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# Starships, Gallifrey, Krypton, And Earth: Searching For The Hero Archetype In The Melodies Of Science Fiction And Superhero Films

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**STARSHIPS, GALLIFREY, KRYPTON, AND EARTH: SEARCHING FOR THE  
HERO ARCHETYPE IN THE MELODIES OF SCIENCE FICTION AND  
SUPERHERO FILMS.**

by

**JAMES WESLEY TALBOT**

**THESIS**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

**MASTER OF MUSIC**

2015

MAJOR: COMPOSITION / THEORY

Approved By:

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Advisor

Date

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When I was four or five, I secretly witnessed my Dad and Brother playing guitars in a basement bedroom. My father was quietly teaching my older brother the chords to "The Sounds of Silence" by Paul Simon and Art Garfunkel. Something in the music changed me forever as they sung the melody slowly and softly while managing the chord changes in tandem. I'll always remember that moment, and love both of them for not realizing their young audience member.

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## INTRODUCTION

My love for science fiction and superhero films began at the young age of four. The theme music for *Superman* was likely my first conscious exposure to orchestral music. Whenever I heard the distant rumble of John Williams's low brass section pumping up the opening of the "Superman Theme," I got excited. Each time my younger self heard the theme emanating from my parent's television speakers, I knew Superman was going to appear any moment. So there I sat, Superman action figure in hand, waiting for my hero.

As an adult academic musician, I am afforded the opportunity to ask myself important questions about my favorite childhood melody: Why did that theme cause me to think of Superman? Did the melody have the same effect for others? What is it about this melody that caused a young boy to think he too could fly?

Dr. Braunschweig exposed me to the musicologist Deryck Cooke, and his text, *The Language of Music* while I was trying to sort through the myriad of ideas that would become this body of work. As my study progressed, he proposed other students of "grammar and syntax"<sup>1</sup> in music like Victor Kofi Agawu and his work, *Playing with Signs*, and the film music doctoral thesis that is Frank Lehman's *Reading Tonality Through Film: Transformational Hermeneutics and the Music of Hollywood*. These men and their works became the cornerstones upon which my arguments are based, and fleshed out several demanding aspects of this thesis.

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<sup>1</sup> V. Kofi Agawu, *Playing With Signs: A Semiotic Interpretation of Classical Music* (New Jersey: Princeton University Press, 1991), 9.

Cooke was as inspiration to me thanks to his close association of expression and emotion to that of melodic quotation by composers. His theories concerning interval relationships and the linguistic manner in which composers wrote melodies intrigued me even though his ideas are—to some—stuck in the 1960s and address genres outside film scores.<sup>2</sup> Similarly, Kofi Agawu seems to agree with an intervallic approach to meaning in a comment on the matter of studying single notes versus combinations:

if we treat the individual note as the elementary unit, we run into the immediate problem that not only does a single note have no meaning except in relation to others, but also the note is, for all practical purposes, a very small unit indeed. The sheer labor involved in developing an analysis of a piano sonata, symphony, or opera with the unfettered note...is considerable.<sup>3</sup>

Cooke asserted composers used a similar interval vocabulary to emote and connect with listeners, like an agreed upon, subconscious language. Stravinsky called this type of practice an “illusion,”<sup>4</sup> but we all know Stravinsky often said one thing, while meaning another. Cooke reminded us these emotions were not that of the composer, or of the listener, but instead the intervals and “tone settings” of emotions themselves. Cooke makes an excellent observation regarding emotions in this regard:

Emotions called forth by music do *not* ‘begin and end with the musical stimulus that aroused them’ ...many people’s experience that the feelings aroused by a piece of music can persist for days afterwards, without memory of the actual notes that caused them.<sup>5</sup>

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<sup>2</sup> Deryck Cooke, *The Language of Music* (New York: Oxford University Press, 1959), 74-14.

<sup>3</sup> Agawu, *Playing With Signs*, 16.

<sup>4</sup> *Ibid.*, 15. “If, as is nearly always the case, music appears to express something, this is only an illusion, and not a reality.”

<sup>5</sup> *Ibid.*, 20.

My fondness for this interpretation guided my findings, but is in no way slighted by the contributions of Lehman to my *Star Trek* chapter, Agawu's analysis of Leonard Ratner's topic theory and signs, and introversive and extroversive semiosis as it applies to my study of science fiction and superhero films.<sup>6</sup>

Agawu remarks on the idea of reception theory in *Playing with Signs*, and reminds us that musical creation can negate or surpass all expectations, but still presupposes preliminary information (i.e., the hero archetype) and a trajectory of expectations against which to register the uniqueness of a melody.<sup>7</sup> Was it the melodic intervals of the "Superman Theme" that inspired the feeling that I could fly from my parent's entertainment center, or was something in the rhythm of the theme that inspired flight? As I grew up, I discovered Science Fiction films like *Star Trek* and *Star Wars*; genres that featured different types of heroes and anti-heroes. One of them was even a 305-meter long starship named, *Enterprise*. Each of these films clearly defined their heroes before and during their arrival on screen with flourishing fanfares and repeated melodic themes.

What are the melodic traits of heroism in musical themes? I couldn't readily identify them in some cases, but I knew their melodies stirred something in me when hearing them. I could always sing them while leaving a movie theater or flying a model ship around my childhood bedroom. I later realized a lot of other children and people

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<sup>6</sup> Agawu, *Playing With Signs*, 4-5, 26. Agawu stresses the importance of considering *how* a piece means over *what* a piece means based on the multiple interpretations of works by listeners and composers.

<sup>7</sup> *Ibid.*, 35.

inherently knew these melodies, too; the emotional connections that melodies create remain long after they are heard.

What are the most powerful intervals of the harmonic series that composers use to express the hero in science fiction and superhero films? Are they the typical perfect fourths and fifths that helped Superman fly around Metropolis? Does it matter if the interval descends, or ascends in the melody? Are there other intervals that might surprise academic musicians into taking another look at popular melodies of these genres? How exactly did composers of the late twentieth and twenty-first century express the heroes of my childhood musically? The relationship between interval and melody, repeated rhythmic patterns, and topics will be studied in an attempt to discern the vocabulary of the hero archetype composers frequently use.

This paper will answer these questions utilizing selections from this author's personal experience teamed with the tools forged by my academic choices, and composers like Igor Stravinsky, Richard Strauss and Gustav Mahler. The use of common pitch class sets will be investigated and interpreted, along with some Schenkerian analysis where applicable. Be advised that extensive melodic and harmonic analysis will not be found here, for this study is not an exercise in demonstrating familiar analytical tools. The tools provided academic musicians and those audience members so inclined (e.g., pitch class sets, scale degrees, harmonic analysis, and Schenkerian analysis) will be utilized as required.

## Terms of Study

### **Background Information**

Mel-o-dy (melədē) *noun*.

*A rhythmic succession of single tones organized as an aesthetic whole.*<sup>8</sup>

The study of melody is nothing new to academic musicians. The mysteries surrounding intervallic and harmonic implications of melody in performance or analytical settings have been the topic of scholarly works for decades. Many scholars have focused on melodies found in Purcell, or Mozart operas (Alan Howard and Andrew Steptoe), Schubert song cycles (Edgar Istel and Frederick H Martens), Beethoven symphonic themes (Richard Will studied morality and humanity in the pastoral symphony), and popular tunes from Tin Pan Alley composers like George Gershwin (Ulf Lindberg). While this thesis project will comment, reference, and examine melodies peppered throughout the classical and romantic eras, prominence will be given to a specific genre: the music of science fiction and superhero films of the past fifty years.

Science fiction novels, films, and television shows represent modern myth akin to that of the attributed works of Homer (*The Iliad & Odyssey*), and the pantheon of Greek and Roman gods that scatter themselves throughout our choice planetary names and space research vehicles. Thomas and Marilyn Sutton's 1968 study on mythology and science fiction is relevant today in its findings; especially that of their theory of modern mythology

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<sup>8</sup> Merriam-Webster, "Definition of Melody," [merriam-webster.com/dictionary/melody](http://merriam-webster.com/dictionary/melody), (accessed: January 12, 2015).

being tied with that of destiny, unlike the former, early myths being concerned with humanity's origins:<sup>9</sup>

Before the advent of the scientific mode, the only means by which man could relate to his universe was through mythopoeic mode. His acceptance of the gods and heroes as the meaning of his world served as an affirmation of intimacy with the most basic and therefore sacral structures of space, of time, of natural occurrences, and of his historical event.<sup>10</sup>

The gods and heroes that challenged our ancestors never left. Stories of the fall of Illium, Jason and the Argonauts, Robin Hood, King Arthur, and many unmentioned lost heroes have been told and retold across time. As technology evolved, so did the vehicle through which heroes are presented to the audience.

It is easy for a study such as this to become too involved in the variety of media programs that have excited children and adults with humanity's archetypal hero throughout the last century. For my purposes, focus will be placed on the hero archetype as it is presented melodically, rhythmically, and thematically through a common musical vocabulary throughout the beginning of science fiction television in the modern era (1960s), and films that continue to fuel new projects into the twenty-first century.

Susan Arpajian Jolley's 2007 classroom study into the hero archetype as it is presented in *Beowulf* and the King Arthur legends sparked a research paper on what it means to be a "hero" according to her New Jersey high school students. She was surprised

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<sup>9</sup> Thomas C. Sutton, and Marilyn Sutton, "Science Fiction as Mythology," *Western Folklore* 28, No. 4, (October 1969), 231.

<sup>10</sup> Ibid., 232. For more on this subject, see also: Rashna Imhasly-Gandhy, "Myth, Archetype and Individualization," *India International Centre Quarterly* 19, No. 4, (Winter 1992), 76-87, and Susan Arpajian Jolley, "In Search of a Hero, in Search of Self," *The English Journal* 97, No. 2, (November 2007), 23-28.



to find that many students identified heroes with qualities that were not connected to ideas of superheroes or supernatural beings of mythology, but with human character traits and values. One student observed that “being a hero is more than being yourself. I don’t think that following your dreams is that great for the world; the only person who really wins in that situation is you.” Another student commented on never having given the concept of “hero” a thought beyond that of superheroes or celebrity figures.<sup>11</sup>

The study of film music and the concept of hero and the hero archetype is a relatively young field in academic research. A search for materials on the subject will reveal articles and books available as far back as the 1940s with studies in the vein of semiotics (embodying narrative elements) and psychological cues as applied to music being the support to the action within a film. Studies by Claudia Gorbman, K. Ernest Irving, and Douglas W. Gallez present the reader with fledgling approaches to how film music should and would be studied as its acceptance in the academic vacuum evolved.<sup>12</sup>

As the airlock surrounding academic study of science fiction and superhero film music is beginning to equalize to the atmosphere in which we live today, musician academics like Deryck Cooke, Leonard Ratner, Victor Kofi Agawu, Frank Lehman, Gary Westfahl, Cameron Patrick, Norman Klein, Jeremy Barham, and many others have manned

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<sup>11</sup> Susan Arpajian Jolley, “In Search of a Hero, in Search of Self,” *The English Journal* 97, No. 2, (November 2007), 27.

<sup>12</sup> For more on this, see: Douglas W. Gallez. “Theories of Film Music,” *Cinema Journal* 9, No. 2, (Spring 1970), 42. “The pace of music in films is at present indeterminate and largely unexplored. It cannot be discussed with the precision attaching to the visual components.”

the helm of a ship that will carry this study, and those yet to come into a deeper understanding of how melody presents the protagonist to an audience.

### **Sub Problems**

The paramount issue with a study such as this is the availability of musical scores for analysis. Many of the old scores for the pieces studied (e.g. *Doctor Who*, *Star Trek*, *Star Wars*) have been transcribed and made available for public sale in a variety of styles that make analysis easier, but still present many challenges. These scores are essentially high quality reductions, or emphasize the melodic character for amateur musicians to reproduce, or to ease performance by the local elementary concert band. One might uncover this truth to be a disadvantage; however, it has been rather fruitful in my work due to my emphasis on melody: it is completely intact in most, if not all of the scores found. The principal voices may not always be there, and the melody may be transposed, but none of these issues inhibited analysis.

Many modern pieces afforded the challenge of being unavailable for study (i.e., no transcriptions exist), or too expensive for a project of this scale. Scores for new films like *Star Trek* (2009), *Man of Steel*, and modern *Doctor Who* required some transcription and may include mistakes in instrumentation, or rhythmic gestures. I have adjusted my study to account for such occurrences, and acknowledge them where applicable.

One may find my harmonic analysis left wanting in this study of the hero archetype in melody and melodic interval relationships. It is true that this paper will present many intervallic relationships, Schenkerian analyses and the use of scale degree for a deeper understanding of what others and I have uncovered, but little in the realm of fundamental

harmonic analysis. This omission is intentional, and meant to focus on the study of melody as it presents certain intervallic similarities throughout performance in a given film or television show. Underlying harmonies may be addressed when reductions are presented for analysis and comparison as a tool to represent the fundamental task of harmony (i.e., subordinate to these melodies). Rhythmic figures that repeat throughout the genre will be analyzed and compared with topic theory and signs of Ratner via Agawu's *Playing with Signs*. Specific key relationships and significance will be addressed throughout this thesis when necessary.

Extant academic research on many of the topics regarding science fiction and superhero film melody is minimal, leaving my study an amalgamation of observation and symbiotic association between the works of academic scholars like Frank Lehman, Victor Agawu, Deryck Cooke, and Cameron Patrick (the extent to which each are applied to my research will be addressed later in this introduction.) My choice of variety in this study of melody is specific to how intervallic relationships represent heroic archetypes in chosen scores, and is most applicable with that of Deryck Cooke's, *The Language of Music*. Particular emphasis on his findings, though they are from the 1950s and 1960s remain steadfast into the twenty-first century; reading this paper will verify this statement. Elements of other studies will be utilized as necessary, but the findings of Cooke were determined a "best fit" for my purpose. There are, on occasion, interpretations of intervals that neglected extended harmonies (e.g. the relationship between seconds, sevenths, and ninths) that challenged Cooke's interpretation of intervals, and require finesse with regard to analysis.

Academic musicians and those unfamiliar with the melodies and films selected will be required to dig deeper and uncover performances of these melodies via YouTube searches, or Netflix viewings. This may carry a few individuals outside the comfort zone that classical studies have afforded the academic world, but none of them should be alienated by my suggested course of viewing a “performance” of these melodies and cues. Without the incredible technology of the Internet and its overwhelming availability of content, this study would have certainly been crippled, or if one will allow, “Dead in space.”

### **Scope of Study**

Intervals selected by composers to represent heroes through a melody assigned to them is predetermined by subconscious cues that composers have been aware of through study and osmosis; we’re all programmed to enjoy the fundamental intervals of the harmonic series, and that of tonic / dominant relationships conveyed through use of the major / minor second and seventh inversions. This work is not an attempt cover the gamut of science fiction music available for study, nor is it an experiment in futile assignment of emotional interpretation by an admiring student. The study is grounded in application of Deryck Cooke’s “language” assigned to common intervals within melodies—a language used by composers for centuries to communicate with audiences—and how those intervals translate into the hero archetype of each chapter’s focus. The use of topics, and extroversive and introversive semiosis<sup>13</sup> as discussed by V. Kofi Agawu, and rhythmic

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<sup>13</sup> Agawu, *Playing with Signs*, 23. Introversive semiosis is defined as reference to each sonic element to the other elements to come, and presumably to those that have come

analysis of key phrases will be applied throughout each portion of this work to provide support to Cooke's altmodisch, but sound theory.

The main melodies of each theme selected are the objects of my examination. For my purposes, the main melody is defined as the melodic fragment that one can easily recognize upon first listening, or attribution to a hero through popular culture (e.g., the fanfare for the starship *Enterprise*, or the iconic themes of John Williams for *Star Wars*, and *Superman*), or as is the case in more recent film, the theme that reveals itself with the end credits. Extensive score study was beyond the capability of this work, but might be possible in future projects with increased access to full scores, expensive licenses, and analysis by other students in the field of film music. As music theory in universities continues to evolve (the articles available this year alone have been astounding!), so shall the aperture through which academia will allow new melodies to flow for engaged students who seek new ways to connect with melodies of the past, present, and future fiction and non-fiction worlds.

### **Review of Literature – Films and Media**

Several motion picture films of the science fiction genre are referenced throughout this work (for a complete list, see Figure 5.1). Chief among them are: *Doctor Who*<sup>14</sup> (the first “series” from 1963, and its modern reboot in 2005-present), *Star Trek*<sup>15</sup> (the television

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before. Extroversive semiosis denotes the referential link with the exterior world. This is a theory of Roman Jakobson.

<sup>14</sup> *Doctor Who*, (originally aired November 23, 1963).

<sup>15</sup> *Star Trek*, (Originally aired September 8, 1966).

series and motion picture films through 2009), *Star Wars*<sup>16</sup>—exclusively *A New Hope*—will be discussed, with *Battlestar Galactica*<sup>17</sup> (the 2003 reboot), and Richard Donner’s *Superman*<sup>18</sup> featuring Christopher Reeve in the iconic role. The final chapter of this work will discuss a sample of themes found in other science fiction and superhero films from 2009 onward.

The music used for analysis was found in officially released soundtracks (e.g., *Battlestar Galactica*, *Star Trek*, *Star Wars*), and transcribed from repeated listening/viewing of scores unavailable due to copyright issues, cost, limited availability of complete scores, and, in many cases, a complete lack of printed material. Those scores that were transcribed from piano reductions from Hal Leonard books will be referenced accordingly, and provided in the works cited for review.

*Playing With Signs: A Semiotic Interpretation of Classical Music* by V. Kofi Agawu offers a combination of semiotic and structural analysis of classical music, and its natural progression towards programmatic music that can, and often is, film music. Agawu’s expansion on introversive and extroversive semiosis, and topic theory of Leonard Ratner<sup>19</sup> will be applied to the melodies selected in my study. Topic theory, commonly

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<sup>16</sup> George Lucas, *Star Wars Trilogy (Episode IV)*, DVD, Directed by George Lucas (Los Angeles: Twentieth Century Fox Home Entertainment, 2004).

<sup>17</sup> *Battlestar Galactica*, “The Pegasus,” episode 23, August 24, 2013 (originally aired September 23, 2005), and *Battlestar Galactica*, “Someone to Watch Over Me,” episode 72, August 24, 2013 (originally aired February 27, 2009).

<sup>18</sup> David Newman, Jerry Siegel, Joe Shuster, Leslie Newman, Mario Puzo, *Superman: The Movie*, DVD, Directed by Richard Donner (Warner Home Video, 2001).

<sup>19</sup> Agawu, *Playing With Signs*, 39. A Topic is a musical sign consisting of a signifier (a certain disposition of musical dimensions) and a signified (a conventional stylistic unit, often but not always referential in quality). Signifiers are identified as a relational unit within the dimensions of melody, harmony, meter, rhythm, and so on, while the signified

applied to eighteenth century musical expressions like *Sturm und Drang*, can, as suggested by Agawu, be expanded to include extra musical ideas (i.e., the hero archetype), and will be helpful in proving how melodies and intervals foster a common language between composer and listener. To that end, I will modify topic theory slightly to be assigned as melodies that embody the heroes to be studied, instead of direct application of the theory, but acknowledge when Ratner's traditional topic theory analysis is used as well.

Frank Lehman's, "*Reading Tonality Through Film: Transformational Hermeneutics and the Music of Hollywood*," was astounding in its completion, and impressed upon me that successful scholarly research in theory and musicology are underway and doing well in the genre of science fiction films. Lehman's project reaches into films like *Empire of the Sun* as well, and focused on character development within the music; this fascinated me and offered an approach that will carry across these five chapters. The daunting capability of Neo Riemannian theory was helpful in visualizing key elements of analysis, and will appear briefly in this paper.

*The Language of Music* from Deryck Cooke is the foundation on which this structure is built. His charismatic writing style opens his theories and interpretations for the listener in ways that many modern authors and music scholars struggle with today (think Jonathan Berger and his review of *Playing With Signs*). The frequently used intervals Cooke identifies are valid in his analysis of postmodern academic music, especially within the realm of science fiction and superhero films. His analyses feature direct and indirect

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is designated by conventional labels drawn mostly from eighteenth century historiography.

extra musical interpretations that may require the listener to make emotional connections with the heroic themes while cautioning against, “reading into the music what isn’t there.”<sup>20</sup> I will be careful not to misattribute as a result. Indirect interval significance is not achieved when partiality and emotional connectivity are disassociated from a listener’s impression of a given melody; they are required elements in this study of the hero archetype, and with the aid of topic theory, outflank any weaknesses in Cooke’s interpretations.

### **Organization of Study**

As previously mentioned, this thesis will focus on the intervallic construct of primary hero melodies from select science fiction and superhero films from the 1960s to 2014, and their respective, significant connections to that of classical composers. The study will demonstrate how melodic intervals relate to one another throughout the periods selected, and how each melody guided conscious and subconscious character development. Analysis of the selected melodies will appear in transcription, reduction, Schenker sketches, set theory and interval identification. The chapters will follow the chronology of selected melodies, focusing on what comprises the melodies (melodic, rhythmic, and programmatic elements), and what traits one might attribute to the characters, or overall plot of a film as a result of listening to its select themes. The final chapter represents a “catch all” of melodic themes and will attempt to ascertain what may lie ahead for the hero archetype in music.

The goal of this research is to demonstrate further vitality in the study of melody as it applies to these film genres, and to prove that a shared musical vocabulary and its

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<sup>20</sup> Cooke, *The Language of Music*, 129.



structures create a definite subconscious language for the listener and further typify the hero archetype—through music—in science fiction and superhero films.

### **Methodology**

The layout for each chapter varies slightly, but will touch upon basic facts and history surrounding the science fiction or superhero medium selected. An analysis of the primary hero theme will be presented along with evidence to support my thesis from the appropriate sources as previously outlined. Each chapter is curtailed with linking data from my analyses.

The musical material presented will appear in reduction for ease of interval analysis with exception to the scores from Beethoven, Brahms, Strauss, etc. These scores are critical in linking the interval selections of modern film score composers with that of their classical counterparts (it is important to note that the not-so-subtle nods to these composers by some of the best film composers of the modern era should not be overlooked by this, or any future study.)

Let's begin our journey into this "stream" of intervals that comprise a melody, and answer some of these questions together. There's no better place to begin than a Junkyard in 1963 London, and a big blue police box!

## CHAPTER 1

### Wibbly Wobbly Timey Wimey: A Hero without Perfect Intervals

It is difficult to imagine this project without discussion of the longest running science fiction television show in history, *Doctor Who*, and the melodic themes of its titular anti-hero, The Doctor. Prior to the beginning of this paper, I had limited knowledge of what *Doctor Who* was about, let alone the scope of how famous the show is in Europe, and now the United States. This success is thanks in no small part to the tenure of David Tennant, Matt Smith, and Peter Capaldi as the Tenth, Eleventh, and Twelfth Doctors of recent years (2005-2014), and prolific syndication of the show on Netflix and BBC America.

The main melody of *Doctor Who* is a masterpiece born from the fledgling, modern electronic music movement of the 1960s. The theme itself is memorable, simple in structure, and inculcates several main ideas presented by Deryck Cooke in his book, *The Language of Music*,<sup>1</sup> and provides an introduction for the triplet figure in modern heroic melody. Study of minor intervals and how they signal the audience to identify with a tragic character like the Doctor will be analyzed, along with select topics that appear in the theme. This study will illustrate how the melodic theme from *Doctor Who* transformed in the reboot of 2005, but maintained fundamentals that helped audiences identify with the mysterious time traveler from Gallifrey.

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<sup>1</sup> Deryck Cooke, *The Language of Music* (New York: Oxford University Press, 1959), 74-79.

*Doctor Who* started its long life in 1963 as a Saturday evening BBC television show aimed at families. The first episode aired on November 23<sup>rd</sup>, 1963—one day after the assassination of President John F. Kennedy—an event that nearly crippled the development of the program. The show centered on a character called, “The Doctor”—a time traveler who, with the help of his traveling companions and his time machine spaceship, The TARDIS (an acronym for Time And Relative Dimension In Space) manage to save entire worlds, galaxies and drop subtle (and not so subtle) morality lessons to the audience via a “creature of the week” premise.<sup>2</sup> This low budget science fiction show featured an opening credit sequence revolutionary for the time, and thanks to a talented young female composer and arranger, mesmerized audiences with a melodic soundscape never before heard on television.

Delia Derbyshire (1937-2001) was an English composer and sound engineer from Cambridge University who began a career at the BBC Radiophonic Workshop making sound effects for radio programs and early television dramas.<sup>3</sup> Her realization of Ron Grainer’s score for *Doctor Who* remains her most famous arrangement to this day. I find this section of the paper difficult to write because I’ll be utilizing the notation and score that Ron Grainer originally composed, but am unable to represent Delia Derbyshire’s work

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<sup>2</sup> tvtropes.org, “Series: Doctor Who,” tvtropes.org, <http://www.tvtropes.org/pmwiki/pmwiki.php/Series/DoctorWho>, (accessed: June 6, 2014).

<sup>3</sup> Joe Hutton, “Delia Derbyshire,” *Grove Music Online*, Oxford University Press, 2008, <http://www.oxfordmusiconline.com:80/subscriber/article/grove/music/2061642>, (accessed: June 6, 2014). Delia composed over 210 pieces while employed with the BBC Radiophonic Workshop.

visually in this paper (which vexes me greatly.)<sup>4</sup> The only thing I can hope to do is write about the melody in a way that would honor Ms. Derbyshire, and inspire others to seek out the melody and have a listen.

Deryck Cooke mentions in his book, *The Language of Music*, that composers use minor intervals to reflect pain, and major intervals to denote happiness and joy directly, and indirectly in a melody.<sup>5</sup> Students of western traditions have been trained to identify such characteristics of human emotion with that of the different modes and traditional tonalities. They've also been warned not to interpret artistic intent beyond the scope of the music presented, lest they enter into conjecture; this knowledge is helpful in assigning significance to the main theme of *Doctor Who*, as is Agawu's study of Johann Georg Sulzer's foundational role of "character" in the compositional process.<sup>6</sup> In a study of how melody is capable of portraying hero and anti-hero elements, interpretive freedom is a requirement.

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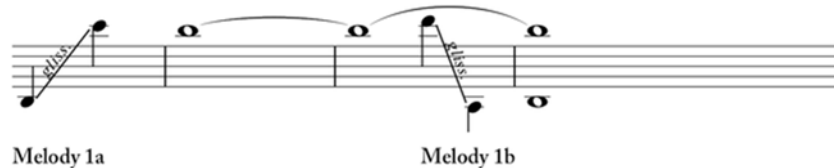
<sup>4</sup> "Ron Grainer," *Grove Music Online*, Oxford University Press, 2014, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/52337>, (accessed: June 6, 2014). Ron Grainer is indeed the actual composer of the theme, but typically gets no credit in publications for his work. Ironically, Delia Derbyshire didn't receive any credit for the theme during her tenure with the BBC, but is herald as the "composer" of the theme in popular culture and *Doctor Who* literature and websites. Ron Grainer himself even tried to get Delia top billing for her arrangement, but to no avail.

<sup>5</sup> Cooke, *The Language of Music*, 64.

<sup>6</sup> V. Kofi Agawu, *Playing With Signs: A Semiotic Interpretation of Classical Music* (New Jersey: Princeton University Press, 1991), 27. Sulzer believed, "...piece of music must have a definite character and evoke emotions of a specific kind...A composer would be misguided if he started work before deciding on the character of his piece."

Cooke draws a connection between modern and classical ideas in his book with lengthy discussion of the seventh interval, and how it is capable of working for and against the traditional ideas of tonality by utilizing all of the “flaws” in natural harmony.<sup>7</sup> Agawu suggests that the use of seventh intervals, or for our purposes, “diversity” adds to the variety and creates options for character development.<sup>8</sup> Let’s examine the main melody from *Doctor Who* and see how these theories apply. Example 1.1 represents the first four bars of the main theme of *Doctor Who* as it appeared in the 1960s and beyond.

**Example 1.1:** *Doctor Who*, “Main Theme”<sup>9</sup>



Em: V (VI) ----V------(vii)—<sup>7</sup>----V-----

This first melodic figure is rhythmically simple on paper, but colorful in Derbyshire’s interpretation. The glissando that appears at the beginning and end of the phrase captures the excitement and mystery of the melody itself, and serves to create an

<sup>7</sup> Ibid., 73.

<sup>8</sup> Ibid., 27-28.

<sup>9</sup> Danny Stewart, Ian Stewart, Jeff Kenny, “Doctor Who and its Theme,” [dwtheme.com](http://dwtheme.com), <http://dwtheme.com/theme/melody/>, (accessed: May 30, 2014). This website, albeit not an academic site, had the most accurate, and readily available score for analysis of all sections of the main theme.

audible distraction for the listener from the tightly packed tone cluster in disguise.<sup>10</sup> One may also notice the glissando to the octave is catchy to the ear and easy for listeners to replicate in a whistle or a vocal experiment (maybe even while flying a homemade TARDIS about the living room!) The “other worldly” sound of a glissando played on a mysterious, Theremin-like tape machine shaped the melody into our “topic” for the *Doctor Who* theme: “eerie.”

The glissando from B to C makes the melody easier for the listener to reproduce regardless of musical training (those who know the *Doctor Who* theme accent the neighbor note C when singing it aloud). One must ask: does that make C just a neighbor note to B (a minor second away), or is it a fundamental pitch of the melody?

This author resolves that the three pitches at the beginning, B-C-D (013), work together to create the iconic theme and cannot exist without each other.

**Example 1.2:** *Doctor Who*, “Main Theme” Reduction and Mirror Symmetry

The image displays two musical staves. The top staff shows a sequence of notes: B, C, D, C, B. Above the notes, intervals are labeled: 'm2' between B and C, 'm3' between C and D, and 'M2' between D and C. The bottom staff shows a mirrored sequence: B, C, D, C, B. Above the notes, intervals are labeled: 'm2' between B and C, 'm3' between C and D, and 'M2' between D and C. A vertical dashed line is positioned between the two staves, indicating the axis of mirror symmetry.

<sup>10</sup> The (0235) set as described.

This reduction in Example 1.2 presents B as a drone through all four measures, with a minor second (notated with the B-C) between the opening pitches; the minor third B-D rounds out the phrase. *Melody 1b* is essentially a variation of *Melody 1a* with added pitches (D and A) to color to the basic harmonic characteristic of the melody. Note the use of the second interval in the mirror. Here the minor second begins with ascension from B to C, and then towards B up from A through a major second. This simple symmetry works well in the *Doctor Who* theme and helps the listener identify the alien nature of the program thanks to the second interval, and begins to shape the hero archetype for the view and listener.

One identifies an octave around B in the main theme, with the following pitches represented: B, C, D, A. Reordering these pitches reveals elements of a favorite tetrachord of Igor Stravinsky, a composer whose compositional techniques are often imitated in science fiction films: the (0235) set class found throughout his ballet, *Le sacred du printemps*, or, *The Rite of Spring*.<sup>11</sup>



This tone cluster may also be linked to Schoenberg and his Second Viennese School of atonal serial compositions that might have inspired Grainer during his composition process. One might imagine this cluster appearing in a piece by composer Györgi Ligeti,

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<sup>11</sup> This tetrachord is one pitch away from the “Ligeti Signal” I describe in a paper on *Lux Aeterna*. Ligeti used signal chords, often the (025) chord to begin new sections in micro polyphonic pieces. One such researcher, Spindler, sited an interview with Ligeti in which the composer stated that his “markers (signals)” were not based on theoretical considerations.”

(like *Lux Aeterna*) where the pitches appear next to one another as they would on the keyboard and expand outward as the melody unfolds. These intervals—not invented by Grainer, Ligeti, or Schoenberg—have been a part of musical vocabulary for centuries, and are made popular in their repeated use by composers, allowing these intervals to become common vocabulary for otherworldly sounds in film music beyond their use on an octatonic series. These pitches assist Grainer and Derbyshire in bolstering the topic of “eerie” within each part of the theme by creating tonal ambiguity.

Tonality, rather the struggle to locate it in the melody of Example 1.1 and 1.2 is prepared by ascent from B to B with a neighbor-note C thrown in for enough dissonance to diffuse the octave leap found in *Melody 1a*. The same technique repeats again in *Melody 1b* with the descent from D to B via A.

Closer analysis of the pitches in the “Main Theme” reveal a minor and major second, minor ninth / seventh, minor third, and major sixth all “swirling” about the opening pitch, B. These intervals are mathematical inversions of one another, and add interpretive symbolism to the melody itself. According to Cooke, the minor third presents the listener with a feeling of settled, and enduring pain, while the major third “looks towards the bright side of life and its circumstances.”<sup>12</sup>

The character of The Doctor is often seen as an alien who hides his true emotions from his companions on a regular basis for their protection, or to serve the plot of a particular episode. He utilizes these abilities to adapt himself and his thought processes to a given scenario or circumstance, much like the ubiquitous seventh chord of the western

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<sup>12</sup> Cooke, *The Language of Music*, 64.



harmonic series. Agawu would identify this approach as extroversive semiosis (using the music to create a link with the exterior world).<sup>13</sup>

In the “Main Theme,” we hear the minor ninth at the beginning (B to C), and again throughout the main melody as it originally appears, inverted via a minor second (C to B).<sup>14</sup> The minor second, according to Cooke, impresses the characters with a feeling of anguish, as best described in his example from Franz Schubert’s, *Erlkönig* (E b –D.)<sup>15</sup> Viewers of the program will recognize such angst in each incarnation of The Doctor character when having to make decisions that affect entire races, planets, and his companion(s) at the time.

Cooke writes about the major and minor seventh chords describing many of their compositional attributes:

The major seventh, of course, provides an antithesis to this melancholy note [minor seventh], turning upwards optimistically to the tonic. It was often thrown into harmonic battle...but the minor seventh always won the day...through the fact that it jarred so ‘painfully’ with the major seventh and was forced down onto its melancholy resolution through the minor sixth to the dominant. Its miserable defeat was far more powerfully expressive than the major seventh’s simple and logical rise to the tonic.<sup>16</sup>

The seventh and its connection to the second supports this analysis, but what of its extended form, the ninth? How might this version of the pitches be interpreted? The “Main Theme” features a minor ninth in the initial B-C (but does so quickly lest it break the E

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<sup>13</sup> Agawu, *Playing With Signs*, 23. Roman Jakobson is the subject of discussion in Agawu’s book on the subjects of Introversive and Extroversive Semiosis.

<sup>14</sup> The minor second figure featuring C and B is always approached in by descent; the major seventh ascends.

<sup>15</sup> Cooke, *The Language of Music*, 98. The pitches represented in the Schubert piece are on the minor sixth in the key of Gm, but the minor second interval still holds true in context of this analysis.

<sup>16</sup> *Ibid.*, 75.

Phrygian mode of the bass ostinato outlined in Example 1.3). This author suggests attribution of this interval with that of Cooke's seventh/second definition, thus preventing the listener from identifying *Doctor Who* as a program about a heroic, "optimistic" main character. One may also find the struggle to avoid these intervals akin to that of The Doctor's determination to hide his true feelings from those in his care. The Doctor is a good man, but he is also capable of unscrupulous deeds.

There's no compositional explanation available as to why Grainer composed the theme in this manner. It's possible he was attempting to tonicize E and B from the start when considering the bass line of the main melody itself; an E Phrygian ostinato turning to B Phrygian in the melody later. The bass line does include a major second figure from G to F, but acts as a passing tone to D. This process supports my theory that Grainer was using vocabulary and structural elements available to him through his compositional practice to create the "musical character<sup>17</sup>" for The Doctor, and utilized seventh and second intervals to his advantage. The tonal ambiguity of the selected pitches—being linked to both E and B Phrygian—establish an identity crisis for the melody, and overall musical personality for the Doctor. This "possession of expressive vocabulary" is a trait that Wye Jamison Allanbrook found significant to composers.<sup>18</sup> See Example 1.3 for a representation of the bass line that accompanies the main *Doctor Who* theme.

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<sup>17</sup> I say this because Grainer is not responsible for the actual theme music heard in the show, but provided the pitches from which Derbyshire produced the theme.

<sup>18</sup> Agawu, *Playing With Signs*, 33. Agawu quotes Allanbrook's *Rhythmic Gesture in Mozart: Le Nozze di Figaro and Don Giovanni* by stating that the audiences held various accepted *topoi* in common with the composer and musical vocabulary in use. For more on this, see Wyle Jamison Allanbrook, *Rhythmic Gesture in Mozart: Le Nozze di Figaro and Don Giovanni*, Chicago: University Press, 1983.

**Example 1.3:** *Doctor Who*, “Bass Ostinato” – mm.1-8<sup>19</sup> in E Phrygian



This ostinato begins the entire piece and outlines the tonic triad, Em (minus the dominant in the bass due to its appearance in the main melody later). The ostinato drove a steady build of mysterious black and white graphics that appeared on television screens across England. The appearance of the main theme on beat three of measure four, illustrated in Example 1.1, on the now determined dominant, B, demonstrate Grainer’s western harmonic approach. The mode-elusive and ambiguous melody rides above this driving, static ostinato hammering out a familiar I-V harmonic relationship.

The bass line ostinato would evolve as the show progressed throughout its fifty-year history, and changed to accommodate each new theme for The Doctor. As the personality of each Doctor developed throughout the series, the percussive bass line would adjust its tempo accordingly (the theme would also change in arrangement and instrumentation with trends in popular music). Cooke’s analysis allows us to find particular significance in this compositional choice, noting that the effect of tempo on emotion is clearly all-important because of how humans experience different emotions at

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<sup>19</sup> Stewart, Stewart, Kenny, “Doctor Who and its Theme.”

different speeds and tempos.<sup>20</sup> The theme for *Doctor Who* featured a “B Section” that will be examined in detail beginning with Example 1.4.

**Example 1.4:** *Doctor Who*, “B Section”<sup>21</sup>

The image shows a musical staff in treble clef with a key signature of one flat (B-flat). The melody is divided into two sections: Melody 2a (measures 1-4) and Melody 2b (measures 5-8). Melody 2a starts with a half note G4 (labeled P8), followed by quarter notes A4, Bb4, and C5. Melody 2b starts with a quarter note D5 (labeled m3), followed by quarter notes E5 (labeled m2), F5 (labeled m9), and G5 (labeled M2). Both sections feature triplet eighth notes. A large bracket below the staff spans from the first G4 to the final G5, labeled P8, indicating an octave. Interval labels above the notes are: P8 (G4), m3 (A4-Bb4), m2 (Bb4-C5), m9 (D5-E5), M2 (F5-G5), and m9 (A5-Bb6).

Not only do we have another four bar phrase divided into two sections in Example 1.4. (e.g., *Melody 2a* and *Melody 2b*), but we also have similarities and differences from the main melodic material presented in Example 1.1.

*Melody 2a* features an additional pitch, G, while *Melody 2b* arpeggiates about the (0235) set class first presented in Example 1.1. This creates an excellent balance of symmetry between each melodic section of the *Doctor Who* theme, wrapped in a minimalist’s package. The inclusion of G at the beginning of *Melody 2a* acts as a tertiary arpeggiator for the performer to reach the octave without disrupting the counterpoint, and presents the listener with a diatonic pitch in the native key, E Minor.

<sup>20</sup> Cooke, *The Language of Music*, 99.

<sup>21</sup> Stewart, Stewart, Kenny, “Doctor Who and its Theme.”

*Melody 2a* and *Melody 2b* contain triplet figures similar to those found in the bass ostinato that accent the steps towards and away from B. The single voice of the melody above the “percussive” electronic ostinato combine to create a texture for the electronic tape machine experimentation that made the *Doctor Who* theme and Delia Derbyshire famous.

**Example 1.5:** *Doctor Who*, “B Section” - Interpretative Reduction in B Phrygian



Example 1.5 provides a reorganization of the pitches in an illustration of the scalar motion the melody contains, now in B Phrygian. The descending motion of the melody mirrors the (0235) set class as it would appear on a piano—all the pitches together in a cluster. The melody begins again in *Melody 2b* to ascend towards B at the octave (much like the beginning of the main theme, but inverted), this time featuring the C-B minor interval. Cooke describes this minor second figure as a removal from the minor scale, and a survivor of the Phrygian mode itself.<sup>22</sup>

<sup>22</sup> Cooke, *The Language of Music*, 77-78.

This primary theme for *Doctor Who* contains a “Bridge” that provides an opportunity for traditional harmony to present its case for inclusion via a brief tonal passage.

**Example 1.6:** *Doctor Who* “Bridge Theme”<sup>23</sup>



The “Bridge Theme” modulates to G by way of  $\hat{6}$  in E: C (IV in G, providing an inverted approach from the original  $\hat{1} - \hat{5}$  motion present in the “Main Theme”). One might say  $\hat{2}$  in B, or  $\hat{4}$  in G, the dominant of C, thus impressing the I-V relationship of the overall theme further. There is no true transitional material aside from the previously heard B-C minor ninth interval that allowed these melodies to join without a beat of separation.

One may see the harmonies divided into segments (T-D-T), which are not far removed from the main melody, though the main melody disguises its harmonic characteristics by utilizing contrapuntal separation of the melody and the bass line. The repetitive use of E and its mediant, G, create a dominant / subdominant relationship with the G acting as  $\hat{6}$  in B. This bridge theme embodies the I-V harmony and is likely included to provide a foundation in familiar harmonic territory for the listener. It is as if Derbyshire

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<sup>23</sup> Stewart, Stewart, Kenny, “Doctor Who and its Theme.”

(or Grainer) wanted to provide traditional elements of heroism to the theme in an attempt to describe The Doctor with an understood musical “language,” and reinforce the idea that The Doctor is the main protagonist, and hero.

Looking at the pitches used in this bridge melody provides insight into the familiar minor interval relationship that wove itself throughout the piece. This melody contains a rhythmic figure exclusive to the bridge. The rhythmic figure is as follows:

**Example 1.7:** *Doctor Who*, “Bridge Theme” Pitch Analysis & Rhythmic Reduction



The pitches presented, A-G-F#-G follow an outline of the following scale degrees in the key of G: 2-1-7-1 and feature the triplet passage of a major second from A-G by stepwise motion circling the tonic pitch, and is medieval in its approach, like the use of Em and the Phrygian mode.

Accounting for the descent to tonic, one arrives at the following analysis:



B-A-G, or  $\hat{3}-\hat{2}-\hat{1}$ , agree with a Schenkerian approach to the melody and links the piece to some basic *cantus firmus* composition rules as well. This figure appears two additional times throughout the melody in mm.6-7 as a way of accenting the dominant D instead of the tonic G. It is important to note the dominant D frames each presentation of the  $\hat{3}-\hat{2}-\hat{1}$  figure in the bridge subsequent to its first arrival in measure 4. This is likely meant as a false transition to E by utilizing a  $v^7/IV$  with the  $v^7$  chord present to soften the

transition for the listener, and prepare the move back to B. This rhythmic gesture creates the descending motion necessary to bring the entire section in the same octave as the original melody, and modulate from G back to B, further emphasizing the mediant relationship throughout the *Doctor Who* theme.

So far we've identified many characteristics of the *Doctor Who* theme as they apply to melodic and harmonic analysis. One can see the repeated use of seconds and sevenths, the tonic dominant / subdominant relationship, and the use of mediant for modulatory purposes. *The Language of Music* offers insight into the role of mediant relationship in melody as follows. Cooke identifies a distinct separation between the harmonic and melodic characteristics of the third and the sixth in tonal music. The interval of a third invoked pleasure and positive expression for the composer and listener in the early days of secular music, and caused a great stir in the church.<sup>24</sup> In the case of *Doctor Who*, the major third is noticeably absent from the theme, replaced by the minor third. Cooke tells us that the minor third is a "depressed sound," but important to our examination of *Doctor Who*, in that it also expresses the 'wrongness' of grief which Cooke discusses in his book.<sup>25</sup>

The assignment of the minor interval relationships in this piece could be considered the topic by which the theme of The Doctor is presented to the audience. Topics, according to Kofi Agawu, are musical signs that consist of a signifier (e.g., the minor ninth interval,

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<sup>24</sup> Cooke, *The Language of Music*, 51. Cooke goes on to describe this interval as, "...Nature's own basic harmony, and by using it we feel ourselves to be at one with nature."

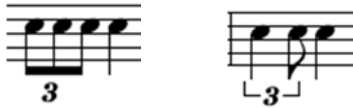
<sup>25</sup> *Ibid.*, 57. Cooke adds, "...The fact that it does not form part of the basic harmonic series makes it an 'unnatural depression' of the 'naturally happy' state of things (according to Western ideas.)"



B-C) and the signified, (e.g., The Doctor character). These signals can be assigned—according to Agawu—to any dimension of melody (i.e., the harmony, meter, rhythm, melody, etc.) and guide the listener towards a conscious and / or subconscious understanding of the composer’s suggested emotional response.<sup>26</sup>

Before moving on to the 2005 reboot of *Doctor Who*, let’s introduce some of the repeated rhythmic figures that may provide clues for the hero archetype in the themes of later chapters. One will recall the bass ostinato from Example 1.3, and Examples 1.4-1.6 include triplet eighth note, and triplet quarter note figures. Figure 1.1 presents these motives as they appear throughout the *Doctor Who* theme.

**Figure 1.1:** Triplet Rhythms Present in the “Doctor Who Theme”



The triplet figure creates a fanfare for the rhythm and follows through all elements of the *Doctor Who* theme. This rhythmic choice helps drive the bass ostinato to create excitement, and adds fluidity to the melody. The triplet figure has been attributed to heroes of nineteenth century music in such works as Franz Schubert’s, *Erlkönig* to represent the gallant stride of the father’s horse as it hastens through the forest, and away from the frightful Elf King.

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<sup>26</sup> Agawu, *Playing With Signs*, 49.

**Example 1.8:** Schubert, “Erlkönig, D. 328” mm.1-3.<sup>27</sup>



This rhythmic figure is performed at an increased pace when compared to that of Derbyshire’s *Doctor Who* theme. The deliberate thrumming of the triplet figure in Example 1.3 is no doubt assisted by the limited technology of tape at the time. The speed with which this triplet rhythm increased or decreased in the *Doctor Who* world changed over the fifty year history of the show. The most dramatic representation appearing during Matt Smith’s run as the Eleventh Doctor (2010-2013).

As the show progressed, it was revealed that the character of The Doctor is a lonely alien traveling throughout the universe in a stolen time machine trying to right his wrongs, and assist other races he encounters in the realization of their misdoings upon others (often to the tune of timely political commentary)<sup>28</sup>. The power of change that The Doctor character engenders is a positive one. The inclusion of the minor third, Cooke’s interpretation, and the topics of Ratner and Agawu are agreeable. The “Heroic” melody of

<sup>27</sup> Franz Schubert, “Erlkönig, D. 328,” Vienna: Diabelli & Cappi, n.d. Pate D. & C., no. 76, 1894-95.

<sup>28</sup> This is no slight on the show; all good science fiction is written with popular events in mind. The reboot of *Battlestar Galactica* featured political themes from the Iraq War (treatment of prisoners, insurgent strikes), while early *Star Trek* episodes addressed racial equality in episodes with half black, half white characters, and featured the first interracial kiss on television between Captain Kirk and Lt. Uhura!

The Doctor being the antithesis of traditional perfect intervals, utilizing dissonance to illustrate the character's capability to bring peace and order to the challenges he encountered are also part of the topic theory approach, and "gentleman's agreement" between the audience and composer.

Did any of these characteristics enter into the themes associated with each incarnation of The Doctor that followed the First Doctor in 1963? Did the reboot in 2005 establish a new paradigm for how modern audiences would understand The Doctor melodically and thematically? Let's take a closer look.

The fundamental *Doctor Who* theme carried into the Russell T. Davis and Steven Moffat eras of the show (2005-present) featuring evolving character melodies that represented each incarnation of the "modern" Doctor (the Ninth, Tenth, Eleventh, and now Twelfth Doctor). Interesting discoveries and connections can be made in these themes that modern *Doctor Who* fans will recognize and assign to each respective Doctor thanks in no small part to the assignment of Ratner and Agawu's topics. We'll also find a resurgence of the perfect fourth as an interval associated with The Doctor's heroic antics, and discover a hidden quality that ties *Doctor Who* back to its melodic origins!

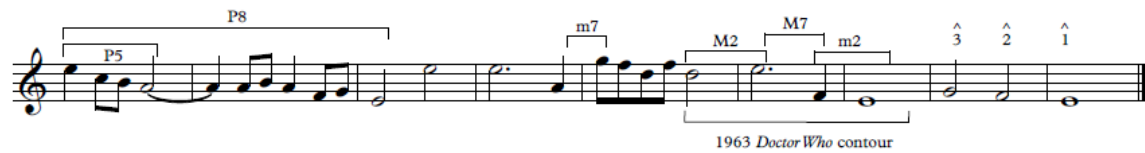
The Ninth Doctor, portrayed by Christopher Eccleston, made his debut in 2005 and was the first Doctor to appear on television since 1989.<sup>29</sup> Composer Murray Gold's arrangement of the opening theme, and his choice of classic Wagnerian *Leit Motif* for principal characters prevailed throughout each 'series' of modern *Doctor Who*, and

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<sup>29</sup> This is the account for the exclusion of the 1996 TV movie made for American audiences. It wasn't until Steven Moffat took over as show runner in 2009 that this film became part of official canon.

provides the first Topic from which the original series is connected to the modern reboot. This Ninth Doctor was strong willed, but masked pain from the loss of his home world, Gallifrey in the Last Great Time War (a war between long-time *Doctor Who* enemy The Daleks, and The Time Lords). To this end, Murray Gold consistently utilized the following theme for the Ninth Doctor:<sup>30</sup>

**Example 1.9:** *Doctor Who*, “Ninth Doctor / Bad Wolf Theme”<sup>31</sup>



Quickly identified within the theme (also known as “Bad Wolf”) is the span of a descending fifth between the pitches E and A in the key of E Phrygian, and connects this 2005 melody with that of its predecessor from 1963. The first phrase of the melody in mm. 1-3 outlines an octave is similar to the *Doctor Who* theme in Example 1.1, but descending in motion. The use of Em / Phrygian and octave span (and subsequent leap that follows beat two in measure three) followed by the major / minor second and ascending and descending seventh intervals in mm.4-7 quote the original *Doctor Who* contour in mode and interval selection.

<sup>30</sup> L. Robin C. LaPasha, “Who in Music Notes,” Duke University, <http://people.duke.edu/~ruslan/Notes.html>, (accessed June 21, 2014).

<sup>31</sup> Ibid.

When analyzing measure five, one can identify a quotation of “The Bridge Theme” in measure eight that signals the listener, albeit subconsciously, that The Doctor is in this mysterious theme somewhere, but masked by a “confusion” that the story would revealed in the season finale. Analysis provides a descending  $\hat{3}-\hat{2}-\hat{1}$  motion, linking Example 1.5’s B Phrygian with the E Phrygian of this cue. The theme, sung by a solo female on an open “ou” vowel with light supporting orchestration helped cement the theme within a few bars; the use of fourth and fifth relationships guide the melody into the listener’s ears: listeners of the twenty-first century, where pop music’s repeated use of fourth and fifth relationships transformed how audiences interpret heroic themes through Jakobson’s introversive semiosis argument.<sup>32</sup> This “eerie” sound of the female voice invokes one with the original topic assigned to the 1963 *Doctor Who* theme, and binds the two eras together.

This theme assists in restoring the heroic aspects of The Doctor prior to the loss of his planet and people at his hands. “Bad Wolf” also represents his companion, Rose Tyler. This is interesting to me because it immediately creates a link between the two characters and unifies their place in the story arc of each season that followed.

Example 1.10 provides a reduction of this melody that presents us with the fifth and octave interval relationship, and represents the I-V harmonic relationship in the reboot 2005 themes. It also demonstrates the use of perfect intervals, while presenting the  $\hat{3}-\hat{2}-\hat{1}$  figure in the final measure common to Schenkerian analysis:

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<sup>32</sup> Agawu, *Playing With Signs*, 23. “Introversive semiosis linking us to sonic elements to come, and those that have come before.”

**Example 1.10:** *Doctor Who*, “Bad Wolf Theme” Reduction<sup>33</sup> with Implied Harmony

Em: i-----iv-----i------(v)-----i-----i

Eventually, the Ninth Doctor sacrifices himself at the end of the series when Rose Tyler absorbs energy from The TARDIS time vortex and becomes the foreshadowed “Bad Wolf,” an omnipotent, omniscient being who can create and destroy life throughout time. The theme in Example 1.9 is ever present during the final scenes of the episode, “The Parting of Ways,” and during the Ninth Doctor’s regeneration into the Tenth Doctor, portrayed by David Tennant.

David Tennant’s time as the Doctor was among the longest of the series, and features a story arc that connected to Eccleston’s Ninth Doctor. The main theme of this new Doctor featured the “Bad Wolf Theme” with slight variations. The two cues are similar and virtually identical when heard throughout the show.<sup>34</sup> This introversive semiosis works well in this scenario in that Agawu argues that the musical expression (e.g.,

<sup>33</sup> The implied harmonies above are provided as a guide for the prominence of I-V intervals in the reboot series.

<sup>34</sup> This connection between the two Doctor’s helps continue the story arc of Rose Tyler and unresolved elements from the Eccleston era. One might interpret its mournful sound as something unresolved, waiting for The Doctor at the end of his tenth life. The cue also utilized more orchestration to guide the solo voice singing on the same vowel shape as before.

the story-elements of the Doctor and his character development) can, and do integrate with the structure of the theme (i.e., introversive semiosis).<sup>35</sup>

At the end of Tennant’s run, the show began to provide clues that The Doctor was about to regenerate into his eleventh incarnation. One such clue came in the form of a song sung by a race of aliens called, The Ood (who just so happened to sing in Latin!). The Ood song was heard just before the regeneration scene, performed by a counter tenor, orchestra and full chorus. This compositional choice provides the audience with a solemn theme for the Tenth Doctor’s regeneration. The lyrics to “Vale Decem” are provided in Figure 1.2 with English translation.<sup>36</sup>

**Figure 1.2:** *Doctor Who*, “Vale Decem” with Latin and English Lyrics

<p>Vale Decem Ad aeternam di meliora ad aeternam vale Decem di meliora beati pacifi ci vale Decem alis grave ad perpetuam memoriam vale Decem gratis tibi ago ad aeternam numquam singularis numquam dum spiro fido Vale, vale, vale, vale!</p>	<p>Farewell Ten on to eternity the fates be with you on to eternity farewell Ten the fates be with you Oh, blessed he who brought us peace, Farewell Ten, lay down your burden. We will remember you forever more. Farewell Ten We give you thanks On to eternity You are not alone Never Trust to the last. Farewell, farewell, farewell, farewell!</p>
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<sup>35</sup> Agawu, *Playing With Signs*, 24.

<sup>36</sup> Penelope Goodman, “The Latin in Murray Gold’s ‘Vale Decem,’ wordpress.com, “<http://www.weavingsandunpickings.wordpress.com/2010/09/09/the-latin-in-murray-golds-vale-decem>, (accessed June 20, 2014). Special thanks to Penelope for reaching out to me on this translation.

As the lyrical portion of “Vale Decem” concluded, the chorus instantly switched to the “Ninth Doctor/Bad Wolf Theme,” this time on an open “a:” vowel, sung by the entire chorus as if to escort our hero into his eleventh incarnation, and demonstrate that with the “death” of the Tenth Doctor, the difficult choices faced by the Ninth Doctor were vindicated.

**Example 1.11:** *Doctor Who*, “Regeneration” Cue



As the Eleventh Doctor, portrayed by Matt Smith, took over the character in 2010, so did a brand new theme develop for The Doctor in the first episode of series five, “The Eleventh Hour,” the cue arrived late in the episode after this new incarnation of The Doctor character began to settle into a personality type, after defeating the “creature of the week.” The Doctor accomplished this by calling the alien threat back to Earth in an effort to remind the aliens (and the audience as well), that The Doctor was an enemy of evil, and had once again earned the right to be called a hero. This theme became known by the title of the cue: “I am The Doctor,” and arrived on those lines of dialogue. Example 1.12 represents the main melodic motif from this theme.



**Example 1.12:** *Doctor Who*, “I am The Doctor” Cue



Right away one will notice the (0235) tetrachord returns on the pitches D, E, F, G to remind the viewers the Eleventh Doctor is indeed the same person, with a different face. The reuse of pitches from the (0235) tetrachord is a nice touch by Murray Gold, and one can only hope it an intentional sign, and Topic for the character.

*Doctor Who* “Main Theme”



“I Am The Doctor”



The harmonic series is founded on the octave, perfect fourth and perfect fifth. Human ears have been trained to hear these intervals in popular music and have reshaped this definition to represent, the struggle to earn the title, or acceptance of “hero” by a given protagonist in a story. The “I am The Doctor” cue is particularly telling of this long history of the intervals of the harmonic series in that the audience instantly begins to identify the new, youthful face of this Doctor with that of the wisdom his preceding incarnations already earned. The *status quo* is maintained (i.e., The Doctor is a powerful alien who seeks to protect the Earth and its history), and a new Topic created when this cue begins to play. The cue becomes the theme for Matt Smith’s Doctor, and is heard during scenes where The Doctor is expressing his superior intellect, or in the process of hatching a plan

to save the day. The hero is back; the hero has arrived. This four-note melody demonstrates these traits to the listener of the twenty-first century on a conscious and subconscious level (via the perfect fourth span) and runs parallel with extroversive and introversive semiosis according to Jakobson and Agawu.

A fusion of Ratner and Agawu's approach to topic theory allows for identification of several topics in *Doctor Who* based on items uncovered in this chapter. "Eerie" is a topic best suited to Ratner's eighteenth century approach to the style of the main melody, extending to the 2005 reboot of the franchise with the "Ninth Doctor / Bad Wolf" theme. Ratner and Agawu would appreciate the addition of another topic, "mechanical" through the selected performance medium of electronic tape machines. Recurring large melodic leaps juxtaposed against close resolutions surrounding a tight selection of pitches from the (0235) pitch-class set creates a symmetrical, melodic topic. The Phrygian modes provided tonality while facilitating modal ambiguity throughout the main theme. The triplet rhythm is introduced in this chapter and provides a topic for the time vortex in which the Doctor travels, his struggles and successes, and how the audience may subconsciously perceive this alien as a familiar, human-like hero. For the purpose of this chapter, *Doctor Who* will be identified by the hero archetype topic, "eerie hero / anti-hero."

To what dimension are these topics repeated throughout modern science fiction and superhero melodies? Let's join The Doctor in his TARDIS and travel back to 1966 and have a look at how the melodic intervals, and topics evolved in another science fiction franchise, and how the hero archetype is identified with city-size starships.

## Chapter II:

### An Enterprising Mission

Our next subject brings us to 1966, and Gene Roddenberry's *Star Trek*. The music of *Star Trek*, specifically the original theme by Alexander Courage, and of the *Star Trek* films composed Jerry Goldsmith (1929-2004), will be analyzed for their use of melodic contour, rhythmic and interval structure, as well as identifiable topics as prescribed by this thesis.

*Star Trek* is one of the most enduring science fiction genres in history. Its creator Gene Roddenberry was a true visionary who created a mythos that inspired inventors and scientists of the modern era (e.g., the inventor of the cellular phone, cloaking technology used by the military, automatic sliding doors, video conferencing, etc.). Its musical themes are equally enduring.

Alexander Courage (1919-2008) was the composer and orchestrator selected by Gene Roddenberry to compose the theme music for the original *Star Trek* series. Courage's theme for the starship *Enterprise* is his most famous composition,<sup>1</sup> and was used throughout all 72 episodes<sup>2</sup> of *Star Trek*'s limited run on CBS. He was also known for his contributions on orchestral scores for friends like John Williams (*Star Wars*, *Hook*, *Jurassic Park*) and Jerry Goldsmith (*The Mummy*, *Mulan*, and the scores for *Star Trek*

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<sup>1</sup> Dennis McLellan, "Alexander 'Sandy' Courage, 88; composer wrote 'Star Trek' theme", *LA Times*, <http://www.latimes.com/local/obituaries/la-me-courage30-2008may30-story.html>, (accessed: February 13, 2014).

<sup>2</sup> Fred Steiner, "Keeping Score of the Scores: Music for Star Trek," *The Quarterly Journal of the Library of Congress* 40, no. 1, (Winter 1983), 11. Courage was not the only composer utilized for incidental music throughout the entire series run. See this chart in Steiner for more information.

(VIII): *First Contact* and *Star Trek (IX): Insurrection*.)<sup>3</sup> It is Courage’s musical introduction to the starship *Enterprise* that presents the listener with a stoic melody to display the majesty the enormous vessel conveyed at is traveled across tiny television screens, and assigned a genuine topic for the ship that would follow her throughout the last half century.

The four-notes of the introduction—performed in a *Schleppend*, or slow and drawn-out topic—to the *Star Trek* theme are among the most interesting pitches of the entire melody, and, as Jon Burlingame of USC Thornton School of Music said in Courage’s obituary, “have been around for years – [the theme] is all around the world – and when you hear those eight notes you immediate think of the *Enterprise*.”<sup>4</sup> Let’s have a closer look at these pitches<sup>5</sup> and identify how this simple melody represents the heroic starship.

**Example 2.1:** *Star Trek*, “Intro Theme”




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<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Courage himself identifies the melody as eight notes accounting for the repeat. This study will focus on the primary pitches of the introduction.

The following melodic intervals are present in Example 2.1: perfect fourth, minor sixth, and minor seventh all from the following pitches: B $\flat$ -F-A $\flat$ -C (0247). The final interval, the minor seventh (B $\flat$ -C), constitutes the span of the repeated four-note introduction and is in lock-step with Cooke's analysis discussed in *Doctor Who*, and the idea of pain and anguish being associated with this melodic interval, and the five-year solo mission of the *Enterprise* into the loneliness of space. The perfect fourth and minor sixth, intervals of "enduring pain" as described by Cooke, along with the assignment of the *Schleppend* topic ring true in the assignment of this four-note pattern as a musical sign for the *Enterprise*, but also run the risk of indirect interpretation previously warned of in the terms of study; the *Schleppend* topic provides backup for this extra musical interpretation.

There are many incarnations of the theme for the starship *Enterprise* throughout the tenure of *Star Trek* in television and film all deserving the same moniker of "topic" or "sign." What matters to Agawu's interpretation of Leonard Ratner's theory is the difference in topics, and that equal importance be given based on the analysis completed.<sup>6</sup> The minute I began studying this four-note section of music, I was reminded of a piece from one of my favorite Romantic era composers: Gustav Mahler's, *Symphony No.1 in D Major*.

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<sup>6</sup> V. Kofi Agawu, *Playing With Signs: A Semiotic Interpretation of Classical Music* (New Jersey: Princeton University Press, 1991), 49.

The opening of *Symphony No.1* features an interesting selection of instrumentation and intervals that pertain to the study of the “Intro Theme” used throughout each incarnation of the franchise. Example 2.2 is an excerpt from the beginning of *Symphony No.1 in D Major*. Mahler utilized a drone on A in nine of the instruments, creating an ethereal soundscape.<sup>7</sup> The upper voices from mm.3-8 are given a similar tempo marking of *Schleppend*, and provide evidence for where Courage may have derived his four-note quotation’s performance marking. These upper voices present what appears to be an exact copy of the interval structure found in Alexander Courage’s “Intro Theme”. This provides a core element of Ratner’s topic theory (that being the *Schleppend* marking) as it applied to classical era compositions, and represents “triadic chromaticism” that, according to Frank Lehman, marks many *Star Trek* themes.<sup>8</sup>

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<sup>7</sup> On an entirely different note, it’s impressive that drones such as this have made their way into popular electronic musicians of the twenty-first century like Anthony Gonzales of M83 and Brian Eno.

<sup>8</sup> Frank Lehman, “Reading Tonality Through Film: Transformational Hermeneutics and the Music of Hollywood,” PhD diss., Harvard University, 2012,” 258.



**Figure 2.1:** Interval Relationship between pitches similar to *Star Trek* “Intro Theme”

<b>Score Excerpt</b>	<b>Intervals and Location</b>
Courage, <i>Star Trek</i> “Intro Theme” (1966)	P4 - m6 (mm.1-8)
Mahler, <i>Symphony No. 1 D Major</i> (1888)	P4 - P4 (mm.1-9)
Brahms, <i>Second Symphony No. 2 Op. 60</i> , “Allegro con spirito” (1877)	P4 - P4 (mm.234-236)
Beethoven, <i>Symphony No. 4 Op. 73 in B ♭</i> <i>Major</i> <sup>10</sup> (1806)	m3 – M3 (mm.2-5)

I’ve added selections from Beethoven and Brahms that utilize the four-note descending sequence similar to that of Courage. Example 2.3 and Example 2.4 are excerpts from Brahms’s *Symphony No. 2 Op. 60*, and Beethoven’s *Symphony No. 4 Op. 73 in B ♭ Major* where each example appears in an introductory fashion (i.e., at the beginning of each respective piece), save the Brahms score; each melodic fragment acting as a mysterious and subtle “fanfare” topic.

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<sup>10</sup> CBC Music, “The Final Frontier – The Surprising Musical Origins of Star Trek,” CBC Music Channel on Youtube.com, 2:20, <http://youtube.com/watch?v=aTaSjS1pwhQ>, (accessed: February 22, 2014), Beethoven is added to the chart after his connection to Mahler was uncovered in this CBC Music documentary.



**Example 2.3:** Johannes Brahms - *Symphony No. 2, Op.73*, “Allegro con spirito” mm. 234-236 <sup>11</sup>

The image shows a page of a musical score for Johannes Brahms' Symphony No. 2, Op. 73, measures 234-236. The score is for a five-voice fugue in woodwinds. The instruments listed are Flute (Fl.), Oboe (Ob.), Clarinet in A (Klar. (A)), Bassoon (Fag.), and Horn in E-flat (Hr. (E)). The woodwinds are playing a rhythmic pattern of eighth notes. The flute part is highlighted with a blue box, showing a sequence of notes: G4, A4, B4, C5, B4, A4, G4. The score also includes parts for Violins I and II, Trombones (Tr.), Violoncello (Vcl.), and Contrabasso (K.B.), all marked with *pp sempre pih*.

**Example 2.4:** Ludwig Van Beethoven - *Symphony No. 4 Op. 73 in B ♭ Major*, mm.2-5<sup>12</sup>

The image shows a page of a musical score for Ludwig Van Beethoven's Symphony No. 4, Op. 73, measures 2-5. The score is for a five-voice fugue in strings. The instruments listed are Violino I, Violino II, Viola, Violoncello, and Contrabasso. The strings are playing a rhythmic pattern of eighth notes. The Violino I part is highlighted with a blue box, showing a sequence of notes: G4, A4, B4, C5, B4, A4, G4. The score also includes dynamic markings such as *pp* and *sempre pp*.

<sup>11</sup> Johannes Brahms, *Symphony No. 2, Op.73*, Leipzig: Breitkopf & Härtel, 1926-27. It's important to note that Brahms presents his interval quotation as a theme for a five-voice fugue between the flutes, Clarinet in A, Oboe, Posaune and Tamburo piccolo during a brief transitional period.

<sup>12</sup> Ludwig Van Beethoven, *Symphony No. 4 Op. 73 in B ♭ Major*, Leipzig: Ernst Eulenburg, n.d., (ca. 1935).

Beethoven's use of the four-note motive varies significantly from the versions that appeared in Brahms's and Mahler's work (one being the major second relationship flanked by two minor thirds). Why didn't Brahms quote the theme directly in his work? Perhaps this is an example of melody being quoted by an admiring composer with a slight change in effort to create something new, or to identify with the subject, or "hero" of his own particular composition to personalize the quotation. In this manner, the listener is presented with a familiar melodic figure from a famous composer, but with something new to fascinate the listener. This is an excellent example of familiar melodies weaving themselves into the future through the hand of admiring composers, and a nod to the legitimacy of V. Kofi Agawu and Roman Jakobson's work.

Let's assign scale degrees to the sequence, beginning with the final "product" of the quotation as it appeared in the Oboe part in mm.7-8 of Mahler's *Symphony No. 1 in D Minor*:

**Example 2.5:** Gustav Mahler - *Symphony No. 1 in D Minor*, mm. 7-8



We can assign the appropriate scale degrees in the home key of Dm:  $\hat{5}, \hat{2}, \hat{3}, \hat{7}$  to Example 2.5. A broader, Schenkerian approach to the four pitches, identifies two distinct harmonic relationships alternating back and forth; V-I accented by A and F Natural on each downbeat. The linking pitches, scale degrees  $\hat{2}$  and  $\hat{7}$  typify the dominant prolongation within the four note figure that inhibits the listener's ability to discern a sense of tonic, especially with the clear arrival on A in the lower voices, with C natural in the upper voices instead of  $\# \hat{7}$ .

Courage opened the *Star Trek* theme with his quote of the famous four-note motif in the key of B  $\flat$  instead of A as seen in the original quote (transposed down a semitone), but would eventually arrive in this key for the opening fanfare of *Star Trek* that features a home key of A (similar to Mahler's introduction) with quartal and quintal chords throughout.<sup>13</sup>

**Figure 2.2:** Scale Degree Analysis of Pitches from Examples 2.2; 2.3; 2.4

Courage Theme Scale Degrees:	$\hat{1}, \hat{5}, \hat{6}, \hat{7}$ (0247)
Mahler Theme Scale Degrees:	$\hat{5}, \hat{2}, \hat{3}, \hat{7}$ (0158)
Brahms Theme Scale Degrees:	$\hat{5}, \hat{2}, \hat{3}, \hat{7}$ (0158)
Beethoven Theme Scale Degrees:	$\hat{6}, \hat{4}, \hat{5}, \hat{3}$ (0135)

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<sup>13</sup> Lehman, "Reading Tonality Through Film," 258.

Comparing the pitch class sets, one can see the whole-tone trichord (024) in the Courage theme juxtaposed against the structure of the  $V^7$  chord of traditional western tonal music utilized by Mahler and Brahms. Here we arrive at a difference in how, through musical quotation and manipulation of topics by adoring fan-composers, melody can be transformed, yet remain familiar in future compositions.

The quoted material from Beethoven, Brahms and Mahler sounds sad, and absent of tonal implications to the twentieth and twenty-first century ear, because the *Star Trek* theme helped change the popular culture idea of this particular pattern's tonality. It is unfair to give *Star Trek* all the credit for this paradigm shift considering the *Doctor Who* theme also featured the Phrygian mode, and tetrachords spanning the interval of a seventh and its inversion. This type of expression, albeit slightly removed from the idea of topic theory,<sup>14</sup> rings true in this analysis of how one of the topics for the starship *Enterprise* and *Doctor Who* is capable of changing the way music is heard in film.

Through examining the pitch class sets in Figure 2.2, one can discern tonal and atonal implications selected by each composer's quote of the four notes pattern. The *Star Trek* quote doesn't sound in a particular mode when heard during the opening credits similar to that of Derbyshire's *Doctor Who* theme. This demonstrates again that rhythmic distance can aid ambiguous melodies in disguising their tonality to the listener.

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<sup>14</sup> Agawu, *Playing With Signs*, 30. Agawu clarifies that many topic theory ideas are stuck in the eighteenth century, but still applicable based on analysis and interpretation (i.e., linguistic analogy).

Now that we've analyzed the first eight notes of the *Star Trek* "Intro Theme", let's have a closer look at the fanfare that follows the introduction, and the interval characteristics present

**Example 2.6:** *Star Trek* "Enterprise Fanfare" Reduction



(027)

This second part of the *Star Trek* fanfare, identified as the "Enterprise Fanfare," written by Alexander Courage, is the most recognizable complete melody in the *Star Trek* lexicon. This fanfare presents the listener with an opening minor seventh (F-E $\flat$ ), while the entire melodic figure spans a minor third (F-A $\flat$ ). Suggesting pain and anguish the characters encountered in their weekly space adventures to the audience through the fanfare topic juxtaposed against the mysterious and cold four note introduction.<sup>15</sup> The opening pitches, F, B $\flat$ , E $\flat$ , a quartal pitch class set of (027),<sup>16</sup> repeats three times as Captain Kirk

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<sup>15</sup> Deryck Cooke, *The Language of Music* (New York: Oxford University Press, 1959), 128. Cooke seemed to prefer neighboring progressions in his artistic interpretation of melody (i.e., 5-1-3, 1-5-5 scale degree progressions). This study merges characteristics of Cooke with that of Ratner's topic theory allowing for the often cautioned "artistic interpretation."

<sup>16</sup> Lehman, "Reading Tonality Through Film", 258. Lehman describes the fanfare in his dissertation as, "Brass fanfare in A major with light quartal implications." He goes on to describe the main theme as being transposed twice by major thirds before returning to the jazzy section of the main theme.

recites the mantra of the *Star Trek* franchise, and the motto of the starship *Enterprise* herself:<sup>17</sup>

Space: the final frontier. These are the voyages  
Of the starship, *Enterprise*. Its five-year mission:  
To explore strange new worlds. To seek out new life  
and new civilizations, to boldly go where no man  
has gone before.

Cameron Patrick’s thesis on *Star Trek: The Motion Picture* provides an excellent introduction to the cue that follows the completion of the mantra, and occurs somewhere within each of the feature films (in subtle and overt expressions). Example 2.7 is taken directly from Mr. Patrick’s thesis on *Star Trek* and has helped my project significantly.

**Example 2.7:** *Star Trek*, “Star Trek Theme: TV (i) & TV (ii)”<sup>18</sup>



<sup>17</sup> Cameron Patrick, “Anatomy of a Film Score: *Star Trek*-The Motion Picture,” B.A. Music diss., University of Queensland, 1986, 39. Patrick uses the “mantra” expression. The official, truncated motto of the starship *Enterprise* is, “To boldly go where no man has gone before.” And is often displayed on the fictional ship’s dedication plaque.

<sup>18</sup> *Ibid.*, 38. Sibelius transcription of Patrick’s Figure 12: Television Series Theme.

The cues in Example 2.7, subtitled “TV (i)” and “TV (ii)”, are Patrick’s representation of the final section of the *Star Trek* theme from the original series, without the “tag.”<sup>19</sup> He separates them into two different sections to fit his discussion of *Star Trek: The Motion Picture*’s soundtrack, but they actually exist as one phrase: AA<sup>1</sup>BB<sup>1</sup>. The interval relationship presented at the beginning of “TV (i)” is the minor seventh (G-F), with the entire phrase spanning the major / minor third between G and B $\flat$  in the first phrase, and B natural in the second. This theme appears in the original series as the title sequence, after the “Enterprise Fanfare” and lightened the mysterious introduction with a fun samba while the *Enterprise* flashed across the screen.<sup>20</sup> One might describe the prominent key of the fanfare as F major, the key of majesty and calm according the most, if not all eighteenth century composers.<sup>21</sup> Frank Lehman identifies a feature of the melody in his thesis: the transposition of the fanfare by major third with each appearance (twice in the opening credits).<sup>22</sup> Example A is taken from Lehman’s thesis, and depicts the melodic phrase using a form of Neo-Riemannian theory as it modulates from A through F to B $\flat$ .

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<sup>19</sup> There is a final section of the main theme, but I’ve chose not to discuss it in depth due to the lack of presence in cues from other *Star Trek* films.

<sup>20</sup> Agawu, “*Playing with Signs*”, 30. Ratner preferred eighteenth and nineteenth century expressions as topics that flowed easily from one to the other.

<sup>21</sup> James O. Young, “Key, Temperament and Musical Expression,” *The Journal of Aesthetics and Art Criticism* 49 no. 3, (summer 1991), 240.

<sup>22</sup> Lehman, “Reading Tonality Through Film”, 258-259.

**Example 2.8:** Frank Lehman's Analysis of the *Star Trek*: Main Title Opening<sup>23</sup>

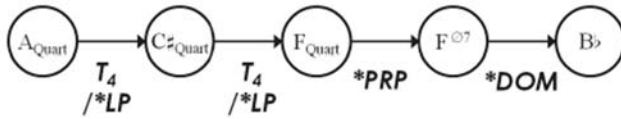
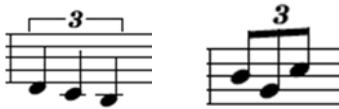


Figure 2.3 presents the triplet motif that appears in the *Star Trek* melodies so far discussed in this chapter. One motive is lifted from Cameron Patrick's TV (i) and TV (ii) analysis, while the other is lifted from the "Enterprise fanfare" that precedes it.

**Figure 2.3:** *Courage*, "Star Trek" Recurring Triplet Motif



The complexity of the motif is simplified in comparison with motives found in the *Doctor Who* theme, yet the eighth note triplet figure remains static; unchanged in both melodies. Both are heroic rhythmic elements, especially since the *Enterprise* is represented with a solo trumpet: the instrument of royalty and great accomplishment.<sup>24</sup>

<sup>23</sup> Ibid., 52. Lehman demonstrates how the melody moves between parallel and relative (e.g., *PRP*) keys through transposition from A to F. *DOM* indicates an arrival on the dominant in the key of F after the melody is transposed.

<sup>24</sup> Young, "Key, Temperament and Musical Expression," 236. The instrument is also associated with glory.



This final section of the chapter will focus on the appearance of the *Star Trek* theme composed by Alexander Courage throughout the history of Star Trek motion pictures, and how its interpretation made slight evolutionary leaps to accommodate the portrayal of the *Enterprise*'s hero archetype in each film. It is by no means intended to be all inclusive, but will provide an idea of how often the heroic theme of the *Enterprise* appears, and how it was used to identify with characters, or a circumstance where the power of the ship and its mission reminded the crew to soldier on through a given challenge.

Many appearances of Courage's *Star Trek* theme occur during prominent action-packed, and dramatic nostalgic moments of each film. Figure 2.4 on the following page presents a brief outline of the initial *Star Trek* fanfare's appearance throughout each of the six motion picture films to focus on the original cast of *Star Trek*.

**FIGURE 2.4:** *Star Trek* Theme Variations in the *Star Trek* Film Franchise

FILM TITLE (Composer)	COURAGE'S STAR TREK THEME VARIATIONS	NOTABLE FEATURES
<i>Star Trek: The Motion Picture</i> (Goldsmith)	NOT PRESENT Main theme constitutes <i>The Enterprise Theme</i> by J. Goldsmith	Courage compositions are inserted against Goldsmith's wishes by Courage himself <sup>25</sup>
<i>Star Trek II: The Wrath of Khan</i> (Horner)	B-E-A (M2)  A ♭ -D ♭ -G ♭ (m2)  E ♭ -A ♭ -D ♭ (TT)	A ♭ -D ♭ -G ♭ figure echoed at the octave during death of Spock 1:05-1:20 and again in end credits at 3:00-3:20
<i>Star Trek III: The Search for Spock</i> (Horner)	A ♭ -D ♭ -G ♭ (m2) B ♭ -E ♭ -A ♭ (m2)  G-C-F (m2)* B-E-A (M2) F-B ♭ -E ♭ (m3) B-E-A(M2) x 3  A-D-G** (-)	*Stealing the Enterprise 3:55-4:10  *TV (i) appears at: 27 into the End Credits.
<i>Star Trek IV: The Voyage Home</i> (Rosenman)	E-A-D (P5)	Appears twice: main credits, and final scene/first appearance of Enterprise NCC-1701-A. TV (i) theme also appears.
<i>Star Trek V: The Final Frontier</i> (Goldsmith)	A-D-G (-)	Appears on approach to the <i>Enterprise</i> via shuttlecraft
<i>Star Trek VI: The Undiscovered Country</i> (Eidleman)	D-G-C (P4)  C-F-B ♭ (m3)  G-C-F (m2)	Appears four times in the film: when the Enterprise leaves Spacedock for the final time, when Spock remarks on Starfleet's final orders for the Enterprise <sup>26</sup> , The final view of the Enterprise, and when William Shatner's signature appears in the final credits.



<sup>25</sup> Patrick, "Anatomy of a Film Score: Star Trek-The Motion Picture," 36.

<sup>26</sup> The orders were to return to Spacedock to be decommissioned, to which Spock replied, "I believe, if I were human, the appropriate response would be, go to Hell."

The *Star Trek* theme does not appear in Goldsmith's *Star Trek: The Motion Picture* score at all. In fact, the only elements of Courage's work that appear in the film are during specific, limited cues, where Goldsmith asked Alexander Courage to orchestrate the original theme<sup>27</sup> (e.g., the captains log entry after the *Enterprise* leaves Spacedock for the first time after her two year refit.) It's possible this deliberate omission of the *Star Trek* theme serves to differentiate the film from the television show.

Figure 2.4 features prominent transpositions of Alexander Courage's theme throughout the principle *Star Trek* feature film franchise. Notice how James Horner's work on *Star Trek II* and *Star Trek III* are the only films linked by the use of A $\flat$ -D $\flat$ -G $\flat$  in the quote of Courage's fanfare. The quote is strengthened further during Spock's death scene towards the end of the film where it is repeated at the octave between trumpets and French horns. One must also take note of the appearance of pitches A-D-G at the end of *Star Trek II*, during which Spock (rather the disembodied voice of Spock), recites the *Star Trek* mantra made famous by Captain Kirk. This is the first time in the *Star Trek* film franchise featuring the original cast where the fanfare appears in its home key of the original series. James Horner's use of the fanfare in its original key teamed with the *Star Trek* mantra recited by a fallen hero creates a poignant moment—a moment intended to imbue the listener with a sense of finality for the character of Captain Spock, or to act as a vanguard for his eventual return.<sup>28</sup>

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<sup>27</sup> Elements of Patrick's "TV (i)" specifically.

<sup>28</sup> One cannot help but note the use of the original key, A-D-G in Goldsmith's work on *Star Trek V: The Final Frontier*. This film is extremely controversial in the *Star Trek* fan community, and is often stricken from continuity.

The title of *Star Trek III: The Search for Spock*, clearly indicates the popularity and success that *Star Trek II: The Wrath of Khan* enjoyed, and provided Horner with another opportunity to work on the music for the franchise. Horner utilized similar themes from *Star Trek II* in his score for *Star Trek III*, with particular expression of Courage's theme during the "Stealing the Enterprise" cue.

"Stealing the Enterprise" occurs early in the film during the theft of the heavily damaged starship *Enterprise* by Kirk and crew. This theft was an attempt to return to the Genesis planet and resurrect the dead Captain Spock at the request of Spock's father, Sarek. As the crew beams aboard their broken starship, the listener is treated to a quotation of Alexander Courage's eight-note introduction (B ♭ -F-A ♭ -C) as the ship quietly comes to life with a glimmer of the majesty she once represented to Starfleet. This subliminal expression of "character,"<sup>29</sup> teamed with Courage's theme, reminds the viewer that the *Enterprise* (and her gallant history) had not been lost on her soon-to-be retired crew. This critical moment is where the obscure fanfare becomes a symbol of the hero archetype in the film, and changes the minor seventh interval (E ♭ -F) to masquerade as a fanfare from one of the typical heroic intervals. I suggest that James Horner used the original fanfare in the following manner:

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<sup>29</sup> Agawu, *Playing With Signs*, 27. A quote from Johann Georg Sulzer on the compositional process, and the importance of identifying how the subject of a melody will be presented throughout.

(G-C-F)\*\* → B-E-A → F-B $\flat$ -E $\flat$  → B-E-A (x3)



\*\*This is a complete quote of the fanfare at 3:55 in the cue.

An allusion to the original theme and its post-tonal nature in Horner's framing of this sequence within the confines of the pitches B and F (the span of a tritone). The miniaturized prolongation that occurs in this section of the cue (approximately 3:55-4:10) could be compared to pitch class extension if this piece were written as a post tonal work. Horner may be utilizing a quote from the original fanfare here that, for his purpose (and that of Alexander Courage), happen to outline the (027) pitch class set. It may also be described as a method of dominant / mediant prolongation across the fanfare, if the distance between intervals is considered in Horner's compositional process.<sup>30</sup> One can see this mediant relationship when referring to the first quote of the fanfare in this cue on the pitches G-C-F, and its separation from the final section of this quote by a tertiary relationship on B-E-A.

The inclusion of Courage's four-note introduction and the "Enterprise Fanfare" into the works of Horner and Goldsmith are indicators of the success the simple melodic figure enjoyed years after the television show aired. This heroic melody representing the starship *Enterprise* helped weave the Star Trek films together and united them through trilogies

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<sup>30</sup> For more on pitch class set extension, see Miguel A. Roig-Francoli, "A Theory of Pitch-Class-Set Extension in Atonal Music," *Journal of the College Music Symposium*, 41 (Fall 2001): 57-90.

(e.g., *Star Trek II, III, IV*) and individual storylines (e.g., *Star Trek V, Star Trek VI*). This compositional practice did not drain any significance from the theme(s) that appear, nor did it have to refill each occurrence with meaning.<sup>31</sup> Indeed, the entire theme for the starship *Enterprise* is the embodiment of heroism. The ship kept her crew safe and was never seen as a “set piece” in the television show or films, but was instead a character herself. Alexander Courage’s *Star Trek* theme introduced the *Enterprise* to audiences back in 1966 and is a testament to her majesty, perfecting her lien on science fiction of the twenty-first century.

Alexander Courage’s quote of the ambiguous four-note introduction on the *Schleppend* performance mark creates an unsure, and “eerie” topic for the introduction to the 1960s television show; a topic that also graced *Doctor Who*. Are the two topics linked somehow? Cooke’s theory may suggest the pain and anguish interpretation as demonstrated in this chapter, but the *Star Trek* theme shifts to a bright, heralding “fanfare” featuring melodic intervals of the minor seventh, and third. The “fanfare” topic is supported by the brass instrumentation and the “samba” that takes its place with the triplet figure occurring in the main melody. This rhythmic topic is becoming a staple within the last two hero archetypes studied, and is well founded considering the triplet is universal in application (i.e., the triplet identifies the hero of a living being and with that of the starship *Enterprise*).

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<sup>31</sup> Agawu, *Playing With Signs*, 48-49. Agawu suggests, but does not abide by the idea that topics may be heard or read as second-order semiotics that lose quality if they become a musical sign.

The *Star Trek* theme features a stronger tonal center than *Doctor Who* while utilizing repeated trichord pitch-class sets in repeated quotation throughout the films. The *Star Trek* films utilized the tonal aspects of the fanfare to depict the brilliance of the *Enterprise* and made subtle nods to both parts of the Courage theme. The hero archetype for the starship *Enterprise* must be identified as “Heroic Fanfare” despite the ambiguous four-note introduction.

Let us travel now in our “Ship of the Imagination”<sup>32</sup> to a galaxy far, far away and have a look at the influence of Igor Stravinsky on John Williams and the *Star Wars* film franchise. Stravinsky’s influence on Williams was rather overt, and the pantheon of *Star Wars* films benefitted as a result.

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<sup>32</sup> Carl Sagan would often “travel” in this imaginary ship in his PBS show, *Cosmos* (1980.)

### CHAPTER III:

That's No Moon. It's a Perfect Fourth!

The 1970s were particularly good for science fiction in film and television. The decade represents a demarcation between the prevalent use of sixths and sevenths in *Doctor Who* and *Star Trek* with a reinvigorated use of perfect intervals to help the audience identify with the hero of a given story. Melody and its contour might have changed, but the prominent use of triplets to represent heroes was reinforced by the *Star Wars* score. The influence of Igor Stravinsky on John Williams during the composing process for *Star Wars* might be the source! John Williams cited direct portions of Stravinsky's work in *Star Wars*. Many composers remained hush on the extent of Stravinsky's influence in their compositional processes, but Williams was always vocal on the subject.

Accessibility to scores and cue sheets is an incredible challenge when attempting to ferret out Stravinsky's influence in this particular genre of film. A great majority of this research risks being based in an aural capacity, where one must listen for "Stravinskyisms" during a cue, or discern similarities in texture and timbre while watching (or re-watching) a scene. The hero theme often becomes stratified above the action on screen providing the listener with an important theme or motive,<sup>1</sup> planting a seed for later in the film. Said themes may evolve and change to become associated with a hero or villain, similar in fashion to the transformation of Beethoven's *Eroica* theme throughout the entirety of *Symphony No. 3 in E♭ Major Op. 55*. This is the proverbial "ballet" in which film music

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<sup>1</sup> Similar to the use of leitmotive by Richard Wagner, a technique that has fused itself to television and film music.



must comply with the demands of plot, becoming almost entirely programmatic in nature. One might say that Stravinsky would agree with this approach to scoring, considering the incredible amount of detail he achieved in associating music with choreography in ballets like *Orpheus*, *Apollo*, *Agon*, and of course, *The Rite of Spring*.<sup>2</sup>

The fact that movie scores are heard alongside images created by the film process is akin to how Stravinsky used music in *The Rite of Spring* to accompany the choreography and staging. Much of the choreography mimicked musical gestures created by Stravinsky to invoke primitive people—enter the triplet figure—in an unfamiliar environment to audiences of the early twentieth century.<sup>3</sup> This tradition in choreography has been translated into the science fiction film medium resulting in audiences identifying Stravinsky cues with epic space battles, and sparse, dangerous environments like that of the desert planet, Tatooine from *Star Wars Episode IV: A New Hope*.

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<sup>2</sup> Richard Taruskin, *Music in the Early Twentieth Century* (New York: Oxford University Press, 2009), 187. Nijinsky's choreography was illustrated by Valentine Hugo depicting Maria Piltz as the Chose One in relation to the music of Stravinsky.

<sup>3</sup> Paul Griffiths, "Igor Stravinsky," *Grove Music Online*, Oxford University Press, accessed: August 1, 2014, <http://oxfordmusiconline.com/article/grove/music/52818>.

John Williams, famous for utilizing elements of *The Rite of Spring* in *Star Wars*, fostered the idea of what a space battle might sound like, or how the aforementioned desolate planet might sound to the average listener through the musical signs pioneered by Stravinsky.

These characteristics, while for a time attributed to Williams's brilliance, have traversed history and returned to their origins in the music of Stravinsky. Stravinsky's compositional staples in the science fiction genre are easily related to his career-spanning redefinition of tonality, and diverse polytonal structural elements that are brought together in close relation to one another.<sup>4</sup> Stravinsky's compositional approaches, including his neo-classical use of serialism, and his metamusical use of pre-existing materials,<sup>5</sup> will demonstrate his influence on Williams, and how through "collaboration,"<sup>6</sup> continues to redefine the audience experience of science fiction film music.

John Williams was one of the most famous film composers of the modern era, boasting a catalog of films that include: *Raiders of the Lost Ark*, *Jaws*, and the *Star Wars* film franchise.<sup>7</sup> The story of the original "temp" score for *Star Wars* is an interesting one

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<sup>4</sup> Edward T. Cone, "The Progress of a Method," *Perspectives of New Music*, 1, no. 1, (Fall, 1962), 20.

<sup>5</sup> V. Kofi Agawu, *Playing With Signs: A Semiotic Interpretation of Classical Music* (New Jersey: Princeton University Press, 1991), 47. Agawu puts Stravinsky, Mahler, Berio, Crumb, and Rochberg in this select group as a compliment.

<sup>6</sup> The idea that Stravinsky is able to work with musicians in the future through understanding his techniques and utilizing quotations or motives from his works in collaboration with the "new music" being created.

<sup>7</sup> Graham Wade, "John Williams (vi)," *Grove Music Online*, Oxford University Press, <http://oxfordmusiconline.com/article/grove/music/30352>, (accessed: April 7, 2013),

in that it featured *The Rite of Spring* heavily (almost exclusively).<sup>8</sup> During production of *Star Wars*, George Lucas stated he wanted the score for his epic science fiction opera to be heavily influenced by nineteenth century composers like Richard Wagner and Gustav Holst.<sup>9</sup> Lucas is quoted in an interview stating that his writing is often done while listening to music, and that he may even follow suggestions by whatever he may be listening to:

I write to music. So, when I'm writing a scene I have the music there and I'm writing it to the music, and then in a lot of cases we'll use that same music as a temp track. So there was temp tracks of classical music in the score. With John you can say, look, you understand the emotion here and the emotion there and he says yeah, yeah, yeah. Then he will take that and come up with his own composition and his own themes which are uniquely Star Wars and give it that same emotional thrust that was in the classical piece. He's very conscientious in trying to get the director's vision on the screen.<sup>10</sup>

One may find it unusual that Lucas set down a temporary score that featured Stravinsky's *Rite of Spring* for several key scenes so prominently. Years after *Star Wars: A New Hope* was completed, Williams went on record stating that he wish he had strayed from the temp score<sup>11</sup> and created more original music in its place. Lucas cites the use of *Rite of Spring*, specifically, "The Sacrifice" for the scene where R2-D2 and C-3PO are marooned on Tatooine. The use of this particular section of *The Rite of Spring* occurs

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<sup>8</sup> Peter Nickalls, "Star Wars: Musical Anachronism and Audience Interpretation," B.A. Diss., Music, Cambridge University at Cambridge, 2010, 23.

<sup>9</sup> Ibid., 7. Prokofiev is also mentioned as an inspiration to Lucas for his fusion of modernism and melody.

<sup>10</sup> Leonard Maltin, Interview with George Lucas, Television Interview, August 29, 1995.

<sup>11</sup> J.W. Rinzler, *The Making of Star Wars: The Definitive Story Behind the Original Film* (New York: Del Rey, 2007), 258.

merely because it was the B-Side of *The Rite of Spring* record, and, according to George Lucas, rarely listened to.<sup>12</sup>

What characteristics of Stravinsky made this usage so appropriate, and appeal to Lucas' imagination of what a dune planet would look and sound like?

The second part of *The Rite of Spring*, specifically, "The Exalted Sacrifice-Introduction," features a key compositional feature of Stravinsky: his use of the octatonic collection paired with alternating major and minor triads from which the famous *Rite Chord* is constructed. The use of octatonicism is beginning to make a case for its presence in the science fiction genre.

Example 3.1 presents us with a score excerpt from "The Exalted Sacrifice" juxtaposed against a piano reduction of the Williams's "Dune Sea of Tatooine" cue found in *Star Wars*. One may clearly see the use of octatonic collections I (0, 1) & III (2, 3) in the flute and clarinet parts respectively. These symmetrical collections, and their ability to replicate themselves created a framework for Williams to extend harmonies and allow two pieces to share tonality. Notice the use of Stravinsky's major third and minor third relationships in the flute motive: E $\flat$ -G $\flat$ -B $\flat$  and D $\flat$ -F-A $\flat$ . These alternating major and minor triads (037 trichords) occur throughout *The Rite of Spring*, and that of many other Stravinsky works.

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<sup>12</sup> Nickalls, "Star Wars: Musical Anachronism and Audience Interpretation," 28.

**Example 3.1:** Comparison between “Exalted Sacrifice”, “Dune Sea of Tatooine”<sup>13</sup> and the “Main Theme” from *Alien*.

*Star Wars*, “Dune Sea of Tatooine” mm.1-2.

Largo (♩ = 52)

Woodwinds  
mp

Violins  
pp

Bassoon  
mf

Trombones / Timpani  
p

*The Rite of Spring*, “Exalted Sacrifice” mm. 1-2.<sup>14</sup>

Largo ♩ = 48

Violins  
p

Basses  
p

*Alien*, “R1-P2 Main Title” mm.56-58<sup>15</sup>

<sup>13</sup> Nickalls, “Star Wars: Musical Anachronism and Audience Interpretation,” 27.

<sup>14</sup> Ibid.

<sup>15</sup> Jerry Goldsmith, “Alien,” manuscript, June 11, 1979.

The brief reduction from Jerry Goldsmith's *Alien* "Main Theme" presents another use of the alternating major / minor (037) trichords utilizing the repeated eighth-note pattern. The alternating E  $\flat$  m and B  $\flat$  m make way to first inversion Em and B major chords as the theme progresses. The rhythmic gestures and trichords mirror Stravinsky's and Williams's similar use in *Rite of Spring* and *Star Wars*. Quotation of this texture in *Alien* by Goldsmith reinforces the image each rhythmic gesture suggests to the audience, and prescribes visual syntax to the desolation of space, a desert planet, or a ritualized pagan dance.

It's well known that Stravinsky utilizes the repeated eighth-note pattern in the opening measures of "The Augers of Spring" to invoke the ritualized pagan dance being performed on stage, stratified above the music,<sup>16</sup> and provides an example of extroversive connection to idealized pagan culture. Example 3.2 is an excerpt from the score, depicting this famous rhythmic gesture from *The Rite of Spring*. Stravinsky introduces the displaced accent on the eighth note to disguise the meter to the listener. The 2/4 time signature is strong in the first two measures, but dissipates as the first accent falls on the second-half of each beat in m.3, followed by one measure of the opening material, quickly returning to displacement with the accent one eighth note to the right. Williams utilized this portion of *The Rite* to represent a charge of Storm troopers aboard the Death Star in *A New Hope*, and as a topic for the evil empire.

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<sup>16</sup> The idea that stratification can extend to the stage element as well is one that shouldn't be overlooked. Stravinsky seemingly applied stratification within the entire body of work being presented.

The theme occurs in the cue “The Death Star / Storm troopers” at approximately 1:21 and lasts just over ten seconds. Within that fraction of time, one is exposed to an almost exact copy of “The Augers of Spring,” but with slight variation to the rhythmic displacement via an accented crescendo towards the end of the cue. One might be interested to hear Cooke’s opinion on how a *metric* theme used to identify primitive people would be utilized to represent an advanced military force in space.

**Example 3.2:** *The Rite of Spring*, “Augers of Spring” Rehearsal 13<sup>17</sup>

The musical score for Rehearsal 13 of "The Rite of Spring" is presented in a standard orchestral format. It features five staves: Cori (Corns), Violini II (Violins II), Fagotti (Bassoons), Violini I (Violins I), and Trombe (Trumpets). The tempo is marked "Tempo giusto" with a quarter note equal to 60 beats per minute. The key signature is one flat (B-flat major/D minor). The score shows a repetitive eighth-note pattern in the strings and woodwinds, with various dynamics and articulations such as "sempre stacc.", "sempre simile", and "sempre sf.".

The repetitive eighth note pattern appears again in *Star Wars* during the Tie Fighter attack on the *Millennium Falcon*, and also during the Battle of Yavin IV near the end of *Star Wars* where Williams utilized different accents, juxtaposed against harsh cuts within the main *Star Wars* theme to heighten the sense of danger for the characters. In the *Rite of*

<sup>17</sup> Igor Stravinsky, *The Rite of Spring*, Mineola: Dover Publications, 1989.

*Spring* ballet, these accents would become performance topics for the dancers. In *Star Wars*, the eighth note pattern suggests a “battle” topic.

This musical “jump-cut” was a favorite of Stravinsky, and is a subject discussed in Edward Cone’s article, “The Progress of a Method.” Cone proposes that listeners look forward to the return, or resolution of original material (e.g., the *Star Wars* theme), so the juxtaposition is acceptable and permissible.<sup>18</sup> This also leads to the argument for stratification, and its practical application in the film business. Stratification allows for quick scene changes, rapid movement within the film and score itself, allowing the composer to abruptly shift material, potentially easing the strain of composition. It was featured in *Star Wars* often during space battles, one such being between a hero ship, the *Millennium Falcon*, and some Imperial Tie Fighters. The action that took place inside the *Millennium Falcon* featured a repeated eight-note pattern, while the exterior shots of the Tie Fighter attack utilize a different theme and rhythmic element to enhance the sense of threat.

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<sup>18</sup> Cone, “The Progress of a Method,” 19. Cone suggests that changes of chords, of melodic leaps interjected into a conjunct line are analogous to what is occurring on stage (or on the screen). Cone suggests that these gestures are considered practical, and were musically important to him.



Stravinsky's use of rhythmic displacement extends to the iconic *Star Wars* Fanfare.<sup>19</sup> Example 3.3 presents this fanfare, and allows one to see the displacement of the lower voices (brass and strings) by two quarter notes. When listening to the fanfare, one cannot discern the metric disruption; it sounds natural, and without complexity.

**Example 3.3:** *Star Wars*, “Star Wars Fanfare” Reduction & Triplet Meter Occurrences<sup>20</sup>

Maestoso (♩ = 108) L'istesso (♩ = ♩)

Legend:

- Present in *Star Trek & Doctor Who*
- New Triplet Motive

The pulsating rhythms occur in the lower voices of the orchestra, while the trumpet fanfare carries a rhythmic augmentation of the triplet figure to add majesty to the opening fanfare: a topic we are now familiar with as a clear association with the hero archetype

<sup>19</sup> Nickalls, “Star Wars: Musical Anachronism and Audience Interpretation,” 13. The fanfare was analyzed from a reduction found in Nickalls work, which is derived from a score excerpt found in the Rinzler *Star Wars* book. Listening to the fanfare authenticates this argument for rhythmic displacement.

<sup>20</sup> *Ibid.*, 13.

(*maestoso* should also be considered part of the topic and overall sign for this fanfare). The rhythmic gestures found in the brass and strings of this reduction invoke metric ambiguity through displacement of the downbeat, and utilizes the triplet in quarter and eighth note combinations in a manner apart from that of *Doctor Who* and *Star Trek*. This compositional and stylistic choice by Williams might have been inspired by Stravinsky's repeated eighth note pattern, primitivism style, and stratification figures.

One should take note of the opening intervals of the theme: F-B $\flat$ , a perfect fourth, and then ascending to the octave, F with another approach to the fourth through a triplet figure in measure three. Cooke identified the fourth as a tragic interval that should guide the listener in a feeling of *pathos* towards the character(s) it is associated with.<sup>21</sup> The entire *Star Wars* franchise is a story of redemption. The idea that the sins of the father (Darth Vader) could be absolved by the son (Luke Skywalker) is perpetuated by main characters throughout each film (e.g., Yoda and Obi-Wan Kenobi warn Luke of confronting his father for fear of Luke succumbing to the allure of the dark side of the force, but still encouraged him to confront Vader). The character of Darth Vader, a once heroic Jedi was seduced by the dark side of the force, and betrayed his ideals, friends, children, and ultimately himself. The perfect fourth can be seen as the link between Vader and his son throughout the *Star Wars* saga.

The perfect fourth becomes a principal element of the hero theme for Luke Skywalker and the mystical force (a musical representation of father and son, and the light

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<sup>21</sup> Deryck Cooke, *The Language of Music* (New York: Oxford University Press, 1959), 81-82.

and dark sides of the force). The interval of a fourth is accepted as a heroic chord in many of the films studied for this paper, but the duality of the interval's significance cannot be overlooked when applied to the mythos of *Star Wars*. The perfect fourth in the fanfare created a spine tingling introduction to a film that imbued the listener with excitement, and anticipation; whatever followed the scrolling exposition was going to be epic.

The fundamental pitches of the "Force Theme" (D-F-A-G) are derived from a drone found in the left-hand of the score excerpt, along with principles applied through Schenkerian analysis. This particular tetrachord was a favorite of Stravinsky, and was used often to suggest octatonic tonality.<sup>22</sup> Considering John Williams's exposure to Stravinsky during the period of composition for *Star Wars*, it is possible that the influence of Stravinsky lingered heavily during the process. Stravinsky himself, a supporter of collaboration and "unique kleptomania,"<sup>23</sup> would likely find no fault in the Williams composing in this manner.

This sonority is established in the cue when a minor triad (D-F-A) adds another major second (G) to the set, creating (0247). This set can be identified through a reduction of the "Force Theme" found in Example 3.4.

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<sup>22</sup> Amy Keyser, "A Question of Religion: Igor Stravinsky's Early Sacred Works," M.M. Diss., Florida State University, 2003, 40-41.

<sup>23</sup> Griffiths, "Igor Stravinsky." Cone also mentions this quote in his article.

**Example 3.4:** *Star Wars*, “Force Theme,”<sup>24</sup> and (0247) Reduction

*Star Wars*, “Force Theme” Reduction

The famous “Binary Sunset” cue from *Star Wars* features two themes in one: the Luke Skywalker theme teamed with the Force theme and its subsequent answer presented in Example 3.5. The “Binary Sunset” answer features the (0247) collection on the pitches: G#-B-D#-C#, when reduction is taken into consideration, bringing the C# from the Cello in m.15. The symmetrical structure that comprises the force theme and the “Binary Sunset” answer is a compositional trait of Stravinsky and is appropriate considering the heavy use of his work in *Star Wars*.

<sup>24</sup> Ibid., 16.

**Example 3.5:** *Star Wars*, “Binary Sunset” (Answer) Cue and Reduction<sup>25</sup>

“Binary Sunset” (Answer) Cue Reduction:

G#m: i VI VI V<sub>4</sub> <sup>5</sup><sub>3</sub> i<sup>6</sup>

Williams’s use of the repeated eighth note pattern found in *The Rite of Spring*, stratification (as it applies to film scoring), use of octatonic collections, and his possible inclusion of the (0247) tetrachord, are elements of Igor Stravinsky that found their way into compositional techniques of science fiction film scoring thanks to the success of *Star Wars*. The topics “Fanfare,” and “Battle,” fuse with the extroversive semiosis suggested by the perfect fourth / fifth with good and evil to form excellent topics, and real world allusions for *Star Wars*. The triplet figures accentuate metric ambiguity that Stravinsky’s influence suggests, and the prominent key relationships work well with the octatonic collections featured. The triplet figure remains a prominent feature of the hero in each chapter of this

<sup>25</sup> Nickalls, “Star Wars: Musical Anachronism and Audience Interpretation,” 19.

work, and will likely remain a “sign” for the meta-level of the hero archetype. *Star Wars* is more than deserving of the archetype, “Heroic Fanfare,” and also that of “The Tragedy of a Hero.”

Now that the musical characteristics brought to *Star Wars* by Stravinsky and John Williams have had time to mature, what are younger film composers doing to inspire creativity, and bring the influences and inspirations of Igor Stravinsky to science fiction film music?

Bear McCreary was only twenty-three years old when he became assistant composer to Richard Gibbs on the reboot of *Battlestar Galactica* in 2003. *Battlestar Galactica* was originally a television show from the late 1970s that followed a massive capital ship named, *Galactica* and her “rag-tag fugitive fleet” on the run from cybernetic life forms known as Cylons. The show was considered a failure, and only aired for one season. This re-imaged version of *Battlestar Galactica* was to be politically charged, and set in a dystopian society where hope and joy were fleeting. McCreary and Gibbs were given one rule to follow by producer Ronald D. Moore: no orchestral, or sweeping symphonic arrangements. Moore wanted percussive, other worldly sounds; something distinctly primitive in nature that evoked the shows thematic core: humanity’s struggle to survive an apocalypse.<sup>26</sup>

McCreary brought many influences to the successful mini-series debut that included the dudek, taiko drums, Celtic pipes, Japanese Biwa and Shamisen, and

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<sup>26</sup> Bear McCreary, Interview by Dimitris Kontogiannis, Phone interview, March 2, 2011. Michael Rymer, the director of the mini-series also weighed in on this. He wanted a minimalist score.

harmonium. In fact, when the show was picked up for a full season, McCreary was given command over the score for the entire show. It is from this point that we follow Bear McCreary's Stravinsky-like approach to composing *Battlestar Galactica*.

Bear McCreary is a graduate of the Thornton School of Music in Southern California and studied alongside Elmer Bernstein (*The Magnificent Seven*, *To Kill a Mockingbird*). He is credited with recording the largest orchestra ever assembled for a television show (*Human Target*) and is lauded by composers like Jerry Goldsmith and John Williams. It is important to note that McCreary identifies Maurice Ravel and Claude Debussy as his favorite composers.<sup>27</sup>

The use of Stravinsky's repeated eighth note pattern appears in the work of McCreary on *Battlestar Galactica* in a cue titled, "Prelude to War." In this cue, similar treatment of the eighth note pattern occurs in mm.29-36, with a steady ostinato arpeggiation of a G Minor chord.<sup>28</sup> One may also notice that this selection contains a repeat, thus creating 16 measures of repeated sixteenth notes. This invokes the rhythmic stress on the eighth note that Stravinsky was so fond of implementing in his compositions. This "sound pattern" is juxtaposed against the drumming that precedes it, and upon its arrival in m.29, is completely unexpected by the audience; something that Stravinsky and his modernist composer contemporaries sought to achieve themselves.<sup>29</sup>

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<sup>27</sup> Ibid.

<sup>28</sup> Bear McCreary, "Battlestar Galactica: Songbook for Piano Solo" (Milwaukee: Hal Leonard, 2010), 51. One must note that this is the only score available for study and is the result of a reduction by the composer.

<sup>29</sup> David Huron, *Sweet Anticipation: Music and the Psychology of Expectation* (Massachusetts: Bradford Books, 2008), 347-8. Huron goes on to note the difficulty in conducting Stravinsky's eighth notes and how his accents can be interpreted.

**Example 3.6:** *Battlestar Galactica*, “Prelude to War” mm.29-36<sup>30</sup>

The musical score for Example 3.6 is presented in two systems. Each system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. The time signature is 3/4. The right hand (RH) plays a continuous sixteenth-note arpeggiated figure, primarily in the treble clef. The left hand (LH) provides harmonic support with chords, primarily in the bass clef. The first system contains measures 29-32, and the second system contains measures 33-36. The key signature is one flat (B-flat major or D minor).

The lower voices accent the first downbeat of each measure, while the second and third beat displace the sixteenth note arpeggiation in the right hand. The tonic triad, Gm, is repeated with occasional cadential figures (m.1, beat three) with a Neapolitan (A $\flat$ ) towards the end of each phrase.

After the death of Schoenberg in 1951, Stravinsky began to utilize serial methods of the Second Viennese School more readily in his compositions. His ballet, *Agon* featured retrograde tone rows, and recurring pitch classes spanning all voices in the orchestra. Stravinsky often utilized the atonal aspects of serial music with the use of hexachordal combinatoriality and smaller sets that didn't include all twelve pitches.<sup>31</sup> McCreary utilized a similar method in composing out one of the most prominent themes in *Battlestar Galactica*.

“The Final Five Theme” was written from a collection of melodies that Bear McCreary had created for several characters in *Battlestar Galactica*. The theme itself plays a pivotal role throughout the entire fourth season of the show. Example 3.7 is a

<sup>30</sup> McCreary, “Battlestar Galactica: Songbook for Piano Solo,” 51. Transcribed for analysis with Sibelius 7.5.

<sup>31</sup> Joseph Straus, *Stravinsky's Late Music* (Cambridge: University Press, 2004), 36.



representation of “The Final Five Theme” as it appears in Bear McCreary’s blog. Applying the principles of Schoenberg and Stravinsky, one quickly acknowledges the use of (0237) tetrachord pitches in the theme: G-A  $\flat$ -B  $\flat$ -E  $\flat$ . This tetrachord appears in the Schenker sketch to be palindromic in construct, and is a shining example of “Stravinskyan”<sup>32</sup> within this brief musical cue. While McCreary makes no mention of this compositional technique in his blog or interviews, it’s possible his classical training afforded him the subconscious ability to compose the melody with striking similarities to that of Stravinsky.

McCreary does note the use of symmetry in his blog concerning “The Final Five Theme,” and wanting to disguise it during a dream sequence that occurs on the show. He goes into detail describing how the mirror image of the “Final Five Theme” is portrayed:

This upside-down melody is what young Kara (Thrace) plays in her dream, set to a child-like simple piano arrangement. It’s an extremely subtle clue, but it’s there nonetheless, like a code, hidden with the music.<sup>33</sup>

Fans of the show may also note the tetrachord set invokes the mystery of the cue; each of the pitches representing the final four hidden Cylon characters critical to the plot of the fourth season of *Battlestar Galactica*.

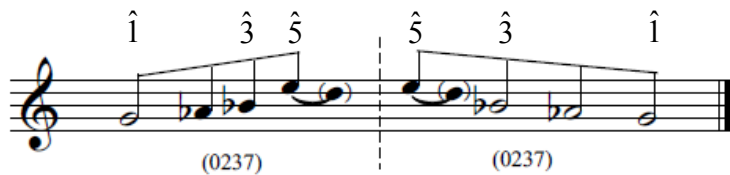
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<sup>32</sup> Cone, “The Progress of a Method,” 19. This is an endearing term for Stravinsky used by Edward Cone.

<sup>33</sup> Bear McCreary, “Bear McCreary –Official Site,” Bear McCreary: Chapter 3: Post Production: Dealing with the Piano,” Entry posted: February 27<sup>th</sup>, 2009, <http://www.bearmccreary.com/#blog/battlestar-galactica-3/bg4-someone-to-watch-over-me-pt-3>, (accessed April 23, 2013). McCreary is referencing several things here: the use of symmetry in his compositional process, and also the embedding of serialism into his work, without alienating the laymen audience.

**Example 3.7:** *Battlestar Galactica*, “The Final Five Theme”

## Symmetrical Inversion of “The Final Five Theme”

Middle Ground Sketch: “The Final Five Theme” & Retrograde & Linear Progression<sup>34</sup>

Johann Mattheson (1681-1764) was a famous German composer, singer and theorist that scoffed at solmization and church modes while lauding the sophistication and importance of melody in music. In his *Der vollkommene Capellmeister* (1739), he outlined an ideal method of composition that described the perfect format for writing a melody.<sup>35</sup> Mattheson believed melodies in music should follow an order with strong arguments at the beginning, weaker elements in the middle, with strong themes returning toward the end.

<sup>34</sup> The (0237) tetrachord is presented in retrograde motion, with the repeated embellishment in the upper voice (D) accounted for.

<sup>35</sup> George J Buelow, “Mattheson, Johann,” *Grove Music Online*, Oxford University Press, 2008, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/18097> (accessed: April 18, 2015).

Johann Mattheson stressed a good melody was crucial to the success of this compositional model.<sup>36</sup>

The linear progression, or underlying structure of the theme in Example 3.7, could be seen through Agawu's incorporation of Johann Mattheson's beginning-middle-end approach, with the removal of the Middle ( $\hat{2}$  of the Linear Progression) section. The beginning of this phrase includes an *Anstieg*, or arpeggiation between the pitches  $B \flat$  &  $E \flat$  when viewed in Example 3.7, that would agree with Agawu's interpretation of Schenker's theory, mapped to Mattheson's. The end section is identified as the result of overlapping sonorities on  $\hat{5}$ , proceeding to a conclusion on  $\hat{1}$ .<sup>37</sup> What is the point of such analysis in terms of science fiction cues in a television show? It certainly lends credence to McCreary's compositional prowess, educational background, and ability to incorporate complex theory into a puzzle for the composer and informed listener to enjoy.

Igor Stravinsky's influence upon these composers is rather apparent. While it is true that some of the elements can be attributed to many composers, one cannot dismiss such rhythmic gestures like the repeated eighth note pattern—a pattern that shaped the choreography for Stravinsky's ballet projects, and later influenced the imagery of space battles in George Lucas' imagination. A composer preparing to score a battle in space, or action sequence may utilize Stravinsky's accent pattern and eighth note repetition similar to the use of triplet meter examine in Chapters 1 and 2. McCreary updated this gesture in his percussion sections on *Battlestar Galactica*, where the rhythmic pattern makes its

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<sup>36</sup> Agawu, *Playing with Signs*, 51-52.

<sup>37</sup> Agawu, *Playing With Signs*, 52-53.

appearance in several musical cues. One should not divorce this gesture from Stravinsky's influence.

Williams and McCreary enjoy success as composers, and have much more to offer the realm of science fiction music. They choose to compose like exiles<sup>38</sup> from the norm, and science fiction of the twenty-first century is made better for it.

The elements listed in this chapter represent strong arguments for Stravinsky's legacy surviving well into the twenty-first century. Much like his neo-classical composition strategy, composers are drawing from several influences at once, and do not adhere to a single set of laws or standards of composition. It's acceptable to juxtapose contrasting rhythmic and harmonic gestures in film or television music; it's now expected. We've also witnessed the return of perfect intervals and their fanfare-like quality to identify with the hero archetype in the *Star Wars* films. This is a significant contrast from the minor sevenths, seconds, and thirds that permeated the first two chapters of this work, and have prepared us to address one of the most heroic archetypes in comic book and feature film history.

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<sup>38</sup> Griffiths, "Igor Stravinsky." Stravinsky was able to work within his changing environment and used it to his advantage.

**Chapter IV:**  
Dum-Da-Dum-Dum-Dum-Dum!

Few melodies in cinema have achieved a level of instant recognition like that of John Williams's score for *Superman: The Movie*. The melodies that comprise the "Superman Theme" are iconic and feature elements of extroversive semiosis, symbolism, and clearly defined topics by definition of this paper, and also that of Leonard Ratner. Analysis of the primary melody will unlock features of the hero archetype that embody the character of Superman. The heroic implications of the perfect intervals will be addressed and link John Williams's compositional choices with that of Richard Strauss.

Superman is a fictional superhero created by Jerry Siegel and Joe Shuster in 1933, with his first commercial appearance in *Action Comics #1* in 1938.<sup>1</sup> In Richard Donner's *Superman: The Movie*, the role of Superman is played by then unknown actor, Christopher Reeve, Lois Lane portrayed by Margo Kidder, Gene Hackman as Lex Luthor, with Marlon Brando as Superman's father, Jor-El. The visual effects were revolutionary for their time, and were created by the same team behind *Star Wars*, Industrial Light & Magic (ILM).

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<sup>1</sup> Associated Press, "Superman Turns 75: Man of Steel Milestone Puts Spotlight on Creators' Cleveland Roots," *NY Daily News*, April 17, 2013, <http://www.nydailynews.com/entertainment/music-arts/superman-celebrates-75th-anniversary-article-1.1319043>, (accessed: December 21, 2013).

John Williams was selected to score *Superman* due to his success with the *Star Wars*. In an interview from the 2001 documentary, *Taking Flight: The Making of Superman: The Movie*, John Williams remarks on the creation of his compositional model for scoring *Superman*, and reflects on elements that inspired him during the process:

One of the essential things about the film to me was the fact that it was fun, and didn't take itself too seriously, and the way Richard [Donner] had directed it, particularly the way Christopher [Reeve] and Margo [Kidder] had played the parts, that it had of it an almost theatrical camp, if you like, to it that was, that didn't take itself too seriously. And if one could strike a level of theatre and slight of hand, and tongue-in-cheek in creation of the themes, that it might be the right idea....I try to have the music constructed in such a way that it would be heroic and big and operatic, but not take itself too seriously.<sup>2</sup>

Williams's take on film scoring is in line with the limitations Frank Lehman agrees are placed on the perception and opinion of film composers by academia. These "restrictions" are actually strengths that remove inhibitions from composers like Williams and helped make the "Superman Theme"<sup>3</sup> a masterpiece of thematic and melodic material.

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<sup>2</sup> Michael Thau, *Taking Flight: The Development of 'Superman*, DVD, Warner Brothers Home Video, 2001. This quote taken from a series of interviews with John Williams, and were transcribed by me for this work.

<sup>3</sup> Frank Lehman, "Reading Tonality Through Film: Transformational Hermeneutics and the Music of Hollywood," PhD diss., Harvard University, 2012, 18. Lehman describes the assumption and perception that academia's inattention and assumption that movie music should "sound like movie music" reinforces a "dismissive attitude...self-evidently unsatisfactory, even irresponsible given the cultural ubiquity and the general importance afforded to this repertoire." I've found in my studies and experience that musicians are often encouraged to scoff at film composers as if they were inferior to the Western Tonal fathers presented those that choose to attend music schools for degree work. This viewpoint is not present in popular culture, and only in recent years, as pointed out by Lehman, has study of this important element of musical exposure been permitted study in the world of academia.

John Williams described the beginning of the “Superman Theme” as a ballet— a mental preparation that not only establishes the inevitable arrival of Superman on-screen, but also the mindset of Clark Kent before his transformation:

The “hero theme,” which is Superman himself, which is made of several parts, is kind of a fanfare: Each time he opens his shirt, you get this sort of three-note Superman musical motif that precedes the exposure of his shirt... we’ve established this “modus operandi” that each time you reveal the shirt, there was this musical, balletic preparation.<sup>4</sup>

The “three-note Superman musical motif” Williams spoke of is an iconic, triplet motive in C (the key of the “Superman Theme”) and is our first example of extroversive semiosis in *Superman* providing the viewer with an image of Clark Kent feverishly searching for an appropriate location to transform into Superman.

**Example 4.1:** *Superman*, Three-Note Motif Intro




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<sup>4</sup> Michael Thau, *Taking Flight: The Development of 'Superman*, 2001.

The appearance of the triplet motive is immediate and overt in the beginning of the theme, and provides the listener with our first topic as defined by Leonard Ratner: march. March style falls under the second category of Ratner's topic theory with themes like fanfare, horn-calls, and brilliant style (rapid passages for virtuosic playing).<sup>5</sup> The rhythmic motive of a triplet appears in each analysis of the Superman theme, and is similar to that of this opening motive in each recurrence. The presence of the triplet motive (metrically and melodically), permeates the rhythm of nearly all themes analyzed in this thesis. Its appearance here should cause one to agree that the figure can make nearly any melody, and as a result, any character, heroic.

The key of choice for the Superman Theme, C Major, is heroic in Williams's composition, and does not want for variety. The keys of C, F (with the raised fourth, or Lydian mode), and G are all tonicized to frame the principal theme from *Superman*. The key of C, according to Mattheson, "is suited to rejoicing and other occasions where joy is in full scope"<sup>6</sup> and is therefore well suited to our hero in blue. Traditional key relationships are at work through the tonic-dominant movement of the "Fanfare Theme," while this thrumming and gallant "ballet" sets the stage for the listener and viewer. This motive repeats several times, building upon its texture and instrumentation until a trumpet rises above the bolero—the orchestra, now at *Fortissimo* (or whatever is louder than that!) explodes into the "Superman Fanfare Theme" presented in Example 4.2.

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<sup>5</sup> V. Kofi Agawu, *Playing With Signs: A Semiotic Interpretation of Classical Music* (New Jersey: Princeton University Press, 1991), 32.

<sup>6</sup> James O. Young, "Key, Temperament and Musical Expression," *The Journal of Aesthetics and Art Criticism* 49 no. 3, (Summer 1991), 237.



**Example 4.2:** *Superman*, “Fanfare Theme”

The ascending perfect fifth between the anacrusis and beat one is what Richard Donner heard as, “Sup-er-Man” during a rehearsal for the *Superman Overture* (the name for the piece at the time) and caused him to burst into the recording studio, applauding and screaming, “Brilliant! Genius!” in Williams’s general direction.<sup>7</sup>

This part of the “*Superman Theme*” is comprised of an AA<sup>1</sup>BC form with an ascending melodic contour beginning briefly on the dominant, G (likely a transitional element from the opening motive), moving immediately to an alternating I – V diatonic fanfare—our next topic! The voicing of a C<sup>7</sup> chord next to its third inversion voicing is confusing without the bassline written in. The harmony is actually over  $\hat{4}$  in C; this implies harmony on F, but with the third missing. The pitches take on a quartal, Copeland-esque pre-cadential figure in these penultimate measures before the conclusion on C. The grounding of the melody in C is a metaphor for Superman taking flight, combating evil, or overcoming his mysterious past to become the hero of Truth and Justice. This programmatic idea is reinforced by the manner in which the melody “soars” with our hero through the pitches G-A-B-C. This is illustrated in a reduction of Example 4.2 below.

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<sup>7</sup> Michael Thau, *Taking Flight: The Development of ‘Superman’*, DVD, Warner Brothers Home Video, 2001.

**Example 4.3:** *Superman*, “Fanfare Theme” Reduction of Example 4.2

The musical notation shows a single staff with a treble clef and a key signature of one flat (B-flat). The melody consists of the following notes: G4, A4, B4, C5, G4, F4, E4, D4. There are four downward-pointing arrows above the staff, indicating specific notes: the first arrow points to G4, the second to A4, the third to B4, and the fourth to C5. Below the staff, Roman numerals are placed under each note: I, V, I, IV, I, IV, I, V<sub>4</sub>, I.

The notion of a Hero overcoming a particular struggle is a compositional feature of Williams’s score for *Star Wars* in 1977. “The Force Theme,” Heard in the “Binary Sunset” cue from *Star Wars: Episode IV* is one of the most memorable of Williams’s compositions, and ties into our examination of *Superman*.

**Example 4.4:** *Star Wars*, “The Force Theme” from the “Binary Sunset”

The musical notation consists of two staves in a treble clef with a key signature of two flats (B-flat and E-flat). The first staff contains the melody: G4, A4, B4, C5, G4, F4, E4, D4. The second staff contains the accompaniment: G4, A4, B4, C5, G4, F4, E4, D4. There is a triplet of notes (G4, A4, B4) in the first staff, and a triplet of notes (G4, A4, B4) in the second staff.

In “The Force Theme,” the audience is provided a melodic ascent similar to that of the “Superman Theme” moving upward from the dominant D to tonic Gm, contrasting with *Superman*’s major key. This minor key relationship may be identified with the emotional, or sensitive connotation the theme elicits from the audience regarding Luke Skywalker,

Darth Vader, and the solemn world in which the characters exist. The style also provides a topic of “sensitive” for “The Force Theme” in its use here.<sup>8</sup>

John Williams invoked the struggle of being stuck, or challenged by one’s current situation (e.g., Luke Skywalker essentially marooned on Tatooine with no way off the planet while under the care of his Aunt and Uncle) during the Binary Sunset scene itself. Skywalker stares into the setting of his planet’s two suns and at the close of a chapter in his life.

“The Force Theme” appears unable to reach beyond the fourth scale degree, but gradually climbs to the octave in a sweeping fashion composed with brilliance by Williams, similar to that of Example 4.2 of the “Superman Fanfare.” These thematic choices do not challenge the distinction between compositional structure and expression,<sup>9</sup> rather they utilize them as an emotional link to the characters and the audience.

The Superman theme features a ‘B’ section of the main melodic idea, with repeated use of the perfect fifth and octave relationships (G-C, and C –C).

**Example 4.5:** *Superman*, “Superman Theme” B Section



<sup>8</sup> The theme occurs in a triumphant march style during the award ceremony at the end of the film, just before the credits role.

<sup>9</sup> Agawu, *Playing with Signs*, 39.

The second part of this theme occurs often in *Superman: The Movie* whenever Superman completes a heroic gesture (e.g., his first appearance to the world saving Lois Lane from a falling helicopter atop the Daily Planet) and throughout a montage of Superman saving the day in Metropolis. Within this melodic element we find the familiar triplet figure outlining the foundry C Major chord. One may also note the descent from G to C (an inversion of the introductory G to C seen in Example 4.2) at the interval of a fourth and alternating fifth. The triplet figure connects this phrase of the “Superman Theme” to its predecessors and adds another march feature to the overall topic. The low brass are given a quarter note rhythm that arpeggiates the tonic triad. The B Section pounds out a triple-meter fanfare over this ostinato. The division of the beat by three is overt in presentation, but disguised in performance (except for the triplet figures). The order of topics now defined for “Superman Theme” as follows: march—fanfare – march. The topics merge into one another to form the background continuity required of Ratner’s topic theory thesis.<sup>10</sup>

The next section of the theme we will discuss is what could be called the “Love Theme.” Williams used another key, F Lydian<sup>11</sup> to invoke the mysterious relationship between Superman and Lois Lane. Analysis of this section will uncover suggested links to the main intervals of the theme and provide another topic for consideration. Example 4.6 below is a brief example of this theme.

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<sup>10</sup> Agawu, *Playing With Signs*, 50.

<sup>11</sup> Young, “Key, Temperament and Musical Expression,” 236. The Lydian mode was associated with higher pitches, and often sun by women in Greek culture.

**Example 4.6:** *Superman*, “Love Theme”


The audience is presented with the theme during the opening credits of the film, wherein Williams presents all the above material in overture format. The audience will not hear the theme again until half way through the movie, after an interview between Superman and Lois Lane, when Superman takes Lois for a hand-in-hand flight around Metropolis. John Williams scored this scene using the melody in Example 4.6 while Lois recites an internal monologue for the audience, addressing the idea that Superman may have the ability to “read her mind” regarding her sudden feelings for him.<sup>12</sup> The previously discussed modern interpretation of sensitive style found in Example 4.4 work well in this portion of the “Superman Theme”, and provide another linking topic (i.e., march—fanfare – march-sensitive).

The melody arpeggiates an F Major triad, rising towards  $\hat{3}$  before resting on  $\hat{2}$  (or the dominant in the home key of C.) This motion is familiar to the listener, and appears several times in the primary theme in similar contour, but different meter. One cannot help but notice the subtle use of triplet meter in this theme, elongated on quarter notes with tied eighth note passing tones to echo the march aspects of the theme. Example 4.7 is a

<sup>12</sup> This is likely one of the moments John Williams’s remarks about in a previous quote about the theatrical camp that Christopher Reeve and Margo Kidder brought to their respective roles.

comparison between the melodic intervals that are shared between the “Fanfare Theme”, “Love Theme” and the “Superman Theme B Section.”

**Example 4.7** *Superman*, Major Second Figure in Superman Theme



1<sup>st</sup> Motive: “Fanfare Theme”  
 2<sup>nd</sup> Motive: “Love Theme”  
 3<sup>rd</sup> Motive: “Superman Theme, ‘B’ Section”

A closer look at the “Love Theme” will reveal some connections with the overall theme, and identify melodic intervals that have appeared before in this work.

**Example 4.8:** *Superman*, “Love Theme” – Interval Analysis & Reduction



The notation shows two staves. The top staff is an interval analysis of the first measure of the 'Love Theme', with intervals labeled: P5 (Perfect Fifth), m9 (minor Ninth), m7 (minor Seventh), and M6 (Major Sixth). The bottom staff is a reduction of the same measure, showing the descending perfect fifth and the ascending major sixth.

The perfect fifth in the opening arpeggiation of the “Love Theme” mimics the descending perfect fifth found in the first measure of the “Superman B Theme” (Example 4.5). The ascension is similar to the contour of the primary theme, carrying the viewer, Superman and Lois Lane into the skies above Metropolis. The souring aspect of the melody—one might call it the sub-topic—is indicated by the sudden metric shift of the

overall theme to this thinner texture between the orchestra and horn section. One can clearly see the brief stop on G, creating the now familiar minor ninth that permeated the *Doctor Who* intro. Remembering the tragic character of The Doctor, this interval selection, an expanded seventh, may represent the sadness Lois feels when she realizes she is falling in love with an alien (likewise for Kal-El, or Superman!) This phrase spans the minor seventh interval Cooke identifies, and serves the moment in which we find Superman and Lois Lane. (i.e., Williams’s tongue-in-cheek approach to scoring a struggling romance between alien and human).

Examination of the “Fanfare Theme” and “Love Theme” reductions yields an interesting link between the two themes. Looking at the first few beats in each reduction, one must identify the similar interval pattern found. While the “fanfare Theme” ascends follows a Perfect fourth- major sixth- major second outline, the “Love Theme” ascends a perfect fifth – major sixth – major second, with the only variant being the opening interval to create an outline of a (024) whole-tone trichord.

**Example 4.9:** *Superman*, “Fanfare Theme” and “Love Theme” Interval Reduction

“Fanfare Theme”      “Love Theme”

The topic for Superman himself should simply be that of “hero” considering his strength of character and immense power. The strong key relationships between C, F, and G and the tonic / dominant interplay support this topic musically even when the character isn’t on screen. The modular themes of the overture allow Superman to be present in his own multi-faceted fanfare, and within the theme for his love interest, Lois Lane. The perfect fourth / fifth and major second melodic intervals connect the various themes together and provide symbolism that any viewer would appreciate and understand. The triplet figure is as bright as the brass section of Williams’s orchestra, and the dynamic level of each rhythmic gesture impresses the significance of the motive on the “musical linguistics” of the hero archetype for the listener. This heroic theme is apart from those studied in previous chapters. There’s no tonal ambiguity, no cause for confusion; Superman is a hero archetype; sine qua non.

We’ve taken a closer look at several elements of the overall “Superman Theme” that John Williams alluded to in his interview from *Taking Flight*. One theme that hasn’t appeared in our analysis of the piece is among my favorites, and one of great majesty and duality.

After the opening credits to *Superman* scroll, the camera pans down to reveal a snowy white crystalline planet, Krypton: the birthplace of Superman. A lone trumpet is heard playing a lovely melody that builds to include the low brass and strings on a sustained pedal G. This is perhaps one of the most beautiful musical moments in the film, and is used throughout the movie to depict the duality Superman faces (e.g., reconciling being Clark Kent from Earth, and Kal-El from Krypton), and his unrequited connection to his



lost ancient Kryptonian ancestors. Let’s look at this simple fanfare in detail, recognizing characteristics that invoke romantic-era compositions, and how John Williams tucked the melody into the tapestry of themes devoted to Superman.

**Example 4.10:** *Superman*, “The Planet Krypton” Cue - Fanfare



C: V-----I-----V----I-----V-----I-----V-----I

This melody, compared to the overall key of the “Superman Theme,” tonicizes the V-I motion that is presented in an interval format around the tonic, C. The first phrase is a strong presentation of G Major with  $\hat{5}$  on a sustained dotted quarter note pitch in our example. If the sixteenth note E on the latter of beat one in measure two and four is considered a brief *appoggiatura*, then we have the same major second motive from Example 4.7 present in the “Planet Krypton” cue, linking the themes with a similar “sign”.

Fans of Richard Strauss (1864-1949) may recognize *Also Sprache Zarathustra*, Op .30, specifically, “Part I: Einleitung, oder Sonnenaufgang,” within the Planet Krypton Cue (approximately 1:10-21 into the cue). Unfortunately, a complete orchestral score for *Superman* was unavailable for study, but similar details between the two pieces can be identified immediately through analysis of score excerpts from *Also Sprache Zarathustra*.

Strauss’ brass fanfare mirrors the intervallic structure found throughout all *Superman* cues—specifically the perfect fourths and fifths—in ascending motion.

**Example 4.11:** Richard Strauss – *Also Sprach Zarathustra*, Op.30, mm.5-7<sup>13</sup>

The image shows a musical score for four trumpets in C and eight trombones (I and II). The music is in common time (C) and C major. It features a fanfare with dynamics *p*, *f*, *p*, and *f*, and the tempo marking *(feierlich)*. The trumpets and trombones play a series of notes that form a fanfare, with the trumpets playing a higher line and the trombones playing a lower line. The score is written for four trumpets and eight trombones (I and II).

It's possible this piece was great inspiration to Williams throughout the composition of *Superman* as is evident by the use of the fanfare itself, and the organ that appears near the end of “The Planet Krypton” cue. Later in Part I of *Also Sprach Zarathustra*, at the crescendo, we are presented with foundry pitches of “The Krypton” theme presented with intervals of a third, fourth and fifth above the bass, culminating in a C Major chord in all instruments of the orchestra. The textural addition of the timpani pounds out the same V-I harmonic structure of both pieces. “Majesty” and “Inverse Mannheim Rocket<sup>14</sup>” come to mind as possible topics for this introduction. These findings are present in Example 4.12 from mm. 19-21<sup>15</sup>

<sup>13</sup> Richard Strauss, *Also Sprach Zarathustra*, Op. 30, Munich: Joseph Aibl, 1896.

<sup>14</sup> Agawu, *Playing with Sings*, 30. The Mannheim Rocket is a series of rapidly ascending notes from the low to high register. This piece ascends slow and deliberately, thus my use of the “Inverse Mannheim Rocket.”

<sup>15</sup> *Ibid.*

**Example 4.12:** Richard Strauss – *Also Sprach Zarathustra*, Op.30, mm.19-21.<sup>16</sup>

The image shows a musical score for the orchestral piece 'Also Sprach Zarathustra' by Richard Strauss, measures 19-21. The score is arranged in five staves. The top staff is for 4 Tromps (C), the second for 3 Pos., the third for 2 Basstub., and the bottom for Pauken. The music features a crescendo leading to fortissimo (ff) dynamics. The instrumentation includes trumpets, trombones, and drums.

Stanley Kubrick's, *2001: A Space Odyssey* was a huge success 1968, nearly a decade prior to *Superman: The Movie*. Perhaps Williams was capitalizing on the success that Strauss' piece relished since its use in *2001: A Space Odyssey* and hoped its basic interval approach would lend itself to audience connectivity with Krypton as an alien planet not unlike our own.<sup>17</sup>

<sup>16</sup> Ibid.

<sup>17</sup> Similar connections were used in Christopher Nolan's *Interstellar* (2014) by composer Hans Zimmer. The use of organ and the ascending perfect fifths were utilized here to depict the majesty of space.

## CHAPTER V:

### Do Heroes Dream of Electric Sheep?

Our exploration into the heroic characteristics of melody as applicable to interval vocabulary, rhythm (specifically the triplet figure), contour, and topic theory barely scratched the surface of what is available for study. This final chapter will be a review of melodies I believe might be featured in theory papers of the future, and how each one is connected to the characteristics outlined in this thesis.

Figure 5.1 represents a sample of melodies from films and television shows since the 1960s, primary intervals associated with their respective heroes, and maps a timeline one could use to answer the question: “how is the hero archetype musically portrayed in superhero and science fiction films?”<sup>18</sup> Review of select themes in Figure 5.1 allows one to see how science fiction composers used many of the common intervals previously discussed and, when teamed with subsequent musical examples, provides an idea of the direction film composers might take in years to come. Any commonalities between intervals across the decades may be the result of composer quotation of their favorite composers (as we’ve seen with Mahler and Brahms with Alexander Courage), and unconscious, coincidental reproduction of famous melodic and intervallic fragments passed down for hundreds of years.<sup>19</sup>

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<sup>18</sup> For purpose of this paper, this is defined as the section of the melody most memorable to the listener after first listening, or the accepted theme assigned to the hero of the story.

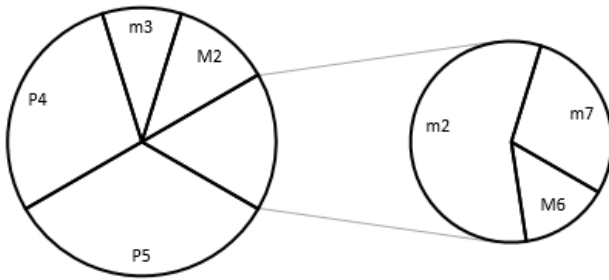
<sup>19</sup> Ibid., 172.

**Figure 5.1:** Analysis of Prominent Melodic Intervals in Popular Science Fiction Films and Television Shows from 1963-2013

NAME OF FILM	YEAR	FUNDAMENTAL PITCHES (Main Theme)	PROMINANT INTERVALS (Main Theme)
Dr. Who (Original)	1963	B - C - D - A (0235)	m7 / M2 [INTERVAL SPAN - m7]
Star Trek (TOS)	1966	B b - F - A b - C (0247)	P4 / m3 [INTERVAL SPAN - M2]
2001: A Space Odyssey	1968	C - G - C - E - E b (0347)	P4 / P5 [INTERVAL SPAN - m3]
Star Wars	1977	F - B b - F - E b - D - C - B b - F	P4 / P5 [INTERVAL SPAN - P8]
Battlestar Galactica	1978	F - C - F - E b - D - C - E b - (F)	P4 / P5 [INTERVAL SPAN - P8]
Superman	1978	G - C - G - A - G - F - G	P4 / P5 [INTERVAL SPAN - P8]
Raiders of the Lost Ark	1981	E - F - G - C - D (E)	m3 / P4 [INTERVAL SPAN - P8]
E.T.	1982	G - D - C - B - A - B - G - D	P5 [INTERVAL SPAN - P5]
Back to the Future	1985	G - C - F# - G - A - G - E - C - F# (D)	P4 / P5 [INTERVAL SPAN - P5]
Star Trek: The Next Generation	1987	G - C - E - D - B - A - G	P4 / P5 [INTERVAL SPAN - P8]
Batman	1989	B - C# - D - G - F#	m2 / M2 [INTERVAL SPAN - P5]
Star Trek VI: The Undiscovered Country	1991	C - D - E b - B b - A b - G	m2 / M2 [INTERVAL SPAN - P5]
Star Trek: Deep Space Nine	1993	G - C - E - B - F - E - F - G	P5 [INTERVAL SPAN - P5]
Stargate	1994	C - C - A - G - A - B b - G - A	M6 [INTERVAL SPAN - M6]
Firefly / Serenity	2002	D - E - F - A - G - F - E - D - C	P5 [INTERVAL SPAN - P8]
The Dark Knight Trilogy	2005	D - C# - D - F - C# - D (014)	m3 [INTERVAL SPAN - P8]
Dr. Who (2005-Present)	2005	B - C - D - A (0235)	m2 / M2 [INTERVAL SPAN - P8]
Fringe	2008	G - E b - C - B b - C - F - E b - D	P4 / P5 [INTERVAL SPAN - P5]
Star Trek (J.J. Abrams)	2009	D - E - F - E - C - (G)	M2 / P4 [INTERVAL SPAN - P5]
Walking Dead	2010	G - D - A - B b - D	m2 / P5 [INTERVAL SPAN - P5]
Captain America: The First Avenger	2011	G - A - D - G - F# - G	P4 [INTERVAL SPAN - P4]
Thor	2011	A - F - G - A - A# - C - A	m3 [INTERVAL SPAN - P8]
The Avengers	2012	G - D - C - B b - C - D - G	P5 [INTERVAL SPAN - P5]
Prometheus	2012	E b - B b - A b - D b - C - A - E b - G - E b	P5 [INTERVAL SPAN - P8]
Man of Steel	2013	C - G - C - F - E - D	P4 / P5 [INTERVAL SPAN - P5]
Pacific Rim	2013	F - E - G - A - C - D	P5 [INTERVAL SPAN - M6]

The minor third, perfect fifth, and octave dominate the themes analyzed in Figure 5.1, as do the use of scale degrees  $\hat{1}$   $\hat{4}$  and  $\hat{5}$  further emphasizing popular culture's reliance upon the tonic / dominant relationship. The significance of this should not astound academic musicians, considering the assumption that all "popular music" utilizes the I-IV-V harmonic relationship. It is natural that this archetype translate into film score melody of a composer seeking to communicate with an audience utilizing an agreed upon interval language.

**Figure 5.2:** Prominent Intervals from Figure 5.1



71% of melodies in Figure 5.1 are minor thirds, perfect fourths or fifths: fundamental pitches of the tonic triad. This is indeed a contrast from the study of melody in chapters 1, 2, and 3 with melodies featuring the second, seventh, and its extended form, the ninth, in addition to the perfect fourth. Is there an indicator of when the shift towards perfect interval preference began in the selected film genres? Alexander Courage and Richard Strauss—Strauss by way of Kubrick—may provide an answer.

*Also Sprach Zarathustra* is the theme representing *2001: A Space Odyssey* in Figure 5.1 due to its prominence throughout history, and accepted role as the fanfare for Stanley

Kubrick's masterpiece. The piece features a significant appearance of the perfect fourth / perfect fifth relationship in Figure 5.1. The perfect fourth is present in the fanfare for the *Star Trek* Theme by Alexander Courage, but this author argues that the perfect fourth / perfect fifth intervals of Strauss benefitted from his topic selections of *Sehr Breit* (broad / massive), and *feierlich* (solemn / ceremonial) as seen in Example 4.11 from Chapter 4. This compositional choice helped the audience absorb the intervals one at a time throughout the fanfare. This opening topic, heavily contrasting the *Star Trek* fanfare that featured a brief perfect fourth on beat one is not prominent enough to afford Courage the distinction of cementing these intervals into the science fiction film lexicon.

Eventually, the perfect fourth / fifth begins to take hold as seen in Williams's *Star Wars*, and *Superman: The Movie*. One can see the use of the interval in later *Star Trek* television shows (*Star Trek: Deep Space Nine*), and other science fiction programs (e.g., *Firefly*, *Fringe*, *Back to the Future*). Bear McCreary's comments on why composers frequently utilize perfect intervals in modern compositions, and describes through a youthful analogy, how melodies communicate a sense of familiarity to listeners:

When you hit a string or a piece of metal or anything that vibrates, you hear the fundamental pitch that the thing is vibrating at, but you hear a series of overtones - of harmonic frequencies - that you're not exactly aware that you're hearing. And those are a series of notes that are increasingly higher than the fundamental. So what's called the first overtone, as in the lowest of the overtones, is an octave higher than the fundamental, and you can guess what the next one up is: It's a fifth higher up than that. So if you have a guitar string that is tuned to a C and you pluck it, you actually hear not only that C, [but also] you hear clearly the C above that, and less clearly the G above that. And in fact, you're hearing many, many more notes that keep going up higher and higher, but the higher you go the less clear it is. There is something fundamentally natural about that octave, and then a fifth relationship, that happens in sound. This is not something that composers came up with...this is something

that happens in the physical universe as we know it. So that makes it feel very strong... you play a note and then you play the octave above it, you're reinforcing overtones...If you take a pan out of the oven and smack it, you're going to hear those same notes...that's comforting.<sup>20</sup>

Let's select a few recent melodies from Figure 5.1 and take a look at how they are imbued with heroism, hope, or sadness. One of the primary melodies from JJ Abrams's *Star Trek* reboot in 2009—composed by Michael Giacchino—is a fantastic sample.

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<sup>20</sup> Charlie Jane Anders, "Bear McCreary Reveals the Physics Behind Your Favorite Science Fiction Theme Tunes," Io9.com, <http://www.io9.com/5883406/the-physics-behind-your-favorite-science-fiction-theme-songs>, (accessed May 30, 2014).



**Example 5.1:** *Star Trek* (2009), “Main Theme” Transcription<sup>4</sup>

This melody, performed on a solo French horn in a low register, is significantly different from that of previous *Star Trek* themes both texturally and melodically. Take note of the triplet figure presented in half notes. This metric motif once again reinforces the traditional significance of triplets and triple meter with heroic actions, and will certainly perpetuate as a heroic rhythmic gesture for years to come.

Giacchino’s use of harmony in this theme with the Neapolitan in mm.5-6, prepares the first inversion dominant in the last measure (this is a half cadence; the melody repeats a few times in the film) through a  $\hat{1}$  to  $\hat{\#3}$  motion in the upper voice. The Neapolitan chord is prepared in traditional fashion except for the root position voicing. The first four measures of the melodic fragment in Example 5.1 feature traits of the Dorian mode, and imbue the listener and the theme with a sense of tense melancholy. The melody from Example 5.1 appears on several occasions in the film, and represents the “new” *Enterprise*, Captain Kirk, and many other programmatic elements.

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<sup>4</sup> The triplet figures presented throughout this reduction represent the myriad of occurrences in *Star Trek* where the triplet appeared (i.e., on occasion, the melody featured the triplet figure throughout the entire melodic fragment). The final triplet figure in Example 5.1 (m.6) is fixed, and occurs with each quotation.

The “tragic” perfect fourth and the minor third in the melody represent challenges the characters face throughout the *Star Trek* reboot: The loss of planets Vulcan and Romulus, the loss of Spock’s mother and nearly all of his race, even the death of Captain Kirk’s father and mother (events that did not occur in the original series timeline). The perfect fourth, D-G is achieved by passing through the minor third first as if to represent the struggle our characters must endure before they are united in the film literally (e.g., on the bridge of the *Enterprise*), and figuratively in their dedication to one another. It isn’t until the last minute of the 2009 reboot of the classic film franchise that the listener is presented with the opening theme composed by Alexander Courage from the original *Star Trek*.<sup>21</sup> If this new *Star Trek* could have a topic, it would share that of its not-so-distant cousin, “Heroic Fanfare,” earned through the modular use of the theme by Giacchino, and the bravado with which the horns play the solemn, stoic melody. Perhaps this theme possesses a more appropriate topic of “admiration” for that of its nearly 50-year-old predecessor?

There exist science fiction films that do not require heroes to earn their theme throughout the story. Instead the hero theme is offered as a hook for the viewer, and sets the stage for a particular series of events. *Pacific Rim*, provides the audience with such a theme in the first ten minutes of the story, and does so with the flair.

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<sup>21</sup> *Star Trek* was written as an origin story for the famous *Star Trek* characters from the original series (e.g., Captain Kirk, Commander Spock, etc.) so it’s fitting that Giacchino’s theme represent the “earning” of the original Alexander Courage theme throughout the film. Only when the whole crew is present on the ship at the film’s conclusion should the audience feel the theme earned by the crew.

**Example 5.2:** *Pacific Rim*, “Pacific Rim” Theme Transcription & Reduction

The image shows a musical transcription and reduction of the 'Pacific Rim' theme. The top staff is a piano reduction with a treble clef, featuring a melodic line with a minor seventh interval (m7) and a perfect fifth/perfect fourth interval (P5 / P4). The bottom staff is a bass clef line showing a bass pedal of D. Below the bass staff is a chord reduction: dm: i<sup>6</sup> iv - v<sup>6</sup> v<sup>6</sup> i.

This melody is performed on electric guitar by Tom Morello (from the band, Rage against the Machine), and is played with full orchestral accompaniment. The industrial feel of the compressed electric guitar crunching out the melody invokes the image of a factory where giant fighting robots might be constructed. The selection of an alternating perfect fourth perfect fifth interval, achieved by the major second figure (D-C) over a bass pedal of D, is excellent for the story in *Pacific Rim*: a movie featuring giant robots called *Jaegers* so intricately built, they must be piloted by two men. This duality is represented by alternating perfect intervals and is an excellent example of a referential link to the exterior world.<sup>22</sup> It would be a stretch to attribute the brief minor seventh in the opening motif with the struggle of the human race to defend against the onslaught of Kaijū,<sup>23</sup> but it's worth mentioning. The perfect fifth's heroic use is logical in representing humanity combating

<sup>22</sup> V. Kofi Agawu, *Playing With Signs: A Semiotic Interpretation of Classical Music* (New Jersey: Princeton University Press, 1991), 22.

<sup>23</sup> Japanese word for monster. Also attributed to the genre of films to which *Godzilla* belongs.

the extra-dimensional threat with 90-meter tall robots. Perhaps the topic for *Pacific Rim* would have to be “defiant hope:” something all heroes, man or machine, must invoke.

Alan Silvestri, is a film composer made famous by his themes to popular science fiction-related films like *Back to the Future*, television documentaries like the reboot of *Cosmos: A Spacetime Odyssey*, and the superhero film, *Captain America: The First Avenger*. The musical theme for Steve Rogers, or Captain America is patriotic in its use of fanfare, triplet rhythms, and march topics to depict the hero (similar to World War II propaganda songs), and tragic in its use of the perfect fourth, and elements of the seventh that align with Deryck Cooke’s approach to both intervals.<sup>24</sup>

Captain America begins as a weak, feeble young man unable to enter military service during World War II. He eventually passes his medical exams by lying, and is accepted to the Super Soldier program after jumping on a live grenade during a training exercise (later revealed to be a fake grenade) to sacrifice his life for his fellow soldiers. He is then injected with a serum that would enhance his metabolism, muscle mass, and provide him with superhuman strength to become Captain America. It is at this time the character is presented with his theme, representing courage and the challenges that all fighting men face; it is an excellent demonstration of subtle story telling with melody. Connections between Silvestri’s compositional choices can be found in other patriotic songs of the era as well like Edmund L. Gruber’s “The Caissons Go Rolling Along.”

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<sup>24</sup> Deryck Cooke, *The Language of Music* (New York: Oxford University Press, 1959), 81-82.

**Example 5.3:** *Captain America*, “Captain America March” & Reduction with Interval Analysis

The image shows two staves of music. The top staff is the original melody in treble clef, key of D major (one sharp). It consists of four measures: a quarter note D, an eighth note F#, a quarter note A, a quarter note B, a quarter note G, a quarter note F#, a quarter note E, and a quarter note D. The bottom staff is a reduction of the melody, showing the intervals between notes: P4 (D to G), M7 (G to F#), P4 (F# to D), and m3 (D to F#).

**Example 5.4:** *Gruber*, “The Caissons Go Rolling Along” & Recurring Rhythms

The image shows two staves of music. The top staff is the original melody in treble clef, key of Bb major (two flats). It consists of four measures: a quarter note Bb, an eighth note D, a quarter note Eb, a quarter note F, a quarter note G, a quarter note Ab, a quarter note Bb, and a quarter note C. The bottom staff is a reduction of the melody, showing the intervals between notes: m3 (Bb to D), P5 (D to Ab), and P4 (Ab to Bb). Below this is a separate staff showing a similar eighth/quarter note pattern: a quarter note Bb, an eighth note D, a quarter note Eb, a quarter note F, a quarter note G, a quarter note Ab, a quarter note Bb, and a quarter note C. An arrow points from the text 'Similar use of eighth / quarter note pattern!' to this staff.

The main melody of the “Captain America March” utilizes the descending perfect fourth in both phrases, a near octave leap down a major seventh from F# to G at a cadential point, resolving in a major third between G# and E in the last phrase. The descending perfect fourth functions as a violent longing for the accomplishment<sup>25</sup> of Steve Rogers’ goal to fight for his country. The fanfare-like aspect of the melody acts in a manner similar

<sup>25</sup> Ibid., 81. Cooke uses an example from Beethoven’s Fifth Symphony to illustrate his point on the subject, but uses descriptors that can be grafted onto any character in a story attempting to accomplish something he/she is challenged by, or by what others perceive unachievable. It’s a fantastic analysis by Cooke that is well suited to this *Captain America* theme.

to that of Superman in that Captain America's theme is heard during a montage of him defeating Nazi soldiers, and perfectly demonstrates extroversive semiosis from a 1940s point of view. The key of D Major was a favorite of early composers and Beethoven due to its musical expression of glory,<sup>26</sup> and is appropriate for a hero who brings pride to the Allies of Northern Europe.

One will notice the singing style in the "Caissons" melody that features a tight melodic contour and few leaps to assist casual singers in participating during performance. This could be interpreted as singing style: a topic, acting as a higher, meta-topic for the melody. The minor third relationships in this melody work well with Cooke's definition of being sandwiched between the tonic and dominant<sup>27</sup> when the song is performed in its entirety. The perfect fifth interval arrives at the end of each musical phrase. The perfect fourth ascends in "Caissons," whereas in *Captain America*, the same interval descends. This melodic motion makes sense when considering "Caissons" a marching song for the Army, and a patriotic tune to be sung, so ascending motion would be preferred. It does not take away from the melodic significance of the interval use here. Gruber's song also features the march topic similar to the "Captain America March" in the fanfare leading up to the melodic fragment presented in Example 5.3 (fanfare not transcribed). The topic of "fanfare" once again associated with heroes of fiction and non-fiction. The recurring rhythmic figure of three beat patterns: two eighth note-quarter note (m.1.), eighth note-quarter note-eighth note (m. 4), and three quarter notes (m.5) emphasizing a triple meter

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<sup>26</sup> Young, "Key, Temperament and Musical Expression," 236.

<sup>27</sup> Cooke, *The Language of Music*, 57.

that creates an energy military troops and crowds alike might march and sing. The triple meter feel is achieved in the orchestra of the “Captain America March” to accomplish the same energizing goal; the triple / triplet rhythm succeeds again.

*Captain America* and *The Avengers* both contain themes for characters that are presented to the audience either after the characters have been transformed into their superhero state (as in *Captain America*) or after the team of superheroes have “assembled” to defeat whatever foe awaits them (e.g., *The Avengers*, *The Avengers: Age of Ultron*). This represents a fantastic thematic element to the production of new superhero and science fiction films by providing the viewer with symbolism for the characters that binds them to their respective melodic theme.

Marvel’s 2013 hit, *The Avengers* is a challenging movie to trace themes in a single sitting. This film featured the paring of Marvel’s then film franchises *Captain America*, *Iron Man*, *Thor*, and *The Hulk* into one massively successful film that set the precedent for all other features of the genre to come (and those that have arrived since this paper has been written (e.g., *Guardians of the Galaxy*, *Ant Man*, *Captain America 2: The Winter Soldier*, etc.). Just as in *Captain America*, the heroes struggle to work together and look pass one another’s personal challenges to defend the world from whatever threats besiege Earth. Alan Silvestri utilized the same compositional technique in *The Avengers* as he did in *Captain America*, and Michael Giacchino before him: revealing the final theme after it is earned.

Cooke provides no interpretation for the perfect fifth in his text. It's a surprising revelation, but the intervals he finds most significant are laid out early in the body of work with no mention of this interval. The closest he comes to acknowledging the interval is a discussion on the augmented fourth, also known as the diminished fifth. Due to the tonal implications and uses of the chord, his analysis cannot be applied to the perfect fifth as it is used in my context of study.<sup>28</sup> Frank Ragozzine suggests through his research that the perfect fifth is nearly indistinguishable from the perfect fourth, or the tritone. One of his experiments on identifying these intervals in a melodic setting (a test based on the circle of fifths), revealed a difficulty by participants to separate the tritone and perfect intervals from one another on a consistent basis.<sup>29</sup> This study may provide insight into why Cooke decided to omit the perfect fifth from *The Language of Music*.

What shall we do with the interval then? Should one assign *pathos* or neutral emotion of the perfect fourth—as described by Cooke—to the perfect fifth in absence of an accessible trait? Agawu does not discuss the significance of intervals in his study, and cannot help us here. One must rely on Cooke's, Agawu's, and Mozart's<sup>30</sup> understanding that audiences interpret agreed upon, subconscious meanings assigned to intervals by

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<sup>28</sup> Ibid., 90. The closest Cooke comes to identifying with the perfect fifth is found in a comment on the sharp fourth: "...pure and simple." I couldn't find any other commentary regarding Cooke's decision to omit the interval in his work.

<sup>29</sup> Frank Ragozzine. "Correspondence in Perception of the Tritone Paradox and Perfect-Fifth/Perfect-Fourth Intervals," *Music Perception: An Interdisciplinary Journal* 30, no. 4, (April, 2013), 394. The tritone paradox also affects the octave as well. His experiments presented in this article were aimed at determining why the tritone caused such difficulty for the listener. His results are found on page 397-8.

<sup>30</sup> Agawu, *Playing With Signs*, 4. Mozart included Turkish music to create a lighthearted joking atmosphere in his opera, *Die Entführung aus dem Serail*. The audience, according to Mozart, would understand that this music would inject a "note of comedy" to a scene.



composers. We all have a musical vocabulary that assigns emotions to pitches, intervals, keys relationships, and rhythms. If the hero doesn't recognize the characteristics within himself, the audience most certainly does, and always will.

## EPILOGUE

Composers of science fiction and super hero films have a pantheon of familiar melodies, rhythms, and shared emotional context from which to pluck and stir the score of a film. The films and television shows studied here featured prominent melodies easily distinguished by the listener. Many of them famous enough that those reading this work might easily recall the scenes each melody accompanies. The use of intervals of the tonic triad have succeeded in becoming the prominent tools used by composers to hammer together the themes their directors and producers demand of the twenty-first century hero. The music of the 60s, 70s, and early 80s offered colorful options found in the minor and major seventh, the perfect fourth, thirds and seconds to compose intricate themes for simple heroic figures like the starship *Enterprise* and her crew, to the complicated and mysterious character of The Doctor. We also discovered a common rhythmic motive on the triplet, and repeated eighth note patterns that created the fanfare topics many of the themes feature, and provide future students with a starting point when studying the rhythmic aspects of the hero archetype.

Victor Kofi Agawu provided this study with an example of Leonard Ratner's topic theory that was malleable enough to wrap itself in the world of science fiction composers, while respecting the introversive and extroversive semiosis of eighteenth and nineteenth century composers, and their associated analytical preferences. Agawu reminds the audience that extra musical events are just as significant to the compositional process as the scripts and storyboards. The composer who fails to establish *what* the hero of their story

is motivated by, and *how* their story will unfold, will fail in translating this intent for the viewing and listening audience.

Deryck Cooke's interpretations were successfully applied to the structure of each of these themes. His observations regarding the chosen pitches and intervals that best communicate emotional characteristics to the audience were present in the hero archetype of my selections. My familiarity with each aided in assigning Cooke's theory to the themes, but my limited knowledge of *Doctor Who* and the search for clues in his theme was the "control" in our experiment that vindicates Cooke's findings.

As indicated in chapter five of this work with Figure 5.1, my study has only scratched the surface of a "small quadrant<sup>1</sup>" of the science fiction and superhero films available for study. As academia continues to evolve and recognize the breadth of film music of these genres—and that of many others—are indeed worthy of scholarly work, then projects that seek to identify reputable traits related to music theory and musicology will supernova. This project is a presentation of a select group of hero archetypes, topics, melodies, and rhythmic gestures related thereto. It is my hope that this proud moment in academic film music analysis will not be lost in time, like tears in the rain,<sup>2</sup> but expanded upon and explored by young music scholars to come. Fascinated by the heroes of their childhood, and the renaissance of science fiction and superhero films of the early twenty-first century.

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<sup>1</sup> Frank Lehman, "Reading Tonality Through Film: Transformational Hermeneutics and the Music of Hollywood," PhD diss., Harvard University, 2012", 320.

<sup>2</sup> Quote from Batty the Replicant (android) in Ridley Scott's *Blade Runner* (1982).

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**ABSTRACT****STARSHIPS, GALLIFREY, KRYPTON, AND EARTH: SEARCHING FOR THE HERO ARCHETYPE IN THE MELODIES OF SCIENCE FICTION AND SUPERHERO FILMS.**

by

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MAY 2015****Advisor:** Dr. Karl D. Braunschweig**Major:** Composition / Theory**Degree:** Master of Music

The study of science fiction and superhero melodies is relatively new in the academic world of music theory. Analysis of hero archetypes found in *Doctor Who*, *Star Trek* (and its major motion pictures), *Star Wars*, and *Superman* provide excellent conduits for all students of music to access the hidden and overt musical meaning assigned to heroes. Realization of this study's findings will feature interval tension and Schenkerian analysis, score reductions, and topic theory to provide perspective on how heroes are identified and perceived by directors, composers and audiences alike. Deryck Cooke, Leonard Ratner, and V. Kofi Agawu's approach to thematic and melodic analysis provide support to this paper's findings, and strengthens the semiotic effect of each melody studied. Intervals used in heroic melodies have an extra musical purpose, utilizing an agreed upon language of music between the audience and composer. Searching for these connections is the goal of this project, providing a framework for future study of the hero archetype in film scores of the twenty-first century.

## AUTOBIOGRAPHICAL STATEMENT

While attending Oakland University, James participated in multiple ensembles including University Chorus, Jazz Singers (under the direction of the late Professor Danny Jordan), Opera Workshop, Percussion Pops, and Guitar Ensemble. James performed with the Oakland Symphony Orchestra on pieces by Giuseppe Verdi at the Max M. Fisher Music Hall, and other works by Brahms, Mahler, and Duruflé at local venues with the Oakland University Symphony Chorus. He also served as transcriptionist for the Music Theater Department in 2011.

Professor Terry Herald of GOH. Co, Inc. provided him with the opportunity to work as music recording engineer on the score to Cuttlefish Productions, *World of Art*. While working with Terry, James wrote and recorded an original bluegrass composition and recorded it with fellow music students. James participated in the formation of the Association for Music Students at Oakland University (AMSOU) where he served as Vice President for two years. The organization raised nearly \$15,000 for a jazz endowment in memory of Professor Danny Jordan.

In 2011, Wayne State University welcomed James into their creative fold to further his studies in music theory. This opportunity was refreshing, and permeated his four year tenure at Wayne State University. While studying and preparing for his Master's Degree, he worked as an Aural Skills II graduate assistant for Dr. Braunschweig, and spent four semesters working with Dr. Joshua Duchan's Music History courses. He was the recipient of the Music Study Club of Metropolitan Detroit Scholarship in 2013.