encircling relationship of genesis and obsolescence, sculpting and deformation, limbo and rejuvenation. Film music is no exception to that rule.

Perhaps it is the time to proceed with experimentation and break boundaries that may have kept ethnic music traditions around the world in Westernised music designs. At least, and resulting from this research's perspective, add a small stone to new construction of thoughts that may give birth to inspiration and **generate** new angles that had previously explored with reluctance and/or minimal gravitas in terms of eastern ethnic-related music and sound authenticity.

This research experience was a chained reaction of exploration and expression in film scoring, which led to a path of self-exploration as well as theoretical and empirical knowledge that gained through time. The initial angle of eastern ethnic music had been tried to keep intact at all times, acting as a filtering engine of all the investigation and discoveries that had been presented. The same applies to all the original scores that were composed with this perspective in mind.

Hopefully, the contribution other than being the presentation of an alternative way of thinking in film music, sometimes vividly authentic and other times strongly experimental, would also be the existence of **audiovisual** material that can be used as a tool for inspiration and further development.



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