The Temporal and Rhythmic Effect on Musical Composition and Form when Scoring Dramatic Moving Picture

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Your love and encouragement inspired me more times than you'll ever know.

Abstract

The goal of this thesis is to explain the unique aspects of composing music for film and the unusual challenges facing the composer in writing music that supports on-screen dramatic action and dialogue.

Besides my work as a composer in the film industry, I have always been active as an educator in the field as well. In my experience, I have found that there are a number of instructional texts that discuss many of the technical aspects of film composition, such as calculating timings and techniques of synchronization of music to film, however, I have found that there is very little information on the compositional technique of film scoring. For example, one of the common aspects of film composition is that very often a composer must write in what might be called ‘nonconventional musical form’ or odd phrase lengths. However information on the technique of how to write musical phrases with unusual numbers of measures that sound natural is difficult if not impossible to find. One does find references to this in many texts, however the thought process and/or technique that the composer used is not explained. Once I began teaching, I realized that I would have to codify some of the techniques that I use in order to teach my students methods to deal with these issues. Many of the techniques originated from personal observation working as an orchestrator, conductor, or ghostwriter for other, more experienced, composers. I consider myself extremely fortunate to have had the opportunity in my career, to work for some very talented and experienced individuals and to learn ‘on the job,’ and in many cases getting the chance to practice, develop and test these methods in a professional working situation. My thesis also includes chapters on the working process - walking through the steps of scoring a motion picture, which I feel certain many readers will be unfamiliar with. My ultimate goal is to expand this thesis into a textbook that can be used to teach the craft of film composition as I feel that such a text, which makes an effort to codify some of the techniques of film scoring, is needed. To demonstrate the methods and concepts that I discuss, I make use of examples from my own personal body of work including scores and audio and video examples included on the accompanying CDs.

1 - Introduction

> *"It is a cardinal rule for the film composer that the visuals on the screen determine the form of the music written to accompany it."*[1]

Music written to accompany and support dramatic moving picture, commonly referred to as "underscore,"[2] presents some unusual challenges to composers in the way that it is conceived. One of the unique qualities of this type of music that I will explore in this thesis is the fact that these compositions must be written to support the action/emotion on screen while simultaneously conforming to critical timings of where those actions and emotions occur and change. This often creates challenging musical situations where a composer will need to write music that does not follow what might be considered to be more 'regular' or 'traditional' musical phrase lengths, perhaps 4 or 8 measure phrases. Instead, the music may have to work in odd or unusual phrase lengths – 3 and 5 bar phrases for example. It is also possible that single beats might need to be added or deleted from an otherwise 'traditional' musical phrase length. For example, a 4 bar phrase that is in 4/4 time except for one measure that must be in 3/4 in order to meet a specific timing requirement. And yet, with these unusual form requirements, the music should sound as natural as possible so that the listener is unaware of these alterations.

In addition to the challenge of phrase lengths, the nature of the harmonic, melodic, and rhythmic elements of the music are also all dictated by the on-screen dramatic requirements. In the text *Scoring for Films*, composer Alfred Newman commented, "without equivocation … the picture dictates the necessity and style of the musical score, totally."[3]

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[1] Roy M. Pendergast, *Film Music: A Neglected Art: A Critical Study of Music in Films,* 2nd ed. (New York: Norton, 1992), 227

[2] Although the origin of the use of this term in film composition is hard to pin down, it seems to have been derived from typesetting where it was used to emphasize some portions of text. In dramatic music the underscore is used to emphasize an emotion or action.

[3] Earl Hagen, *Scoring for Films: A Complete Text* (New York: Criterion Music, 1971), 162

As a professional film/TV composer with over 30 years of experience, having scored 40 feature and television films, received 5 Emmy nominations and won 2 Emmy awards, I have had to compose a great deal of music conforming to the limitations mentioned above. Over the years I spent hours working out ways to manipulate my compositions in order to give them a more 'natural' feel, even though there was often a timing requirement that necessitated that I distort the musical form to match the picture. Additionally, prior to becoming a full time composer, I worked as an orchestrator/ghost writer and conductor on an additional 40 films and hundreds of hours of episodic television. In this role I had the opportunity to observe how other composers, including Jerry Goldsmith, Marc Shaiman, James Newton Howard and Alf Clausen, dealt with these issues as well.

In addition to my professional work I have always had a hand in education. My first teaching position was in the Don Ray film-scoring program at UCLA in the early 80's. In 1998, after moving to Seattle, I taught a number of extension classes that I designed at Bellevue Community College. This was the start of what eventually became an independent program in film composition that I created - the Pacific Northwest Film Scoring Program. As the program gained more attention due to an Internet website promoting the extension classes, we also began offering a 2 week summer intensive program which has successfully run for 14 years. Participants have come from all over the world including Austria, Australia, Brazil, Columbia, Dubai, Italy, Japan, Mexico, Scotland, South Korea, Sweden, Romania and Turkey with backgrounds ranging from high school juniors to tenured university professors. The participants helped spread the word internationally and I was invited to teach the 2-week format program in Scotland at Napier University, Copenhagen at Artlab and China at the De Tao Masters Academy. For two years I commuted to Chicago to be the lead composition instructor for the Masters in Composition for the Screen at Columbia College Chicago. Most recently my Pacific Northwest Film Scoring program merged with an independent film school in Seattle and was certified to grant Masters of Music in Film Composition degrees.

Early on in my teaching of film composition, and with this combined professional and educational background, I sought out published texts that I could incorporate into my classes. I found that although there are many books explaining the technical timing issues of film composition – methods on how to do the calculations and figure out the phrase length requirements – that there seemed to be very little information on compositional techniques that one could use to manipulate the music in a way that these distortions would sound seamless and natural. So over the years I have created a clear outline of the steps in my personal process that allows me to instruct students with a methodology of approaching this style of composition. To that end, I initially had to go back and codify exactly what it was that I and other composers I had observed were actually doing. Music theory's prime purpose often seems to be to codify music that already exists. I feel, however, that the most important reason for developing music theory is that it should allow us to understand how a particular creative musical result was achieved.

In this thesis I will demonstrate some specific compositional techniques that I have observed and further developed, and that I consider to be basic tools applicable to the art and craft of writing music for film. This new codification will be the first time that composing dramatic film music will be discussed in these terms. I will demonstrate methods of composing music with unusual phrase lengths that yield a natural feel. Additionally, I will explore how music is composed that fulfills the emotional requirements of the dramatic arc of the on-screen actions, all while meeting the picture's timing requirements. Terms that I employ in the instruction of this craft will be defined and demonstrated. For example: the concept of organic versus inorganic scoring, and the policy and vocabulary of a score. All of the techniques and theories that I will discuss are based upon my own experience and observations of other composer's works. It is my goal in this thesis to create a document that will begin to codify compositional techniques that can be taught, much in the same way that harmony and counterpoint can be taught, as the basis for the mastery of the craft of composing dramatic music for film. The information contained herein will attempt to fill a void in the instructional resources available to those interested in film composition.

To do this, I will examine excerpts of pieces from my body of work composed from 1992 to 2013, where I will demonstrate the specifics of these concepts. In some cases I have chosen older works as the concept I am interested in demonstrating occurs in a more obvious manner. In this way it is easier for the reader to see the technique at work. While the composition of some of the examples used herein predates this thesis, the analysis of the works and explanation of the techniques used is being compiled in a single concise document for the first time. The impact of this thesis will have far reaching consequences in the film music composition pedagogy as there is not any resource that currently exists as a teaching tool that bridges the gap between the readily available technical information – the music to picture synchronization math – and the compositional techniques required to manipulate the music to naturally meet all the technical and dramatic requirements of the film.

2 - Sources of Information on the Craft of Film Composition

Instructional texts that present techniques for composing dramatic music are a relatively limited resource for those interested in learning the craft, or an actual skill set, for composing for film. This thesis aims to offer students of film composition a document that begins the process of codifying compositional techniques as related to the creation of dramatic film scores. The focus of my work will be to assemble, into a single unit, techniques and concepts that I use in my compositional process. As well, I have observed similar musical results to the techniques I will discuss in other composers works. While I do not want to imply that any other composer is using the exact same techniques that I use, this document will offer the reader at least one method of achieving the same or similar musical/dramatic results.

In September of 2011, when I began work on this thesis and was doing some searching on the Internet for information, I came upon a discussion about film scoring textbooks on the Soundsonline forum.[1] There was one individual who was inquiring of the members in the discussion group what books they would recommend for the study of film composition. The replies listed some of the more popular texts (which I will discuss below), but time and time again the participants in the discussion group responded that although there were books on how to deal with technical issues of timings and synchronization of music to film, as well as books that discuss orchestration; they mentioned that in fact, there were very few – if any – texts available on how to actually compose dramatic music and affect emotion through underscore. This is one of the main reasons that I began my efforts to analyze and organize teachable techniques in the craft of film composition. I wanted to discover and codify what elements of music would best support the variety of dramatic situations on screen. I felt that there had to be some way to learn a collection of musical devices or techniques that would yield specific emotional responses and that those could form the basic skill set required to compose dramatic film music.

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[1] Soundsonline-Forums. "General Discussion." Accessed September 12, 2011. http://www.soundsonline-forums.com/archive/index.php/t-6230.html

> "In the absence of genius, there is always craftsmanship.
> Lack of genius is understandable, since there are so few who
> possess it, but there is no excuse for lack of craftsmanship."[2]

All forms of art have some element of basic training or 'craft' that an individual can learn - a set of basic skills that require mastering in order to get to the point where one has the ability to create great art.

In my quest for this information, the first textbook that I explored, back when I was an undergrad at Berklee College of Music in Boston (1973 – 1976), was Earl Hagen's *Scoring for Film*. Hagen was an accomplished television and film composer who scored many popular television series in the 1950s and 60s including "I Spy", "The Dick Van Dyke Show", "Gomer Pyle: USMC" and "The Andy Griffith Show." This book exposed me to a lot of the technical aspects of the process, including the mathematics of film composition.

In the early years of dramatic film scoring, from around 1935 when composer Max Steiner invented the click track, composers were required to do computations in order to calculate how many beats to compose at what tempo to ensure that the music being written would correctly synchronize with the picture. Figure 1 below is a page of formulas necessary to do those computations for film music synchronization from Ruby Raksin's book *Technical Handbook of Mathematics for Motion Picture Music Synchronization.*[3]

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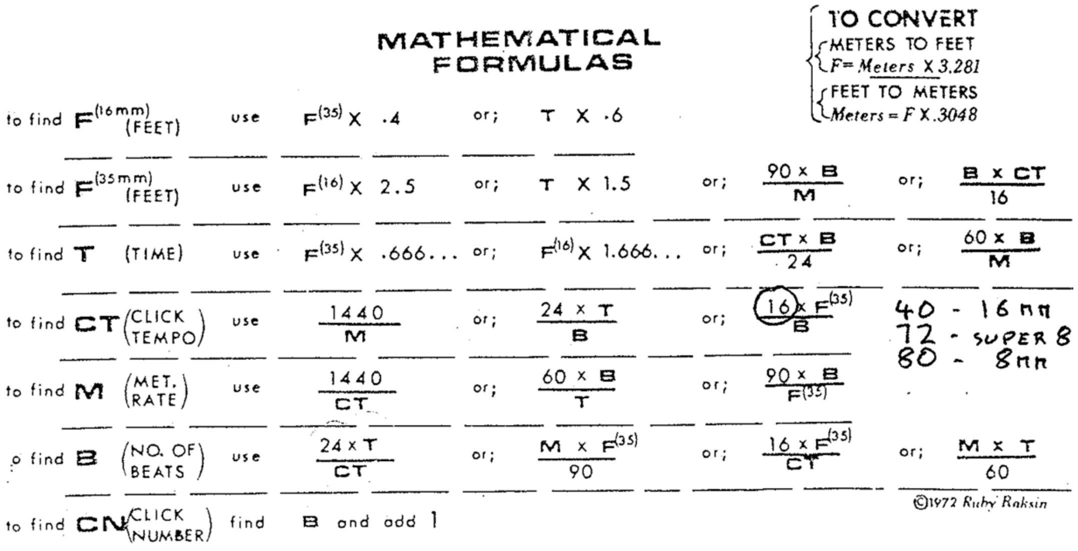
[2] Paraphrased quote from Chris Auer, chair of the Film & Television Department at Savanna College of Art and Design.

[3] Ruby Raksin, *Technical Handbook of Mathematics for Motion Picture Music Synchronization,* 2nd ed. (Sherman Oaks, CA: R-Y Publishing, 1972), 17

Figure 1



MATHEMATICAL
FORMULAS

TO CONVERT
METERS TO FEET
F= Meters X 3.281
FEET TO METERS
Meters = F X .3048

to find $F^{(16mm)}$ (FEET)	use	$F^{(35)} \times .4$	or;	$T \times .6$					
to find $F^{(35mm)}$ (FEET)	use	$F^{(16)} \times 2.5$	or;	$T \times 1.5$	or;	$\frac{90 \times B}{M}$	or;	$\frac{B \times CT}{16}$	
to find T (TIME)	use	$F^{(35)} \times .666\ldots$	or;	$F^{(16)} \times 1.666\ldots$	or;	$\frac{CT \times B}{24}$	or;	$\frac{60 \times B}{M}$	
to find CT (CLICK TEMPO)	use	$\frac{1440}{M}$	or;	$\frac{24 \times T}{B}$	or;	$\frac{\boxed{16} \times F^{(35)}}{B}$			40 - 16mm 72 - super 8 80 - 8mm
to find M (MET. RATE)	use	$\frac{1440}{CT}$	or;	$\frac{60 \times B}{T}$	or;	$\frac{90 \times B}{F^{(35)}}$			
to find B (NO. OF BEATS)	use	$\frac{24 \times T}{CT}$	or;	$\frac{M \times F^{(35)}}{90}$	or;	$\frac{16 \times F^{(35)}}{CT}$	or;	$\frac{M \times T}{60}$	
to find CN (CLICK NUMBER)	find	B and add 1							

©1972 Ruby Raksin

As you can see from the formulas above, originally a conversion process was required because film tempos were not discussed as beats per minute, but rather as frames per click. This principle works on the basis that 35mm film travels at a standard 24 frames per second, and if a click occurred every 24 frames, it would equal a 24-0 click, or the equivalent of 60 beats per minute. Therefore if you had a click every 12 frames, the clicks would be closer together yielding a 12-0 click or 120 beats per minute. Before digital metronomes were incorporated, these clicks were produced by creating loops of film leader of specific lengths that were loaded into a film projector with a hole punched somewhere along the edge, where the optical audio track is located. Every time the hole passed over the optical reader, it would create a pop or click. This resulted in an extremely accurate metronome.

The Hagen book, unfortunately, did not seem to have instructional information on how to compose dramatic music, which was what I wanted to learn. Even at that time, the information that was available about film composition was mostly technical, mathematical and anecdotal. I was unable to find the information I desired about the actual dramatic composing process.

In revisiting Hagen's text for this thesis, I discovered examples where the author explained how he composed the music to 'hit' the sync points that he felt were important, however there was very little information explaining what he did musically to support the drama or how he came up with the ideas. In one example he mentions, "… that the movement started in the orchestra at the beginning of the pan shot …"[4], but there is no explanation of what his thought process or the technique he used to compose this type of movement was. Later in the same example he discusses using a sharp dissonance to heighten the visual effect of the reveal of an object on screen, but again no more detail of his process in creating this dissonance.

This book's most unique feature is its historical perspective of the way things were done 'back then.' The collection of photographs showing the equipment – flatbeds, moviolas and dummy machines - which are no longer in use, is extremely interesting and even some of the synchronization calculation techniques discussed, although outdated, are helpful in understanding how the currently used techniques developed from them. But to me, the fascinating fact is that during the 'Golden Age of Hollywood,' these were the tools and techniques that composers worked with, and still a lot of enduring music was composed for film. I was very fortunate to personally know the gifted composer David Raksin, whose career started back in 1935 and is probably best known for his unforgettable score to Otto Preminger's "Laura" (1944). These were the tools he used, so obviously the lack of today's modern technology did not affect the quality of his compositions or any of the music of that era. Great music was, and should always be, the goal.

In *The Complete Guide to Film Scoring* by Richard Davis, there is a discussion of the craft of film composing where he makes a comment about creating music that sounds heroic using "certain melodic and rhythmic devices that you can draw from."[5] However, there is no further discussion defining what those devices are! In a discussion of his simple and childlike music for "Forrest Gump," composer Alan Silvestri mentions, almost in passing, that in scoring the opening sequence for the film, that follows a traveling white feather, he decided to use an "immediate unprepared key change (modulation)"[6] at a moment when the feather changes direction and moves away from another man on screen. This was one of the few statements of a concrete musical technique (modulation) to support a dramatic situation and is the kind of information that I was searching for.

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[4] Earl Hagen, *Scoring for Films: A Complete Text* (New York: Criterion Music, 1971), 41

Davis does discuss the idea of developing a concept for the score - this could include the instrumentation, the style of the music, and other characteristics of the score that are somehow derived from the content of the film - what I refer to as the 'vocabulary' of the score. In the book he discusses this in generalities but includes interviews of composers where they discuss how they derived the concepts for the scores they wrote. Most of the composers do start with some analysis of the film, but there is no concrete discussion on how that yielded decisions about the score. Of course this is not a black and white subject, but yet, one might say that major chords are bright and happy and minor chords are dark and sad; loud and fast music is exciting where soft and slow music can have a peaceful calming effect; and music with dissonances can create a sense of tension. If one agrees with these simple concepts, which can be observed in many instances, then there should be a way to begin to codify the nuances of musical compositional theory so that they can be applied to composing a wide range of dramatic music – music that will evoke a particular emotional reaction and thereby enhance and support a visual image.

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[5] Richard Davis, *The Complete Guide to Film Scoring: The Art and Business of Writing Music for Movies and TV* (Boston: Berklee Press, 1999), 132
[6] Davis, 138

Davis says “To intensify the drama, composers might write music that closely follows the actions onscreen…”[7] So the fact that this emotional reaction to the music happens is clearly acknowledged, but no methodology is explained.

Although the text never really explores any additional compositional techniques, it does have some other excellent information. It includes a chapter on the history of dramatic music starting as far back as the Greek and Roman choruses that were used to accompany plays, all the way through to the early use of live music to accompany silent films and trends over the decades up to today. There is a somewhat unique element in the book, which is a chapter on film production – explaining the stages of production in making a film so that, as a member of the film making team, the composer can understand the entire process. Finally there is one chapter dealing with the business of film composition and a chapter of interviews with composers, orchestrators and other related professionals from the field, which while interesting were primarily anecdotal. Overall, I did find it a bit odd that only one chapter out of five is dedicated to the actual composing of film music (60 pages out of 378) and that not a single notated musical example is included in the text.

The problem that I came up against in most of the books that I am including here is that there does not seem to be much information on the specifics of the craft/technique of film composition. Unlike other areas of composition study where one can find many instructional textbooks that delve deeply into subjects such as harmony, counterpoint, form and orchestration in great detail - the so called ‘tools’ of the composer - there seems to be a real void in this kind of detailed instructional information about the composing of dramatic music. Most of the film music books seem to be lacking in concrete, usable musical techniques that one could learn and practice towards becoming a proficient composer for film.

I have always felt that there are many aspects of the art form that could be codified. Through observation (albeit, maybe these are too simplistic) one notices certain recurring practices: sad or distressing films are often accompanied by music in minor keys such as the main theme to “Love Story” (1970), action scenes are often supported and enhanced by active rhythmic music such as the scores to the “Bourne Identity” films (2002, 2004, 2007), scary scenes are reinforced by the use of dissonance such as the shower scene in Alfred Hitchcock’s “Psycho” (1960) and so on. These might be obvious observations, but surely there are other techniques that composers use that are not quite as obvious or that have a more subtle effect. Davis states that “Which notes you put on the paper…is something that cannot be taught, much less talked about in a book.”[8] I agree that one cannot discuss specific notes, but certainly, as I have mentioned above, there must be some general directional guidelines.

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[7] Davis, 143

The revised second edition of *On the Track*, by Fred Karlin and Rayburn Wright, includes many notated musical examples of scores and sketches from films. There are also separate chapters discussing composing for film that delves specifically into: using melody, using harmony, using rhythm and using orchestration. This book has become the main text that I use and refer students to. However, in my lectures I explain *what* it is the students should be looking for in order to understand the technique being illustrated in the examples. That element is unclear in most cases.

In the chapter on using melody, composer Jerry Goldsmith is quoted as saying “You try to start out with something that immediately the audience can really associate with, whether it’s three notes, four notes, whatever it is, something that registers upon them.”[9] It can be observed that character driven themes and love themes are often longer in length, but short motifs are more easily manipulated and can work for film sequences of any length which is especially useful in action oriented films. The famous “Jaws” (1975) theme by John Williams makes use of a two-note motif “that uses the interval of a half step, which brings with it a built-in feeling of tension."[10] Often scores will make use of specific intervals as a characteristic of the score, but more common is the use of a short melodic motif, as mentioned by Goldsmith above. There is also a discussion in this chapter of developing the motif by changing the notes of the motif and varying the rhythmic values of the notes which somewhat contrasts to my thinking about the development of motifs.

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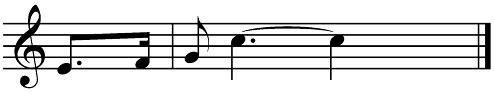
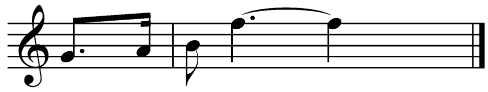
[8] Davis, 151

[9] Fred Karlin and Rayburn Wright, *On the Track: A Contemporary Guide to Film Scoring,* 2nd ed. (New York: Routledge, 2004), 197

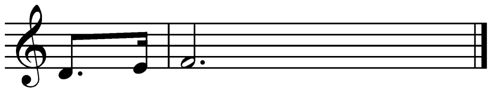
In my experience, in order for a motif to be useful as the theme of a character (or a place or situation), it must be developed in such a way so that the listener is able to recognize it easily. This is crucial in order to identify when the theme is being used. I have found that most people do not hear the actual notes of a motif as much as the shape of it and that often, a motif is repeated and developed to create a theme. An excellent example of this would be the theme that John Williams composed for the character Indiana Jones, which uses a basic 4-note motif with a characteristic rhythm:



All of the statements of this motif occur at different pitch levels with different intervallic relationships between the notes. Some with the entire motif:



One of the statements is truncated:



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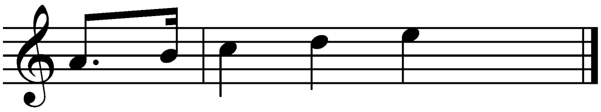
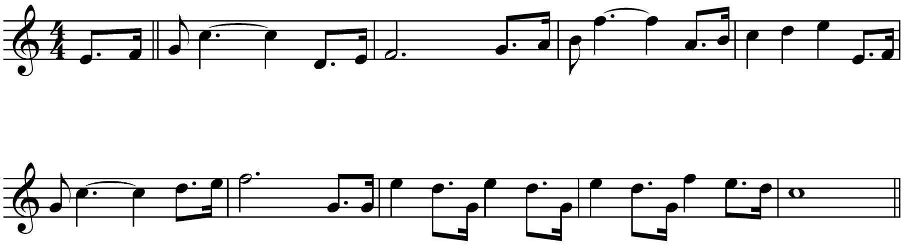
[10] Karlin & Wright, 199

Another of the statements is expanded:



This basic motif is used 6 times in a row before a secondary melodic idea (still based on the main motif's rhythmic element and itself repeated) is introduced.



It is the repetition of this small musical idea and its variations that make up the main theme. Because of the usage and development of this short 4 note motif, one only has to hear the first 4 notes of the theme, in other words just the motif, and already the listener is able to identify it as Indiana's musical signature.

This, of course, is based upon the idea that a theme is a melodic concept, which as the text points out, and I agree, is sometimes not the case. Themes can also be rhythmic, harmonic or ostinato figures and less of a true melody; although in my experience, melodic motifs are the most useful and malleable.

In the chapter about using harmony there is a discussion of the many different types of harmonic languages/systems that film composers make use of – diatonic, chromatic, modal, polytonality, quartal, serialism, pedal points and ostinatos, etc. - along with suggested listening examples. In many cases there are also notated score excerpts included. The authors also make a few suggested dramatic applications for each harmonic language. For example, "a chromatic harmonic approach fits films that deal with sophisticated, sometimes historical, subjects" and "is very useful for thrillers"[11]; they also comment that "Music for period films set from any time before recorded history through the middle ages …"[12] could make use of modal harmony. I appreciated this viewpoint and feel that even if not 100% in agreement with my own personal thoughts, this discussion at least presents a student of film music with the principle of choosing a harmonic language that supports the time, place and/or subject matter of the film. However, I do feel that this topic is much too deep a subject to really properly delve into in a single chapter, and even the writers included the disclaimer that "… the study of composition is beyond the scope of this book."[13]

Although the ways that they analyze the different harmonic languages or explained how they work differs with my understanding and teachings, I did agree with the concept that capturing the spirit of a character through the use of harmony that might be "faithful to a character's taste and lifestyle will help relate the score to the film."[14] This is one aspect of what I have termed the 'policy' of the score – the relationship of the score to the film – and will discuss in more detail in the working process chapters. The other element introduced in this section that I found agreeing with my experience was that "Composers frequently increase harmonic tension as the dramatic tension increases."[15] Unfortunately a methodology of how to achieve this was not included in the text. Often student composers understand the concept of dissonance due to its significant use in 'absolute' or 'art music'. However in film scoring, techniques of how to control the level of dissonance to follow the dramatic arc of a scene is an important skill. For example if there is a chase that is rising to a dangerous climax, the use of increasing levels of dissonance can dramatically support that rise in danger or tension.

The chapter on using rhythm includes a discussion on the importance of choosing the correct tempo for a scene. Jerry Goldsmith stated, "Sometimes …

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[11] Karlin & Wright, 223
[12] Karlin & Wright, 227
[13] Karlin & Wright, 223
[14] Karlin & Wright, 257
[15] Karlin & Wright, 267

the film is so well edited that you can get a tempo and the phrases seem to fit and smoothly go along with the action."[16] The book also discusses the fact that "When the music doesn't require such a strong forward drive, rhythmic elements might be orchestrated in a much more subtle way"[17] which introduces the student to the important concept of being able to add propulsion to a scene through the use of rhythm. There are also discussions about using rhythm as a thematic idea as well as a discussion on the use of ostinatos, but in neither case is there a discussion on why a composer would make the choice to use either of these techniques or how it would impact the dramatic content of the film – "… It is an ideal technique for contemporary music of all sorts, and can often be of dramatic use in scoring."[18] Unfortunately, this statement does not give the reader much insight as to why one might use these techniques. In the discussion about uneven or changing meters, the comment that "This gives variety to the rhythmic effect by slightly changing the emphasis of the basic accents"[19] never explains why composers would choose these kinds of meter changes for dramatic purpose. The authors do point out that Jerry Goldsmith made extensive use of this technique in his score to "Along Came a Spider" (2001) and also point out that "He has been integrating these uneven and changing meters into his scores for many years …"[20], but with no discussion about possibly why he decided to incorporate this technique into his scores.

The final detailed chapter on using orchestration includes discussions on choosing instrumentation that can support the location or period of the film, and also the concept of choosing an unusual combination of instruments to give a film its own unique signature sound, both of which are easily understood concepts. I discuss this idea as the 'vocabulary' of the score and will expand on that subject in the working process chapters. The authors make the point that "you cannot make a poorly orchestrated piece of music sound good with recording technology or engineering magic"[21] which reinforces my philosophy that the study of orchestration is crucial. However, one of the things that I was looking for when I started out, is why do composers make certain instrumental choices within the body of their scores? Why use a high cello instead of a low violin? Was there a dramatic reason to choose one over the other? How did that choice impact the audience? In my own work I know that I consider these instrumental choices for dramatic reasons as much as musical ones, and would have liked to hear composers comment on their decision process.

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[16] Karlin & Wright, 279
[17] Karlin & Wright, 279
[18] Karlin & Wright, 287
[19] Karlin & Wright, 290
[20] Karlin & Wright, 290

For me, *On The Track* is the primary resource text that I always recommend to students looking for a textbook on film composition. Besides the inclusion of multiple chapters about actual composing techniques, there are also chapters that discuss the film making team, the stages of the film making process, budgeting and scheduling, as well as chapters covering many other aspects of the process that I also feel are important for film composers to know. With the inclusion of many notated score excerpts which are usually difficult, if not impossible, to find; this book is the most comprehensive text that I found. Another plus is its large format, which makes the notated examples easily readable – an issue I discovered in other texts. However, with all its strengths, it still leaves many unanswered questions about the actual techniques of composing dramatic music.

A recent publication, *Composing for the Cinema: The Theory and Praxis of Music in Film*[22], caught my eye because one of the authors is prolific Italian composer Ennio Morricone, best known to American audiences for his work on "Once Upon a Time in America"(1984), "The Mission" (1986), "Cinema Paradiso" (1990) and "Inglorious Basterds" (2009). It is rather unusual that a major composer writes and shares insight about his work, and so I was excited to get my hands on this book. As it turns out, the text is really a transcription of a series of seminars with co-author musicologist Sergio Miceli. There are a few sections of the text where

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[21] Karlin & Wright, 312

[22] Ennio Morricone and Sergio Miceli, *Composing for the Cinema: The Theory and Praxis of Music in Film,* translated by Gillian B. Anderson (Lanham, Maryland: Scarecrow Press, 2014)

Miceli seems to be the sole author as the character of the writing is somewhat more academic. As one would expect, because his comments were transcribed, Morricone's thoughts come across as much more conversational. Personally, I was far more interested in what Morricone had to say, and believed that his insight would be the real value of this text.

Unfortunately there are no notated musical examples included. Apparently during the original seminars, audio and video examples were played and when reading the text, one does not get the benefit of experiencing those elements. With that said, there are some particularly unusual comments that I came across. "… my advice is to have the director listen to the theme being played badly. If he accepts it that way, it will certainly be more attractive to him when you have orchestrated it."[23] In this matter I believe that Morricone is a bit out of touch with the contemporary realities of the business. Directors have become quite accustomed to hearing fully realized performances, using sequencers and sample libraries, of the entire score. As composer Jeff Rona states "Everything I write and sequence will be auditioned for the director or producers, so the cues must sound great, even though they will be replaced by live players."[24] The days of even just playing one's themes on the piano for a director are pretty much gone. In fact, many composers, such as Rona, write and orchestrate directly into the sequencer. Those files are then printed out and sent to an orchestrator to create the final scores from which the music will be performed.

Morricone does use the term 'vocabulary' much in the same way that I do, when looking for the right sound for the score to match the character of the film. There is an extensive discussion about elements that he says should be analyzed in the film including: "… the geographic setting and the historical environment, the characteristics of the costume and scenery design, the type of light, in the treatment of color … and the psychological condition of the characters…"[25] He states that "… it is necessary to establish, first of all, a common method of interpretation, a common vocabulary."[26]

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[23] Morricone and Miceli, 6

[24] Jeff Rona, *The Reel World: Scoring for Pictures* 2nd ed. (Milwaukee, WI: Hal Leonard Books, 2009), 129

[25] Morricone and Miceli, 7

A rather startling element in the book, which is also pointed out in the translator's forward, is that "Although Morricone's tunes are famous, he is not interested in melody per se."[27] In fact I found it very surprising that he ranks melody so low in importance:

> "Thus, when you go to the piano to have a director listen to something, it is impossible for him to hear the sonority of the cellos or the attack on the basses that follows and then the clarinet that makes a certain sound after that. Therefore, one is forced to make him listen to a theme, a theme that might prove pleasing at the moment, but that later on he might not like because of the orchestration, which is the most important thing."[28]

In fact Morricone, who is well known for orchestrating all of his own music, feels that the composition is incomplete if not fully orchestrated. He states that

> "… the orchestration belongs to the musical composition. Is not orchestration as one normally uses the word. And I don't even like to call it orchestration, that would mean taking a piece written for piano, for a polyphonic instrument, and then transcribing it for the orchestra. Instead, here one is dealing with composition."[29]

Interestingly, he discusses some very elementary elements of score preparation; such as being sure that the cue number and page numbers are included on each page, making one wonder what level of audience was attending these seminars.

Unfortunately, I did not find much in this book that was truly illuminating. In fact some of the statements that Morricone made about methodology were almost the exact opposite to my experience and observations. For instance at one point in the book he discusses animation scoring and points out that because there are so many synchronization points "… music for animated films is composed first and the scene is edited to the music, because otherwise it would not be possible to find all the synchronization points."[30] This is, in my experience, absolutely incorrect. My animation scoring assignments have included episodes of "Tiny Toon Adventures" (1990 – 1991), "Box Office Bunny" (1990) - the first theatrical Bugs Bunny short produced after a hiatus of 25 years, as well as the 3D digitally animated IMAX film "Cyberworld" (2000), and never have I composed the score before the picture was completed. I always had to sync the music to the film. In the third case study I will discuss the challenges of scoring animation and demonstrate synching techniques. In fact, the only film that I know for certain where the music came first was Walt Disney's "Fantasia" (1940). The animators created visual interpretations of well known classical orchestral works such as Dukas's "The Sorcerer's Apprentice", Stravinsky's "Rite of Spring", Ponchielli's "Dance of the Hours" and Mussorgsky's "Night on Bald Mountain". Overall this book was an interesting read, but it did not contain very much information about the actual 'nuts and bolts' of dramatic scoring. The fact that there were no musical examples was disappointing, and to hear Morricone talk about his own music (melody not important, play your themes badly, etc.) just left me puzzled. This book was the farthest away from my own experiences working in the industry in Hollywood. Perhaps things are done very differently in Italy.

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[26] Morricone and Miceli, 7
[27] Morricone and Miceli, vii
[28] Morricone and Miceli, 5
[29] Morricone and Miceli, 61

Sonny Kompanek, probably best known as an orchestrator working for composer Carter Burwell on such films as "Rob Roy"(1995), "The Big Lebowski" (1998), "Burn After Reading" (2008) and the "Twilight Saga" films (2011, 2012); wrote a small book titled *From Score to Screen: Sequencers, Scores and Second Thoughts – the New Film Scoring Process.* This text describes situations in the industry much more in keeping with my own experiences. In the opening of his chapter about the members of the music team, the 'cast' as he calls it, he says:

> "When a composer sits down to create a film score, an amazing process takes place. The essence of a film is translated into musical themes and gestures that, in turn, become dramatic elements in themselves for the audience to experience. These musical elements can reinforce what is seen on the screen or play against it for contrast. By creating musical themes that work in a variety of dramatic settings over the course of the film, the

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[30] Morricone and Miceli, 64

> composer can enhance or even manipulate our interpretation of characters, moods, or events."[31]

In this statement he discusses the use of thematic material as well as introduces the use of what I call the 'dramatic variations.' He goes on to discuss the current role of the orchestrator making the point that:

> "Film composers today are more familiar with computer sequencing then classical orchestration techniques, and understandably so as the sound often comes first and the score later, if at all. (For smaller projects, a synthesized film score might not even see the paper stage but remain electronic from start to finish)."[32]

His description of the role of the contemporary orchestrator is brutally honest. He describes how he has been asked to create film cues from: "humming, grunting, whistling and/or the stamping of feet; a single word description of the scene - "chaos" - for 30 seconds; four bars of a melody and a request to "fill out" the music for a four-minutes full-orchestra cue … [etc.]"[33] Although the picture he is painting is not pretty, it is quite realistic. Many filmmakers choose to work with their favorite rock musician as opposed to an experienced, trained composer. Because of this, in order for the score to be performed by live musicians, the role of the orchestrator has vastly expanded over the last 15 - 20 years. It is quite common that the orchestrator on a film has a far more comprehensive understanding of music and the workings of an orchestra, than the composer he is working for. Prior to the use of synthesizers and sequencers, it was traditional that the composer, who was a schooled musician, would produce a handwritten sketch from which the orchestrator would create a completely flushed out score. This mode of working has all but disappeared with the exception of a few 'old school' composers. When I am scoring a film, I create a 12 line handwritten sketch that I give to my orchestrator. I have seen sketches by John Williams and so I am aware that this 'classic' way of working still does go on. Kompanek's book also discusses the role of the conductor, the musicians, the music editor, the contractor, the copyist, as well as the director and studio executives and their involvement in the scoring process.

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[31] Sonny Kompanek, *From Score to Screen: Sequencers, Scores and Second Thoughts – the New Film Scoring Process* (New York: Schirmer Trade Books, 2004), 19

[32] Kompanek, 22

[33] Kompanek, 22

Of particular interest to students of film composition is the chapter he calls "Getting Started." In this chapter he discusses breaking into the business and points out that "You should meet not only directors for whom you want to compose, but anyone in the business who could help you make contacts …"[34]

While this book does not address the actual composing process, Kompanek has written some insightful chapters on extremely important subjects. For example, one chapter is devoted to understanding the differences of composing for a live orchestra versus an electronically emulated (sequenced) orchestra. In one section he titles "MIDI Can Do the Impossible," he points out some obvious facts - that "MIDI can play outside the live instrument's range."[35] - to the less obvious "MIDI can make all instruments audible no matter what range they may be in."[36] This highlights the fact that one of the biggest issues in orchestral emulation is that the balance of the orchestra can be completely altered and distorted. Another common problem is that few midi libraries can emulate the effect of using divisi strings. When adding a second note to an electronic string section, the effect is that the "… strings sound bigger as more lines are added"[37] due to the resulting doubling of the number of sampled players, which in fact, is the exact opposite of what happens live. An issue that I have seen with my students that Kompanek describes is that "MIDI can make [perform] tricky rhythms perfectly in sync throughout the orchestra."[38] - no matter how the rhythms are divided between sections or players.

The chapter on composing[39] has more 'tips' that techniques: trusting your instincts, dealing with writer's block, how many themes the average film has, encouraging composers to work to expand their own default harmonic language, deciding when to use a click track and so on. However, there are no notated examples or concrete techniques. Interestingly, in the chapter on dealing with resolving problems quickly at a recording session, appropriately titled "Fix It," Kompanek does give some very specific instructions to solve dramatic issues based upon what a director might say after hearing a cue performed. For example, if the director asks for more tension, Kompanek lists as quick fixes to "add a half step above a chord (in picc above violins, in horn in mid-range), move basses up or down a half step, strings ponticello (maybe tremolo also), add extremely high or low notes."[40] In other words, add some dissonance to your harmonic structures or change the playing technique to something more edgy. Here are techniques that a composer might apply to the initial composing of the score in a cue that requires more tension. He also spells out some compositional devices that might help to make the music more neutral, less 'wholesome', less 'rigid', less tense, and have more or less motion. This is the kind of information that beginning film composition students need, specific musical compositional techniques to add defined dramatic result to a score. So, although this book does not cover these elements in the initial composition chapter, it does support my viewpoint that these kinds of basic techniques can and do exist. Unfortunately it does so by coming at the techniques through a back door, so to speak. Overall, I think this book has some excellent, honest and practical information for students. It conveys the realities of working in the current film music industry as opposed to some idealized reality. However, as I have said about other texts that have been discussed here, the book does not include enough specifics on compositional technique for composing dramatic music.

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[34] Kompanek, 39
[35] Kompanek, 69
[36] Kompanek, 68
[37] Kompanek, 70
[38] Kompanek, 68
[39] Kompanek, 47-59

Composer Jeff Rona, possibly best known for his work on the television series "Chicago Hope" (1994 – 2000), has written two books on the subject of film scoring – *Synchronization from Reel to Reel* (Hal Leonard, 1990) and *The Reel World: Scoring for Pictures,* 2nd edition (Hal Leonard, 2009). I have found his *Synchronization* book to be extremely useful when researching detailed technical information. For instance, what the difference is between the various types of time code and when and why they are used. In *The Reel World* I found that he and I agree on a variety of concepts. When discussing learning about film scoring, he mentions that "… vital skills and methods can be passed from composer to composer…"[41] and goes on to point out that "... some musical ideas and vocabularies seem to work better than others. Entire books have been written on this, and yet they shed little practical light."[42] So it seems that we are on the same page about the fact that there is a craft that can be learned, and as I have mentioned earlier in this chapter, books with actual practical compositional technique are hard to find. Finding that Rona had the same reaction to the lack of practical composition techniques available to those interested in learning the craft, I was looking forward to what he was going to share that would be practical to students. "There are some musical concepts and conventions that find their way into scores more frequently because they work …"[43] supports what I have been saying all along, that there must be teachable craft and techniques that a student of film composition could learn.

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[40] Kompanek, 101

In his text he discusses many of the concepts I have already discussed such as using melodic themes and varying them to support the different dramatic contexts in the film. He writes about things to consider when spotting the film (where the music goes and why), composing the music with hit points to synchronize with a picture and many other concepts that are covered in the other texts I have reviewed. In the first chapter entitled "Music for Film", after a discussion on spotting, there is a section entitled "The Hit: Underscoring Crucial Moments." This section has outlined some compositional techniques that a composer could use to "hit" moments in the film.

> "… important moments can be accentuated by a modulation to another key, or a change of tempo. Anything that brings awareness to the music will associate that moment in the scene as important. Other ways to hit a moment in a scene are starting a new melody, recapitulating an important theme, bringing in an instrument or section, introducing a rhythm or variation, hitting a chord or note with some energy, or making any significant musical change."[44]

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[41] Rona, xiv

[42] Rona, xv

[43] Rona, 2

[44] Rona, 10

While all of these techniques are certainly valuable clues to the student composer, why one is chosen over another is not discussed, nor are there examples included in the text. Still, this statement at least suggests that there are different musical 'tools' that a composer uses to hit a dramatic synch point with the score – some more subtle than others. He goes on to discuss making musical changes within a cue to reflect the shifts in the drama using the term 'transitions.' He points out that these changes can happen (and often do) on cuts or edits in the picture. In a chase or action sequence that cuts between the good guys and the bad guys, Rona points out that:

> "Musical underscore will nearly always want to reflect many of these cuts. Shifts can be simple, but a composer need not be afraid to make significant transitions on the moment-by-moment changes. Changing to various themes or keys will make the whole thing feel more complex, interesting, and compelling to the audience."[45]

When he discusses the significance of choosing the tempo of a scene and the use of accelerandos and ritardandos as dramatic devices, he jumps to the use of technology stating that "it is important to be very familiar with the tempo-calculating tools of your sequencer."[46] I found it particularly interesting, and was very pleased to see, that he went into a rather detailed discussion about the limitations of tempo changes when recording your music with a live ensemble. Very often students (and some professional composers as well) who compose using a sequencer are negligent in this area and compose music with drastic unprepared tempo changes that are almost impossible to be performed accurately by a live ensemble in a sight reading situation. "An ensemble cannot be expected to make a sudden radical shift of tempo while maintaining any dense rhythms such as constant eighth or sixteenth notes."[47] One unusual observation regarding this discussion of tempo and tempo changes, is that Rona never makes use of common musical terminology such as 'accelerando', 'ritardando', and 'fermata'; and instead he favors the use of common English terms such as speed up, slow down, and sustained note. I suspect because he is considering the untrained readers of his book who may have little or no musical education.

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[45] Rona, 13
[46] Rona, 15
[47] Rona, 15

Of particular interest to novice and student composers will be Rona's case study of his score to "White Squall" (1996), which was his first major film score. He describes the process of working with director Ridley Scott who had thrown out the original score because the composer "… stuck too closely with the temp score. The director expected to be more surprised."[48] As Rona points out, usually composers are fired because they have wandered too far from the temp score, so this was an unusual situation. What this case study reveals is the sometimes-treacherous path that a composer may encounter when working on a film. Rona describes composing and revising cues multiple times as new edits of the picture were delivered. He also discusses his close working relationship with his orchestrator and music editor and their roles in getting the score completed. "Finally, with one day to spare before getting on the plane, I finished. I had written the last cue and made the last changes. … I hadn't gotten a full night sleep in three weeks, and hadn't had a single day off to do anything else. But it was done."[49]

In chapter 3 of his book, Rona discusses how he attended a workshop where he saw a film where "One composer had scored the film, but it sounded like a different person had written each cue. Horrible!"[50] This is the concept that I discuss as the 'vocabulary of a score'. He supports the need of establishing this by stating that "if you listen carefully to any good film score you will hear a strong sense of stylistic cohesion."[51] He also goes on to point out that "the most memorable film scores are those with strong melodic themes."[52], which is a sentiment that I share. He further discusses that "Most good scores repeat themes at the key moments in the story. Beyond the main themes is a consistent use of style and coloristic and harmonic vocabulary, which also keeps a score feeling like a single entity …"[53] So here he is expressing many of the basic concepts about film scoring that I feel are important. He even alludes to what I have termed the 'policy of the score' – how it relates to the film – by mentioning that "You will find scores that speak softly while others are incredibly bold and attention-grabbing. It's not unintentional to make the choice as to how overt a score is in context to the film."[54]

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[48] Rona, 19
[49] Rona, 25
[50] Rona, 48
[51] Rona, 48
[52] Rona, 48

As I have found in most texts, the technique to achieve certain technical requirements, specifically changes to phrase lengths, is discussed, but not explained fully. Therefore, the student composer is not exposed to a compositional technique that they can use. For example when discussing the form of a piece of music to match the action on screen Rona states that:

> "In order to compose music to fit the very specific duration of a scene and all the transitions within it, there are no rules that say a phrase must be four bars, or that every bar must be four beats. As mentioned above, music must flow along with the edits and action. If there is a hard transition between scenes or a specific action within a shot to hit musically, it will not bother the listener if you drop a beat, or even half of beat, in order to stay in sync with it."[55]

In my experience, unless you take great care in the composition of the cue, dropping a beat or half a beat can sound like an aural speed bump and will be quite obvious to the listener. As I will demonstrate in the first and third case studies, there are techniques that can be taught that allow composers to achieve the necessary form manipulations through a kind of aural 'slight of hand' - much the way a magician redirects your attention so you don't actually see what he is doing out of your field of vision.

In this text I found that many of the concepts that I hold as truths about film composition are in agreement with Rona's viewpoint. The book, like others, lacks in actual trainable composition techniques, however there are some other features that are excellent. As I mentioned earlier, I find that Rona is the author I turn to when in need of information about technology and technical issues. In section two: "Technology," Rona discusses setting up a home studio – an absolute requirement in the current work process in the industry. As I quoted him earlier as saying, "Everything I write and sequence will be auditioned for the director or producers, so the cues must sound great, even though they will be replaced by live players."[56] He discusses the computer, sequencing software, samplers, synthesizers and effects that one must become familiar with in order to create high quality sounding demos. He also has pages of tricks and tips of how to make the various sections of the orchestra sound as real as possible when using electronics - what we call orchestral emulation. Like other texts already discussed, this one has sections discussing the role of the music editor, the film score mixer, the orchestrator and others on the music team. He has a few brief examples of 'correct' music notation and explains how to export a MIDI sequence to a notation program. There is also a chapter on music for television where he discusses some of the differences of scoring for television as opposed to feature films. Section 3 of the book deals with the business of film music - contracts, royalties, agents, etc. Finally, throughout the book are multiple sections of interviews with other composers who add additional perspective.

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[53] Rona, 49

[54] Rona, 52

[55] Rona, 54

Music editor Roy Pendergast's book *Film Music: a neglected art,* 2nd ed. contains one of the most comprehensive histories of film music with two thirds of this book devoted to that subject area. Many of the scores that he discusses are analyzed for their compositional content and in this way the chapter really demonstrates how different compositional practices became part of the language of film music.

In part two of the book "Aesthetics," Pendergast discusses many of the concepts that have shown up in other texts. "Music can create a more convincing atmosphere of time and place."[57] Here he speaks about, as we have already discussed, how using music indigenous to a particular locale helps the film establish its geographic location. Additionally, music from a certain time period helps establish the moment in history where the story occurs. Another basic function of film music can be "… to underline or create psychological refinements - the unspoken thoughts of a character or the unseen implications of the situation …"[58] – what I call the use of music to redirect the viewer's understanding of the scene. An additional concept that I introduce in the working process section of this thesis is the idea of internal versus external scoring. It is discussed here using the example of a scene where:

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[56] Rona, 129

[57] Roy M. Pendergast, *Film Music: a neglected art: a critical study of music in films,* 2nd ed. (New York: Norton & Company, 1992), 213

> "… the main character, Joe, is seen running in the street, then along a great stone wall and down a huge flight of stairs. Yet the music here is not "running" music – [composer David] Raksin has scored the emotion rather than the physical character of the scene. Joe has been running, figuratively, throughout the film; it is only now, as he begins the search for his dead brother's body, that he finds any sort of quietude. Raksin reflects this psychological point in his slow music for the sequence."[59]

A big challenge for composers is scoring scenes that are heavy in dialogue. One of the techniques used is sometimes referred to as composing in counterpoint to the dialogue. In this method "… blank spots in the dialogue are filled with fragments of music, which come to the foreground momentarily to comment on the dialogue and then drop back into the background when the next line is said."[60] Unfortunately, the handwritten example demonstrating this included in the book is extremely difficult to read due to the reduction in size required to print it. However there is an accompanying discussion on how the composer applied the technique, which is helpful. Once again, this text restates many of the concepts of film scoring that are discussed in the previous listed texts. Pendergast talks about the use of leitmotif, once again crediting it to opera composer Richard Wagner. He does, however, state more clearly that "Most composers working with leitmotif scores tend to treat the melodic material as variations. In other words, a motif varies and develops alongside a character or dramatic situation."[61] I discuss this using my terminology – 'dramatic variation.' Because Pendergast worked mostly as a music editor, his chapter on synchronizing music to picture seems to be more comprehensive. While most current composers only synchronize their music to picture using a click track, which Pendergast discusses, there is also an excellent discussion on the technique of free timing. "Free timing refers to the process of recording music to picture without the use of a click track."[62] This technique involves the use of a large sweep clock at the conductor's podium, as well as visual cues known as streamers (a vertical line that pans from the left to the right of the picture and when reaching the right side indicates a sync point) and punches (literally holes punched into the film with a hole punch). These visual elements would have been marked onto the film that was projected before the recording session. At the time Pendergast wrote this text, scoring to a projected picture was still common whereas current practice is to feed a video signal through a device that can overlay these visual elements on to the video in real time. Many composers that compose using sequencers are unfamiliar with this technique of score synchronization, as it requires a specific compositional technique. As Pendergast also notes, "It generally takes a little longer to record a cue using the system, but the musical results are well worth the extra time involved."[63] Composers comfortable and familiar with this technique will use it when writing romantic cues or cues that require the performance to breathe a bit more. However it also requires a conductor familiar and experienced in the technique and many of today's composers do not conduct their own scores.

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[58] Pendergast, 216

[59] Pendergast, 216

[60] Pendergast, 221

[61] Pendergast, 232

This book also includes a brief chapter on scoring for television as well as chapters, albeit dated, on video postproduction techniques, digital audio and the synthesizer - which I imagine were added when the second edition was published in 1992.

A few years ago I had the honor to be on a panel with composer Lalo Schifrin, best known for composing the theme to "Mission Impossible" (1966) and scoring over 100 films including Oscar nominated scores to "Cool Hand Luke" (1967) and "The Amityville Horror" (1980). I recently discovered that he wrote a book entitled *Music Composition for Film and Television.* The book has many extended musical examples by the author and some interesting discussions about his work methods. One chapter of the book includes an entire score for a piece he was commissioned to compose for the Chicago Symphony Orchestra. Unfortunately, I believe there is no recording available and the score takes up 105 pages of a 265 page text – so I was not quite sure what the point of its inclusion was. Schifrin does, however, share some techniques that he uses in his writing process. He starts very early in the text with his interpretation of the relationship between the modes and certain dramatic moods. He includes a list of the following:

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[62] Pendergast, 266
[63] Pendergast, 268

> "*Ionian* (major scale) for positive moods, happiness, euphoria, exhilaration
> *Dorian* and *Aeolian* (minor scales) for sadness, melancholy, loneliness
> *Phrygian* for hope, longing, a sense of "almost there"
> *Lydian* for affirmation (more positive than Ionian)
> *Mixolydian* for searching, adventure, discovery
> *Locrian,* which is somewhat like Phrygian but toned down; however it could be useful according to the circumstances"[64]

While I may not agree with all of his characterizations of the scales, here we do find that the statement I made earlier that "major is bright and happy and minor is dark and sad" has been observed and practiced by another composer as well. Schifrin then goes on to discuss very specific musical devices to support certain kinds of psychological states or emotions. For instance he suggests that "Depression [can be scored with a] solo instrument, like bass flute in C."[65] and "Anguish, despair [can be scored with] Strings with or without high woodwinds using a major seventh or minor second intervals."[66] and "Obsession [can be scored with]… an insistent ostinato with woodwinds in medium-low register clusters."[67] Although I feel certain that all these techniques work, perhaps instead of just giving these specific examples it might have been better to explain his choices and reasoning? After all, not every scene of depression will be scored with a solo instrument, although I do think that it is valid to say that a solo instrument works because the sense of being alone is well supported by a single voice. However, I feel certain that this is only one way to support a scene of depression musically. Schifrin does admit that "There are no formulas or laws in film music, as long as the composer's intuition guides him or her to the right path. My guidelines should be only a point of departure to trigger the imagination during the creative activity."[68]

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[64] Lalo Schifrin, *Music Composition for Film and Television* (Boston: Berklee Press, 2011), 2
[65] Schifrin, 2
[66] Schifrin, 2
[67] Schifrin, 3

In the 3rd chapter, Schifrin discusses "The Interval Relationship of Different Moods" discussing consonant and dissonant intervals and debunking some old myths about the tritone. "There was a story in which an organist was condemned to death if you played this interval. … Nevertheless, this interval in our day and age is very useful for establishing tension."[69] He also demonstrates the melodic use of 8-note scales (in particular the symmetric diminished scale) and how he incorporated it in one of the main recurring themes from the "Mission Impossible" series[70]. Also included in the text is an interesting discussion about the use of various other 'hybrid' scales [my terminology].

There is a section on the 'moods' created by the use of certain intervals, while although interesting, was confusing to me. Also, in my experience, melodic use of an interval and harmonic use of an interval are quite a different matter. For instance, the melodic jump of a major 7th Schifrin characterizes as an interval that supports "Conflict and Despair"[71] whereas a major 7th used harmonically (for example, in a major 7th chord or a dominant 7th chord with a 13th) does not, in my experience, support either of those emotions. He does not seem to make any distinction about these different uses. In fact, he says that "the minor second is the most dissonant of the intervals"[72], and I agree that this is true of an exposed minor second, but not of all minor seconds which are sometimes added to voicings to add richness, not dissonance. In fact, his description of a tritone adding tension is only true in some contexts as well. Certainly ‘Blues’ with its use of multiple dominant 7th chords: (I^7, IV^7 and V^7) is hardly a tense progression.

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[68] Schifrin, 3
[69] Schifrin, 26
[70] Schifrin, 27
[71] Schifrin, 34
[72] Schifrin, 35

His discussion of action music supports concepts from other texts that “Unpredictable rhythms can help add to a cue’s sense of excitement.”[73] In fact, I feel certain that it is the element of unpredictability and adding excitement that explains why Jerry Goldsmith made use of changing time signatures in his scores, as was mentioned above. Interestingly, Schifrin applies the use of the Fibonacci number sequence (1:1:2:3:5:8:13:21:34:55:89:etc.) to creating accents in an action cue. This is the first time I had seen anyone suggest using this technique in film composition. I had certainly studied the Fibonacci number series in college in the analysis and composition of absolute music – the primary example that comes immediately to mind is Bartok’s “Music for Strings, Percussion and Celesta” where the form of the 1st movement seems to “… make substantial use of the golden ratio and the Fibonacci numbers.”[74] Also the beginning of the 3rd movement has an “Opening xylophone solo [that] has the rhythm pattern 1:1:2:3:5:8:5:3:2:1:1 with a crescendo followed by a decrescendo (hairpin) climaxing at the top of the sequence. Obvious nod to Fibonacci as well as a nice use of retrograde symmetry.”[75] Schifrin refers to other 20th Century composition techniques, including the use of 12-tone series and pitch-classes, in scoring although some of his examples are not from actual scores, and sometimes have confusing explanations. When he does use actual score excerpts, it would have been great to have an accompanying CD to hear the examples. (Oddly, the book mentions an accompanying CD, but when I called the publisher, I was told that it never materialized.)

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[73] Schifrin, 37

[74] Gareth E. Roberts, *Bela Bartok and the Golden Section*, Accessed March 30, 2012. http://mathcs.holycross.edu/~groberts/Courses/Mont2/Handouts/Lectures/Bartok-web.pdf

[75] Gareth E. Roberts, *Bela Bartok and the Golden Section*, Accessed March 30, 2012. http://mathcs.holycross.edu/~groberts/Courses/Mont2/Handouts/Lectures/Bartok-web.pdf

In chapter 5, "Suspense," Schifrin shows examples supporting his earlier statement about the most dissonant interval saying "If the sustained sound contains a minor second or a soft trill, based also in a minor second, it could be the basic approach for light suspense."[76] Although other texts have pointed out that dissonance is an effective method of scoring tension/suspense, here Schifrin actually defines and demonstrates the use of a minor 2nd for this purpose.

A very short chapter about "Special Genres" is included where he discusses horror, love and comedy scoring (all in 4 pages!). When discussing love he points out that "… the actor's ages are important (young love or a more mature relationship, etc.) when creating this theme."[77] I wholeheartedly agree with this statement, but feel that there could have been a follow up to that statement with some guidelines or suggestions, especially considering how specific he had been at discussing some techniques earlier in the text. I found that the discussion here was too brief and not much insight was shared. Overall, as a source of compositional techniques, I found this text ranged from offering extremely specific compositional methods, as in the first chapter discussed above, to being quite vague. The inclusion of many extended musical examples is great (some as long as 22 pages!), but without a CD or pointing out the location in a film where the included cue appeared, I felt were less useful than could have been. In many instances it seemed to be more of a case of 'here is the score for what I did in this situation' with inadequate explanation of the compositional technique applied.

Another interesting source of film music analysis is Philip Tagg's doctoral thesis, *KOJAK: Fifty Seconds of Television Music – Towards the Analysis of Affect in Popular Music*[78]. Besides the text, I was also able to find a video that he made, and that is posted on YouTube.com, where he further demonstrates and supports some of his concepts.[79] Tagg's thesis focuses on the theme for the 1970's "Kojak" television series, which certainly falls under the category of film music and therefore deserved inclusion here. I will point out, however, that Tagg's thesis is not in music composition, but rather his degree and dissertation are in musicology. This work's focus being the symbolic meaning and interpretation of the music that Billy Goldenberg composed for the main title of the "Kojak" television series.

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[76] Schifrin, 73

[77] Schifrin, 97

[78] Philip Tagg, *KOJAK: Fifty Seconds of Television Music – Towards the Analysis of Affect in Popular Music*, 2nd ed. (PhD diss., University of Goteborg, 1979), accessed October 22, 2014, http://tagg.org/mmmsp/kojak.html

Tagg makes some statements to support his analysis that, in my professional opinion, are inaccurate and do not reflect the contemporary practice or craft of film scoring as I have experienced it. Curiously, at the beginning of the paper, Tagg states that he had made numerous attempts to contact the composer of the theme, Billy Goldenberg, but was never successful in reaching him or getting a response to his multiple letters.[80] Being a fellow composer, and using my professional network, I *was* able to contact Mr. Goldenberg and he verified for me that some of the statements included in Tagg's text regarding the way he created and conceived the work were, in fact, inaccurate.

The first curious issue that struck me is when Tagg stated that "[it is] impossible to determine whether the visual sequences or the music was recorded first …"[81] and then goes on to mention that "one particular aspect of the "Kojak" titles seems to support the theory of its visual being cut to music ..."[82] He continues on to discuss the similarities of the synchronization of the music to the visuals in this piece with the process of scoring animation, where he advances the misunderstanding that in animation scoring, with all the dramatic sync points, the music is usually composed before the visuals are created. In discussing the "… synchronization (sync) techniques in the production of animated films,"[83] he points out that post scoring animation "… usually involves following highly irregular time patterns which would disturb the inherently integral musical nature of a title theme ...”[84]

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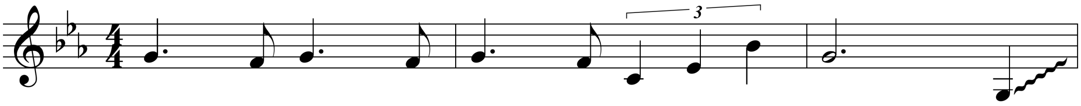
[79] YouTube. "The Kojak Theme: Score and Museme 2." Accessed January 3, 2015. https://www.youtube.com/watch?v=-acVjh1mfBQ
[80] Tagg, 23 (note: no page numbers are printed in the thesis itself, these numbers are derived from opening the pdf version of the text in Adobe Acrobat)
[81] Tagg, 124
[82] Tagg, 124
[83] Tagg, 124

In fact, this theme, and almost all animation, is post-scored to the picture and even before getting verification about this from Goldenberg it was obvious to me, when reviewing the music, that the theme had all the earmarks of being post-scored to the final edited picture. As I demonstrate in the first and third case studies, film composers are often required to make technical variations of their music to meet the timing requirements of the picture or visuals. This is usually achieved by adding or subtracting beats or bars to a phrase of music, which is what takes place here, as I will outline below. Oddly, Tagg himself even stated that this occurs in post scoring in the quote above, and yet did not seem to recognize it in this piece of music.

The “Kojak” theme has an ABA form with an introduction and coda. After the introduction section, the A section features a main melodic figure that is 3 measures long and is used multiple times:



Some of the statements of the main motif begin with a quarter note pick-up that is a melodic gliss up – usually by an octave - to the downbeat of the next statement of the motif. In the actual recording, the first statement of the motif (above) is preceded by an octave gliss and you can see how this example ends with the start of the melodic gliss going to the next (second) statement of the motif. This 3 bar figure repeats twice, modulates up a minor 3rd and is repeated again. However in the 3rd statement of the motif, it is used in an expanded form where the third bar of the phrase is now in 5/4. The B section, which has a completely different repeating melodic element and accompaniment figure consists of three 5/4 measures.

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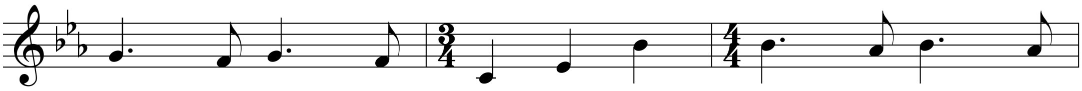
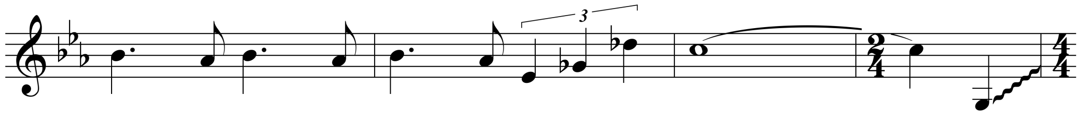
[84] Tagg, 124

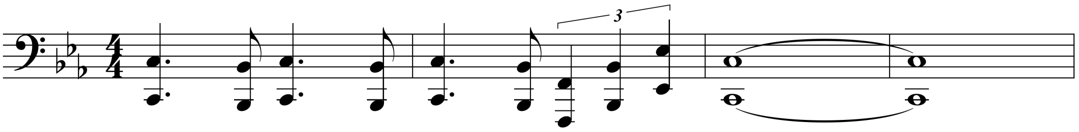
When the piece returns to the A section, the first statement of the main melodic figure is now truncated to 2 bars – one in 4/4 followed by one in 3/4.



As can be seen in the example above, it immediately moves to start of the transposed repeat of the melodic motif, but here this next figure (below) is expanded by two beats – the original motif (transposed) and is now three 4/4 measures in length with an additional 2/4 bar added.



The coda then begins with a very small variation of the original 3 bar melody played in the lower register (including the bass) in octaves.



Without even seeing the visuals, this piece has all the earmarks of being scored to picture. The unusual 3 bar phrase lengths, the truncated and expanded main motif, and the changing time signatures are all signs of the techniques that composers use to meet the timing requirements of a picture. We can see the irregular time patterns that Tagg mentioned as a sign of post scoring.

This however, is not a major criticism of the text. After all, as I mentioned earlier, noted film composer Ennio Morricone also stated erroneously that animation is always drawn to the music as otherwise it would be impossible for the music to sync with all the visual elements. So the misunderstanding that Philip Tagg has of the process of scoring music to match picture sync is completely understandable. It does, however, seem odd that he did not discuss this with anyone familiar with film scoring techniques. For the record when I questioned Billy Goldenberg about this issue, he verified that the theme was in fact, post scored to the visuals, as I had surmised.

The main thrust of Philip Tagg's work is to analyze the meaning or symbolism of the elements of the "Kojak" theme. In the video that is related to his thesis (viewable on You-Tube) he takes some rather unusual steps in his analysis by actually changing Goldenberg's music to support a finding that he wants to make – a methodology he has termed "hypothetical substitution."[85] As an example, in the video there is a discussion of the term "stabs" - which I first became familiar with when learning to write big band jazz. Commonly thought of as "Short, percussive chords meant to accentuate the harmonies and groove. Usually played by brass, strings, or keyboards."[86] Tagg admits to not being familiar with the term except for having "heard it in film music production circles."[87] In the video he discusses, in depth, Goldenberg's use of stabs and the implication of their symbolism. Firstly, he defines them as "sharp, sudden, forceful, jerky, and dangerous movements"[88] (I believe here he is describing the actual physical movement of a stab because during this moment in the video he is showing the famous "shower scene" from Alfred Hitchcock's classic "Psycho.") In his comparison, he then describes the musical stabs in "Kojak" as "… loud, shrill and sudden [and] at relatively unexpected intervals."[89] Certainly individual listeners could have different opinions of what constitutes loud (I believe in this context it might be more appropriate to discuss these as accented) or shrill (possibly dependent on register?). Whilst stabs by their nature, are sudden or short; every single stab in the "Kojak" theme, with the exception of one, occurs on the second eighth note of beat 2 – a common syncopated rhythmic placement used widely in jazz. To say that they occur at unexpected intervals is in fact, an inaccurate statement. The one time that a stab does not, in fact, occur in that metric location is when Goldenberg changed the meter of the measure in which it occurs - presumably to meet a timing requirement of the picture. Moving that particular stab made it work better musically in the single 3/4 measure of the piece.

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[85] Tagg, 114

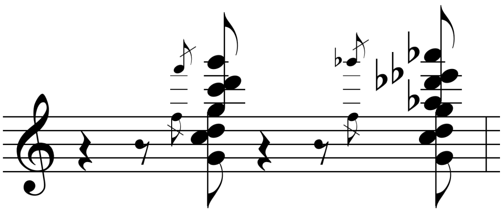
[86] Michael Johnson, *Pop Music Theory,* 2nd ed. (Boston: MonoMyth Media, 2009), 210

[87] YouTube. "The Kojak Theme: Score and Museme 2." Accessed January 3, 2015. (5:32)

[88] YouTube. "The Kojak Theme: Score and Museme 2." Accessed January 3, 2015. (5:37)

[89] YouTube. "The Kojak Theme: Score and Museme 2." Accessed January 3, 2015. (5:46)

Continuing with his analysis of the stabs, he works to point out the similarities between the "Kojak" stabs and 2 other pieces of music: Stravinsky's "Rite of Spring" and Bernard Hermann's score to "Psycho." It should be noted that while the use of stabs in the "Rite of Spring" do occur at unexpected intervals; in "Psycho" they happen at quite regular intervals of half notes. Here we find that one of the characteristics of stabs, as defined by Tagg, are actually dissimilar in these works where he is trying to connect them. There is, however, one element that the stabs in those two works do have in common and that is that they are harmonically quite dissonant. Oddly to me, in order "to illustrate the similarities more clearly" between "Psycho", the "Rite of Spring" and the "Kojak" theme, Tagg changes the voicing of the stabs in the "Kojak" theme as shown below:



The voicing on the left above is the original one used in the theme (as transcribed by Tagg and copied here) - which is simply the root, fifth and ninth of a Cminor^{11} chord, which is sounding elsewhere in the ensemble. To me this is not a particularly shrill sounding voicing and as previously discussed, is not occurring at unexpected intervals. However, to demonstrate the similarity between the "Kojak" theme stab and Stravinsky's or Hermann's use of stabs, Tagg creates an electronic (synthesized) version of the voicing but transposes the upper octave of the 4 note structure up a minor second which then creates an extremely dissonant sounding chord (voicing on the right above). In this way Tagg seems to be forcing the concept that the stabs in the "Kojak" theme are similar to the other two, which are both dissonant voicings. I would suggest that this "hypothetical substitution" is not an altogether acceptable methodology for comparison, since it seems to be Tagg wanting to make a connection where it might not otherwise exist. After all, if one has to make such a major alteration to the music, does that not imply that the original unaltered version was not actually that similar to the other piece to begin with?

When Billy Goldenberg viewed the video he wrote to me and said:

> "I just watched the video and am delighted to be in the company of Stravinsky and Debussy. My parents would have been so proud. Seriously, though, I have some thoughts. We both know that I did not write this theme with the extraordinary platitudes that Tagg suggests. However I've given this some thought. Aristotle said that creative work starts out with imitation. I do believe that and I think that there is a little database in the brain which registers all or most of the music that the creator has heard. It's totally subconscious but may creep into his work here and there."[90]

In film music, the composer's intent must be clear – he/she needs to know what the dramatic effect of the music will be when composing it or the score may not do its job of supporting the film and helping to tell the story. If Billy Goldenberg did not intentionally make the connections that Tagg's analysis suggests, then one might conclude that the way Tagg heard it is not necessarily the way that Goldenberg conceived or composed it.

In the 1947 text, *Composing for the Films*[91], co-author/composers Theodor Adorno and Hanns Eisler open their book with the negative observation that film music had become "… whatever musical clichés and ideas about music happened to be current."[92] They suggested that the industry had created an environment that "… hindered the progress of motion-picture music."[93] I was rather taken by the critical tone of the text – was the point of writing this an attempt to try and suggest improvements because of their fondness of the art form, or simply to dismiss this type of composition's value? It certainly came across to me that it was the latter and I was left wondering what the conclusion of the text would ultimately be.

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[90] B. Goldenberg (personal communication, November 19, 2014)

[91] Theodor Adorno and Hanns Eisler, *Composing for the Films*, 2nd Ed. (New York: Continuum International Publishing Group, 2007)

[92] Adorno & Eisler, 1

[93] Adorno & Eisler, 1

The first chapter calls into question the value of some of the commonly used compositional techniques in use at the time. Interestingly, however, some of the issues surrounding film scoring practice are the same today, as every director has a different way that he/she wants a score to support their film (as I discuss, the score's policy). Possibly when this book was written in 1947, with the studio system still existing, there were policies set by the studios that composers had to adhere to and so the composing environment may have felt a lot more creatively restrictive.

In discussing the use of leitmotif, Adorno and Eisler imply that composers are simply lazy by stating that "He can quote where he would otherwise have to invent."[94] The criticism of this technique as a method to give a musical identifier to a character, for instance, is described as "… being drummed into the listener's ear by persistent repetition, often with scarcely any variation …"[95] But these statements are followed by a discussion of how Wagner used leitmotif in a very different fashion than film composers – which is a unique way of looking at this subject since almost every other text on film composition credits the whole concept of using leitmotif in film music to Wagner. Certainly contemporary composers make use of this technique because they find it to be an invaluable tool and are not using the technique out of laziness.

In discussing melody, they argue that it "… has throttled the development of motion picture music …"[96] mostly because of the nature of scores of that era needing to be tuneful, based on the demands of the audience and film producers. In current film composition there is, in fact, a major backlash to the use of melody and a push towards more ambient and rhythmic scoring – almost to the point that melody has all but disappeared from many contemporary scores. So this discussion is certainly quite a bit different for today's composers many of whom feel that a wholesale dismissal of the use of melody makes very little sense, since some films benefit from melodic scoring. There are two competing schools of thought that permeate regarding the use of melody and therefore affect the audience's awareness of the score. Some composers feel that an ambient dark pad that supports the drama on screen is how film music should function – with little melodic musical content. Others, including myself, feel that melody is an essential element for good film music as well as meeting the dramatic and technical requirements of the film. That does not mean that only music with melodic content is valid, but I believe that a well-composed score will be aware of when it is playing a supporting/background role and when it can play out up front as a featured character. Bernard Hermann, considered by many as one of the icons in film composition, "… always insisted he was not a "film composer" but a composer who worked in film."[97] I feel that there is a distinct difference between those two titles and perhaps this philosophy is what led him to always being concerned with writing great music, which is why it has had such longevity and enduring impact.

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[94] Adorno & Eisler, 2
[95] Adorno & Eisler, 2
[96] Adorno & Eisler, 4

Overall, Adorno and Eisler do make some valid points about the problems of how music is used to score a film and many of those discussions are still being continuing today. Their solution, however, to "… the striking discrepancy between contemporary motion pictures and their musical accompaniment …"[98] could be potentially viewed as overly simple and flawed. They suggest that film music should embrace the "… elements and techniques elaborated … in the works of Schoenberg, Bartok and Stravinsky …"[99] The idea that every film would benefit from a score in any one particular style or genre, be it 20th century composition or otherwise, is just forwarding a notion that they criticized earlier - that film scores are making use of whatever ideas about music happen to be current. The difference here is that Eisler – who studied with Arnold Schoenberg[100] - and Adorno – who studied with Berg and had ties with

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[97] Steven C. Smith, *A Heart at Fire's Center – The Life and Music of Bernard Hermann* (Los Angeles: University of California Press, 1991), 2
[98] Adorno & Eisler, 21
[99] Adorno & Eisler, 21
[100] Adorno & Eisler, viii

Schoenberg and Webern[101] – both felt that the style of composition of those composers were the most valid, important and contemporary.

Today's film composers make use of many elements of 20th century art music that may have been unacceptable to the audiences of 1947. The use of dissonance as a method of supporting tension, the use of unusual rhythmic patterns to create a disorienting effect, as well as extended techniques of the individual instruments to expand the orchestral color palette. But alongside these, current composers make use of rock, jazz, bluegrass and ethnic instrumentation and styles – every film is different and no one single genre or style of writing is right for all films.

Ultimately I found that this book has little to offer in terms of teachable techniques for a film composition student. The text might be of interest to those looking for some historical context of the development of some of the techniques that Adorno and Eisler were encouraging, that are today commonplace in the vocabulary of film composers. It is unfortunate that the tone of the text is so negative, as I am sure that that may have often alienated anyone who might have been willing to listen to what Adorno and Eisler had to say. Besides all the criticism heaped on to the industry itself, they also had nothing good to say about the movie going audience and described them as "… illiterate, intolerant and uncritical …"[102]

In the book *The Art of Film Music*,[103] composer/educator George Burt – best known for his award winning concert music, but who also scored 6 theatrical films including "Secret Honor" (1984) and "Fool for Love" (1985) both for director Robert Altman – set out to write a text that "… was intended for both composers and filmmakers."[104] He contends that "… filmmakers need to have as clear an idea as possible about what they can reasonably ask of the music."[105] I could not agree more with that statement. One of the issues that I have discovered in my teaching is that most film making programs do not adequately instruct their students in the use of music. Often it is taught in a class that covers sound and music as one topic and the true value of dramatic underscore is not adequately explored. The idea that this book's goal was to educate filmmakers as well as composers was an exciting prospect. As a by-product, composers who read this text would gain some insight into how to communicate with directors, many of who have little knowledge or understanding of musical terminology and language. Burt also makes use of a convention that when discussing musical examples in technical terms that a non-musician would not comprehend; he used an italic font. He has written the text so that these technical sections "… may be skipped by non musicians without a loss of continuity."[106]

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[101] Adorno & Eisler, ix

[102] Adorno & Eisler, 38

[103] George Burt, *The Art of Film Music: Special emphasis on Hugo Friedhofer, Alex North, David Raksin, Leonard Rosenman* (Northeastern University Press, 1994)

[104] Burt, vii

Many of the concepts I have already discussed are supported by Burt's text but are of special value here in that the book's goal is educating filmmakers as well as composers. For example, the fact that music "… can deepen the effect of a scene or bring an aspect of the story into sharper focus."[107] may be something that a novice filmmaker never considered even though composers are aware of this being one of the main responsibilities of a well-written score. The text also discusses how the score can affect "… how we [the audience] perceive what they [the film's characters] are feeling or thinking."[108] as well as the "… enormous impact on the pacing of events, …"[109]; again part of the craft of the film composer.

In the first chapter "The Story's the Thing", Burt discusses all the dramatic value music can have in helping to tell the film's story and reveals uses of music that perhaps filmmakers might not have considered. For instance he illustrates that

> "… pictures of people running in frantic pursuit of something need not be accompanied by music that also "runs." If the dramatic intent of the scene is to amplify an underlying sense of fulfillment

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[105] Burt, vii
[106] Burt, viii
[107] Burt, 4
[108] Burt, 4
[109] Burt, 4

> or release, it may be better served by a broadly based, lyrical kind of music."[110]

In this example, Burt is demonstrating the fact that music can tell the audience additional or different information about what is occurring on screen – as I have illustrated earlier. Sometimes the music is scoring subtext of a scene directing the audience to pay attention to "… what you cannot see but need to think about … because it tells you something that will make an appreciable difference in your perception of the overall event."[111] He goes on to explain that a film composer achieves this "… [by] writing music that will somehow take notice of an important yet understated or implicit aspect of the scene. "[112]

Although he makes some reference to this subject earlier in the book, in the second chapter, "Characterization," Burt reinforces some of the other details about film scores that I have already discussed. Although I use the term 'vocabulary', Burt states that "The most crucial and most difficult problem a film composer faces is finding the music that seems absolutely right for both a film and its characters."[113] He points out that "Music is particularly adept at establishing an aura that is identified with a time and place…"[114], examples of which were also discussed earlier.

Some of the more interesting details in this and the other chapters are the notated musical examples with well-written analyses where Burt makes an effort to explain why a particular musical technique was used to yield a specific dramatic result. For example, in discussing two excerpts of Hugo Friedhofer's score to "The Young Lions" (1958), he remarks on how Friedhofer was skilled in composing "… music [that] is capable of portraying the mental processes of the actor."[115] In one scene where Marlon Brando is being enticed by the provocative invitation of a married seductress, Friedhofer makes use of "… music [that] is angular and tonally deceptive."[116] Later Burt discusses how in an earlier scene in the film where we saw Brando and a young woman who he is developing an affection for, Friedhofer makes use of "Diatonic progressions [in comparison to] the angular, chromatic shifts employed in the other scene, and the effect is less complicated and more forthright."[117] This demonstrates the composer's choice of using different harmonic/melodic language to represent a complex relationship (adultery with a married woman) with a more simple relationship (emphasizing a deeper level of feelings).

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[110] Burt, 7
[111] Burt, 7
[112] Burt, 7
[113] Burt, 17
[114] Burt, 17
[115] Burt, 18

Although this text has some excellent discussion about the use of themes and their variations as well as detailed observations of many other aspects about scoring, its major weakness is that most of the films and scores that are discussed were produced between 1940 and 1970. Although these films are generally regarded as 'classics' and the dramatic challenges of scoring discussed are similar to what current composer's face, the musical approach to scoring today would be stylistically and compositionally quite different. Just considering instrumentation alone, all the included scores/films were recorded before synthesizers, electronic instruments and sequencers existed or played a major role in the scoring process. Besides this, the author himself recognized that there are omissions of many major composers including Bernard Hermann, Jerry Goldsmith, John Williams, Ennio Morricone, Bruce Broughton and James Horner as well as other important figures in film music's development - Erich Korngold, Max Steiner Franz Waxman and Lionel Newman. I could add to that list - Henry Mancini, Danny Elfman, Hans Zimmer and more. So while I thought the book was intelligent and comprehensive, I am not sure that today's composers (and film makers) would feel it to be as vital to their education if only because of Burt's choice of films to discuss. I was disappointed by this considering that I feel that the book's goal of educating filmmakers and composers was a valid and a worthwhile idea.

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[116] Burt, 18
[117] Burt, 21

As I stated in the beginning of this chapter, after reading and researching these and other texts about film music, I found that there was very little written that actually taught the craft of film composing in the same way that there are texts about other aspects of musical composition. I discovered that almost every text I read alluded to the fact that there were techniques and musical practices that do have dramatic effect (such as minor music being sad, and dissonance adding tension), but very little teachable craft that a student composer could learn, practice and apply. In those rare instances where there was some codification of technique, it was often inconsistent, unclear or incomplete.

I was already a working composer before many of the books discussed here were published and so I learned the craft through observation, experience, analysis and a certain amount of trial and error. I was fortunate in my career to have the professional opportunities that I have had and am aware that current changes in the industry do not afford most future composers that type of on-the-job training. Therefore I believe that this thesis will be of use to those interested in learning from my discoveries, mistakes, mis-steps and successes.

Film scoring is a technical, but creative art form that, although designed to support another medium, can be rich and magical. I believe, as many others do, that film music is the orchestral music of this generation. Today, film, game and media composers as a group are composing more orchestral music than any other group of composers due to the high demand for original music in those mediums. Also, this music is becoming more popular to younger audiences as can be seen by the growing popularity of video game and film music symphonic concerts - it certainly has a large number of young fans and supporters.

With all this, the discovery of the lack of books that teach musical techniques for composing dramatic music validates the point of this thesis and the future textbook that it will become a part of. It is my hope that this document will begin to demystify, inspire and enlighten in a way that attracts others to pursue careers in this field.

3 - Working Process - Part 1

An Overview:

In this chapter I will outline the steps in the process that I developed as my personal method of approaching scoring films. All composers begin with a blank piece of manuscript paper (or today, it might be an empty computer sequence) and create music that is inspired by the film and enhances the story. In the book *The Theory and Praxis of Music in Film*, composer Ennio Morricone discusses that the composer must consider "...the genre, the nature, the argument of the film [and] in what style it was shot". Furthermore, he suggests that the composer also consider "… the subject, the general cutting, the images, the photography, the editing [and] the dialogue…" He points out that the student composer should "Try, in sum, to discover the reasons at the root of the choices that the composer made."[1] There are many decisions that need to be made to compose the perfect score to a film, but the process can be laid out in a series of steps. The evidence suggests, and as is illustrated by Morricone's statements, that all composers go through some version of an analysis process before making musical choices that would best support the film. Once I began to teach film composition, I found that it was useful to clearly define the steps in my process as a way to instruct my students to having a clearer methodology. It is this stepwise process that I will delineate here.

The purpose of a musical score:

The main function of dramatic underscore that accompanies film is to support or enhance the action/drama on screen. Lalo Schifrin, best known as the composer of the "Mission: Impossible" theme (1996) and "Cool Hand Luke" (1967) said that "[The score] creates a sort of subliminal enhancement of what is dramatically and visually going on, and it creates the perfect psychological climate for the audience to be absorbed…" [2] One can hardly imagine the shower scene from Alfred Hitchcock's thriller "Psycho"(1960) being anywhere as scary without Bernard Hermann's edgy, driving score where "… the sudden, harsh, shrieking violins… closely follow the sense of shock and fear in Janet Leigh's character…"[3] The final scene of "Cinema Paradiso" (1988) would certainly not be as moving without Ennio Morricone's deeply emotional music helping the audience recall moments from earlier in the film.

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[1] Ennio Morricone and Sergio Miceli, *Composing for the Cinema: The Theory and Praxis of Music in Film,* translated by Gillian B. Anderson (Lanham, Maryland: Scarecrow Press, 2014), 6-7

Properly scored, the music in an action scene makes the experience more thrilling for the audience. For example the underscore of the chase sequences in "The Fugitive" (1993), scored by James Newton Howard, "… moves the action forward with rhythmic patterns in the orchestra …"[4] creating a sense of excitement. In a danger scene the score adds more tension as can be heard in multiple scenes from the "Lord of the Rings" trilogy (2001, 2002, 2003) scored by Howard Shore. As is mentioned in *On the Track*, "Generally speaking, an increase in dissonance equates with an increase in tension."[5] Music certainly enhances romantic relationships such as the theme (and ultimately the song) from "Titanic" (1997) as composed by James Horner.

Underscore can also be used to inform the audience of something not on screen. An example of this might be using the music to alert viewers that what a character is saying should not be taken at face value but rather understood as possibly false or at least suspicious. This is precisely one of the ways that Jerry Goldsmith's score to "Basic Instinct" (1992) constantly keeps the audience on edge. His score enhances the "… psychological mystery factor …"[6] to keep us wondering what is true and what is not as Sharon Stone's character, Catherine Tamell, plays mind games with Detective Nick Currari, as played by Michael

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[2] Earle Hagen, *Scoring for Films: A Complete Text* (New York: Criterion Music, 1971), 155

[3] James Buhler, David Neumeyer, Rob Deemer, *Hearing the Movies – Music and Sound in Film History* (New York: Oxford University Press, 2010), 101

[4] Fred Karlin, Rayburn Wright, *On The Track – A Guide to Contemporary Film Scoring,* Rev. ed. (New York: Routledge, 2004), 285

[5] Karlin and Wright, 267

[6] Karlin and Wright, 179

Douglas. In 'Period Films,' the score can help establish the era by "… drawing on the sound and harmonic essence of the music of the period …"[7] such as Patrick Doyle's score to "Henry V" (1989). The score can also help establish location and or ethnic background of a character by making use of the harmonic, melodic or instrumental flavor of folk or ethnic music from a specific locale. John Williams's score to "Memoirs of a Geisha" (2005) made use of ethnic instruments – shakuhachi and koto - and when discussing the score he said "The aim was to create an Oriental atmosphere by using traditional Japanese instruments…"[8] Miklos Rosza, who scored historical epic films such as "Ben–Hur" (1959) and "El Cid"(1961), had as part of his approach - "For films involving historical subjects, he did extensive research and tried to create a musical sound that was palatable to the average audience, yet based on real historical musical premises, motives and Instruments."[9]

"Film scores are often required to bring propulsion and drive to a film."[10] In doing this we can see that another function of a score can be to help change the perceived pacing of a scene – for instance, making a slow scene seem to move faster – by creating an underlying driving pulse.

First decisions – Organic/Inorganic, Vocabulary and Policy:

One of the first steps in scoring a film is deciding the type of music that would best suit the style and character of the film. Alfred Newman (6 time Oscar winner, composer of "Wuthering Heights" (1939), "The Hunchback of Notre Dame" (1939) and "The Grapes or Wrath" (1940)) said that "The film always must dictate the spirit, style and psychology of any score, however crystalized the composer's personal style may be."[11]

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[7] Karlin and Wright, 182

[8] Classic FM. "John Williams Discuses Memoirs Of A Geisha." Accessed June 12, 2014. http://www.classicfm.com/composers/williams/guides/john-williams-discusses-memoirs-geisha/

[9] Richard Davis, *Complete Guide to Film Scoring* (Boston: Berklee Press, 1999), 52

[10] Karlin and Wright, 282

[11] Hagen, 161

I choose to discuss these elements using the terms 'vocabulary' and 'policy' of a score. I decided to make use of these when I first began to teach film composition as they seemed to clarify what I feel is a very important step in the film scoring process – deciding what the flavor of the score should be and how it interacts with the film. Therefore, I define policy as the relationship of the score to the film – how the music relates to the film – and the vocabulary refers to the unifying musical characteristics of the score.

As an example, the score that I composed to "Year of the Comet" (1992), which I discuss in the first case study, incorporates elements of Celtic music to match the main locale of where the story takes place. Although I make use of a full symphonic orchestra, I augmented it with some ethnic Celtic instrumentation - pennywhistle, hammered dulcimer and bodhran. I also incorporated other musical elements - harmonic and melodic – that I felt were derived from Celtic musical tradition and therefore helped give the score an ethnic flavor.

In other texts and classes this might be referred to as the "style," "genre," "language," or "concept" of the score[12]. I prefer the word vocabulary as I feel it encompasses many other individual elements of music besides just instrumentation and style. For example it can also include the nature of the melodic elements. Are the themes simple and 'sing-able' such as in John Williams's score to "Raiders of the Lost Ark" (1981), or angular and complex such as in Jerry Goldsmith's score to "Basic Instinct" (1992)? The harmonic language/systems used can range from diatonic, such as in Alan Sylvestri's score to "Forrest Gump" (1994) to highly chromatic or atonal such as in John Corigliano's score to "Altered States" (1980). Other musical elements, such as the way dissonance, rhythm and accompaniment textures are incorporated in the score and even the type of harmonic voicings used, can also be considered as elements of vocabulary. All of these musical characteristics are chosen to compose a score that best reflects the flavor of the film as well as unifying the overall score and giving it a unique character.

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[12] Karlin and Wright, 63

Policy is a somewhat more challenging concept to explain, but as an example, when scoring a comedy, as I did for "Robin Hood: Men in Tights" (1993), the music never sounded like 'funny music.' It never used any comical musical gestures that might, in and of themselves, make the audience laugh. Instead, director Mel Brooks and I agreed that the music should support the action and adventure elements of the story and never comment on the comedy – rather play against it. In an interview with Variety magazine in 1994, Mel commented that "[Hummie] … understands that the score is never funny. It doesn't compete with the wit and comedy hijinx. It's a supportive element. If the score were funny it would cheapen the movie." Elmer Bernstein, who scored "Ghostbusters" (1984) using a similar approach explained it this way – "In comedy, playing the music seriously helps [emphasize] the ridiculousness of the character."[13] This is the policy of how the score I composed relates to this particular film, however, this is not the only policy for scoring a comedic film. In contrast, it is possible to score a comedy film in a more 'slapstick' type of style by making use of funny musical devices, as was done by Randy Edelman in "The Mask" (1994). A score of this type will incorporate comedic sounding musical gestures such as trombone portamentos, 'wa-wa' figures on the trumpets and 'silly sounding' pizzicato string phrases. Another common comedic technique is called 'mickey-mousing.' Using this technique "… the music mimics [or accents] every little action on screen …"[14] almost like a sound effect. Footsteps, door slams, falling rocks, almost anything could have a musical gesture in sync with the action. This was a technique commonly employed in the Looney Toons animated shorts of the 1940's and 50's as practiced by Carl Stalling.[15] As an example, Mr. Stalling often used a musical gesture to accompany eye blinks - a note plucked on a violin (pizzicato) immediately followed by an upward slide (portamento).

There are other elements to consider in determining the policy of a score, as I define it - the emotional depth level of a score is another policy decision. For example if one scored a modern romance such as "500 days of Summer" (2009) in the same way as a period romance, say "Gone with the Wind" (1939), the evidence suggests that this 'over the top' approach would be experienced as incongruous and therefore comedic. The juxtaposition of a score featuring high soaring string lines and exaggerated harp glisses on to a contemporary romance could make the film seem quite silly. However, that exact scoring approach might be appropriate if the director requested that the composer poke fun at a particular relationship in a contemporary film. As an extreme example, in the final moments of the film "Airplane" (1980), with a score composed by Elmer Bernstein, we find a great moment of over the top comedic scoring. Elmer called it "… 'great big' serious."[16] Soaring violins and a chorus are featured when the film's hero, Ted Stryker (as played by Robert Hayes) who has just landed the plane and saved the day, takes flight attendant Elaine (as played by Julie Hagerty) in his arms for a long drawn out, romantic kiss. But just to make sure that the audience gets the musical joke, Bernstein's score keeps modulating up and up until the chorus can no longer reach their pitches and instead the singers are screeching. I also incorporated the idea of 'big serious' over the top scoring in a scene from "Year of the Comet" (1992) where this rather slimy full-of-himself guy is coming on to our heroine (played by Penelope Ann Miller). In the scene he is trying to verbally seduce her by talking about how amazing their love making could be. So I composed a romantic piece incorporating every cliché big romance musical element I could think of.

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[13] Karlin and Wright, 180
[14] Davis, 142
[15] Davis, 179

In the early stages of scoring a project, the composer must look at the film, analyze it and figure out what type of music will best suit and support it. In other words, deciding what the vocabulary and policy of the score are is done prior to composing a note of music. Some of the characteristics that a composer might consider in the analysis of the film could be the particular time period and/or location of the story. After that, the themes for the film will be composed working within the guidelines of the policy and vocabulary decisions made.

While exploring the options, I find myself going through an elimination process of deciding what types of musical elements would definitely not work as part of the score. Those elements might include some of the items previously discussed: instrumentation, harmonic language, melodic character, unusual voicing characteristics, genre and style. I consider this early stage of scoring a film as a 'subtractive' process. Often it is easiest for me to eliminate what types of musical elements I feel would not work to support the film's story as a method to coming up with what will ultimately suit it best. Composer John Morris, best known for his work on "Blazing Saddles" (1974) and "The Elephant Man" (1980) supported this concept saying that "In any film, it's like a Chinese menu. I decide what I don't want."[17] As an illustration of this, consider the score for an historical period drama. It would seem unusual or incongruous to use the instrumentation of a contemporary rock rhythm section – electric guitars, synth keyboards, electric bass and drum set, instruments that did not even exist then, and which might be much better suited for scoring a contemporary story. Using this type of rock ensemble and writing in an appropriate rock style would create what I define as an 'inorganic score,' as it is not a choice that is suggested by the story, period, costumes or location of the film. So here is yet another example of a policy decision, and for me the primary one. Is the score going to be organic or inorganic to the film? I do want to point out the there have been very successful and popular inorganic scores composed for films; for example the score to "Chariots of Fire" (1981) by Vangelis. This is an electronic/synthesizer score composed for a period piece, not something suggested by the film, but a creative decision made to combine two disparate styles.

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[16] Karlin and Wright, 180

Sometimes we also find that scores reflect the current musical trends of the time period when the movie was being produced as opposed to reflecting the era represented in the story itself. This often leads to inorganic scoring choices. An example of this was the choice to use Rap songs as part of the soundtrack to Baz Luhrmann's "The Great Gatsby" (2013). The film is obviously a period story that made use of a style of music not yet invented at the time period depicted in the film. This is clearly an inorganic juxtaposition of a contemporary style of music into a film that takes place in the early 1920's. When I was first hired to compose the score for "Robin Hood: Men in Tights" (1993), I felt it would be a good idea to research the way other composers had approached scoring this era since this film was a parody of previous films based on the same story. So I watched earlier Robin Hood films that had been made. The most well known ones are the 1991 “Robin Hood: Prince of Thieves” starring Kevin Kostner and scored by Michael Kamen, and the 1938 “Adventures of Robin Hood” starring Errol Flynn and scored by Erich Wolfgang Korngold. These were the two that I was most interested in. The Kevin Kostner film was of particular interest because that version was the one that Mel’s film was skewering the most, so maybe there was something musical I could do to enhance that. I also watched at least one of the animated Robin Hood stories as well. The most interesting thing that I discovered was that the music in the Korngold score seemed less to reflect the period of the story and more the style of music that was in vogue for scoring action/adventure films at the time – Hollywood’s adaptation of late Romantic period music. In fact, Korngold won the Academy Award in 1938 for best score.

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[17] Karlin and Wright, 95

During my career, I would say that my preference, and therefore most of the projects that I am hired to score, are ones that suit the approach of creating ‘organic scores’ – ones whose style and flavor are more directly suggested by the character of the film. This policy approach is most certainly not necessarily better than any other and is dependent on the director’s input so that the score supports his or her vision of the film. However, these decisions must be made early on so that once the actual composing begins, the score will have a unified sound and consistent relationship to the film. Ennio Morricone commented that “Sometimes the director makes such crazy requests that the composer may want to gag. For this reason I say that the composer has to find his or her way . . . by trying to apply the proper compositional rules coherently while harmonizing them with the exigencies of the director.”[18] Composer Bill Conti , whose work includes “Rocky” (1976) and “The Right Stuff” (1983) holds the view that “What the director is hearing and feeling is to be respected at all costs.”[19]

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[18] Morricone and Miceli, 53

[19] Karlin and Wright, 4

It is also worth noting that some composers create organic scores for some projects and inorganic ones for others and that all the choices are dependent on the project. For example, Mychael Danna's score to "The Ice Storm" (1997) about a dysfunctional family in the 1970's features Gamelan and native American flute. These strong instrumental sounds make for an unusual inorganic scoring of the period and subject matter. However his Academy Award winning score to "Life of Pi" (2012) features classical Indian instruments - sitar, tabla, santoor (hammered dulcimer) - along with an orchestra to score the story of Indian storyteller's tale about his father's journey in a lifeboat with a Bengal tiger after the cargo ship they were traveling on was destroyed in a storm. This story, that has its roots in India and features Indian main characters, including the tiger, had an organic score.

After a preview screening of the mini series "In Cold Blood" (1996) that I scored - based on the Truman Capote book, directed by Jonathan Kaplan and starring Anthony Edwards and Eric Roberts – executive director Robert Halmi came up to me and complimented my work saying that my score "more perfectly matched the film than any score ever composed for any of his projects." Considering he had produced over 800 television films and mini-series, it was quite a compliment. This, to me, is the value of organic scoring – perfectly enhancing the film's story and point of view. To once again quote Ennio Morricone – "I do a job that respects me, that respects my professionalism while at the same time also respecting the film."[20]

Another film that I composed the score for, "After the Rain" (1999), written and directed by Ross Kettle; starring Paul Bettany and Louise Lombard, took place in South Africa at the end of Apartheid. The director specifically asked me not to use any tribal drums or African style vocals as he felt that that would take away from the film being more of a 'universal human story' set against a particular time and place backdrop as opposed to it being an 'African story.' This allowed me to create a flavor to the score that did not immediately bring to mind the location or time period of the film. In some ways this makes the decisions about the vocabulary more challenging because when considering the musical character of the score there are fewer absolute 'wrong' decisions and many more options available to the composer.

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[20] Morricone and Miceli, 54

As one can see, the initial choice about the policy of the score – organic versus inorganic - has an effect on how the composer proceeds. After that decision has been made, then the composer can start to make decisions about the score's vocabulary or musical characteristics: the instrumentation, the harmonic language, possibly a particular style or genre of the music, the nature of melodic elements used, etc. Richard Davis mentions that "In speaking with composers, the one thing that comes through again and again is that the most successful scores have a concept that drives the music."[21] In other words, a consistent vocabulary and policy. In all the case studies contained in this thesis, I will discuss these two elements as my starting point to composing the scores.

Thus far I have only discussed one element of policy, but there are other policy decisions that affect the relationship of the music to the film. As one additional example, 'internal' versus 'external' scoring. The easiest example to illustrate this concept might be a battle sequence where the score could be written to support the action element of the scene (external scoring) or conversely, the score could be written to underline the reaction that a character is having to the horror of the events that he/she is witnessing (internal scoring). Director Paul Wendkos (who directed many made for TV Films) commented that:

> "I don't like music to be outside; I don't like doing the score externals. I don't like the score walking, crying or scoring car chases. That's boring. I'd rather get down into the visceral essence of what the chase is about and capture that element, capture the heartbeat of the chase, capture the life and death element of the chase"[22].

When I scored "The Second Civil War" (1997) for director Joe Dante, there is a scene at the end of the film where we are inside a television news station as the people working there are standing in stunned silence watching the monitors and seeing images of the start of a civil war between warring militia groups. I was asked to score the shock and disbelief of the viewers and not the action of the war - an internal scoring approach.

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[21] Davis, 135

[22] Karlin and Wright, 4

Themes – the Musical Basis of the Score:

Once the composer has decided on the vocabulary and policy, the next step in the process is analyzing the film for the number and nature of the themes required to support the film's story. Much of film composition can be seen as a type of 'Themes and Variations.' "The *theme and variations* technique is borrowed from art music – it consists of presenting a theme, which will be later reprised and transformed …"[23] I have observed that the main themes in films are often based on individual characters, recurring situations or activities, or locations. The concept of creating unique themes to help a listener identify characters or situations was used by opera composer Richard Wagner and was termed 'Leitmotif.' Similar to the way that contemporary film composers manipulate their themes, Wagner would vary his leitmotifs "… according to the requirements of a particular situation."[24] This type of emotionally directed alterations is what I term the 'dramatic variations' – molding the themes to accompany the different emotional settings needed to support the story. Jerry Goldsmith, commenting on the thematic organization of a score, said that "It's not a piece here and a piece there. …You're trying to emphasize the character of the people up there. As they evolve, the music must evolve with them."[25] Composer Max Steiner "… became known for writing emotional, lyrical themes, but was versatile and could provide any mood required."[26] So like Wagner, film composers use their thematic material not only to identify a character, but also to support the emotional state of that character.

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[23] Emilio Audissino, *John Williams's Film Music* (Madison: University of Wisconsin Press, 2014), 34

[24] Willi Apel, ed., *Harvard Dictionary of Music,* 2nd Edition (Cambridge: Belknap Press, 1974), 466

[25] Karlin and Wright, 194

[26] Davis, 40

The other type of variation, that is completely unique to film composition, is what I call 'technical variation' - variations that deal with the form of the music that is dictated by the timing requirements of the film. As we will see, when a film composer is scoring a scene, the form of the music – phrase lengths – is controlled not by musical form, but by timings of where there are emotional or location shifts in the film (sync points). "Once the composer determines the sync points, he figures out how to tailor the music so that these sync points come at logical places in the music, often at downbeats."[27] In other words, the natural or usual musical form will need to be altered to accommodate making the sync points land on downbeats (or possibly other specific beat locations depending on the music composed).

First and foremost, the themes of the film need to be composed being mindful of the dramatic variations that will be required of them. However, knowing that technical variations will likely be required once the actual scoring process begins, the themes also need to be able to be manipulated. The composer must be able to expand and contract the themes in order to meet the technical/timing requirements of the film. There are techniques that I have developed, and will demonstrate, which allows composers to build this flexibility into the original themes. One example of this concept is the focus of the first case study of "Year of the Comet".

Expanding on the concept of dramatic variation, a composer might decide that a theme should be composed for a particular character in a film. It is also important to note the dramatic contexts that the theme will have to support by analyzing the path the character takes through the film. One might consider a film that features a character that is a politician and well-respected member of the community during the day, but by night is a serial killer. Noting that here we are dealing with the same individual, it would be appropriate to use the same character theme in 2 very different dramatic contexts - one very proper and respectful and the other evil and deviant. One could further expand this example by imagining that part of the film about the politician/serial killer also included flashbacks showing him as a young child living in an abusive household. This is yet another dramatic variation of the same theme in completely different context. Apparently, when discussing the initial idea George Lucas had to use classical music to score "Star Wars" (1977), John Williams argued the point that what a score made up of a collection of classical pieces "… doesn't do is take a piece of melodic material, develop it and relate it to the character throughout the film."[28] In this exchange Williams was supporting the approach of dramatic variations of a theme.

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[27] Davis, 155

In creating any theme, the composer must first be aware of the different emotional settings that the theme must support and, for me, while I am composing my themes – using the previously decided on vocabulary – I make sure that the themes can be manipulated to support all the required dramatic situations in the film. Oscar winning composer Franz Waxman, whose scores included "Sunset Boulevard" (1950) and "A Place in the Sun" (1951) explained that:

> "The immediate establishment of a particular mood is one of the most important functions of motion picture music. This usually can be done most effectively through expert orchestration and scoring rather than through melodic and harmonic development, [so that] the same melodic statement may serve many moods …"[29]

Although I do agree with Mr. Waxman's assessment that it is important that the melodic element (theme) must serve many moods, I disagree that harmonic development is not an effective device in dramatic variation. This will be demonstrated in the second case study that deals with dramatic variation.

It should be noted that one of the principal differences in the compositional approach to Theme and Variations in concert music as opposed to film music, is that in a film score the theme must be readily identifiable no matter what different variations are applied to it. Because of this, the melodic alterations will be somewhat less extreme than can occur in concert music. In order for a theme to serve its purpose of helping to identify a particular character and the emotional state that he/she is in, it is important that the listener is able to identify it easily. In many cases, the theme has been developed from a smaller musical unit or characteristic motif. Jerry Goldsmith stated that "You start out with something that the audience can immediately associate with, whether it's three notes, four notes, whatever it is, something that registers upon them."[30] So usually the motif or melodic element stays intact and the dramatic variations are achieved by changing many aspects of the accompaniment with a minimum amount of variation of the melodic element.

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[28] Audissino, 71

[29] Buhler, Neumeyer and Deemer, 18

This thesis proposes a variety of 'tools' or techniques available for composers to use to manipulate a theme to support different dramatic contexts. Examples of these tools/techniques include – developing the melodic element, changing the tempo, changing the instrumentation and orchestration, changing the harmony (reharmonization), changing the meter, changing the note values (augmentation and diminution) and changing the accompaniment figures (textures). As is noted in *On the Track:*

> "In developing a motif, every other music element can be used effectively: the notes of the motif can be changed; the rhythmic values of the notes can be varied (eighth notes morphed into quarter notes or even whole notes, for instance). Shifts in harmony will reveal the different emotional implications of the motif; and orchestration will have an effect as well."[31]

I want to make a comment on the quote above as it relates to the concept of developing a motif and "changing the notes." This comment would seem to be a direct contradiction to the comment that I made in the previous paragraph regarding dramatic development involving a minimum amount of variation of the melodic element. In my observations, listeners do not recall the actual notes of a motif as much as they recall and identify the shape. As an illustration, consider the opening motif of Beethoven's 5th Symphony in C minor. This motif is based upon a shape of a note repeated 3 times followed by a leap down with a specific rhythmic pattern. Notice, however, that each subsequent statement of the motif starts on a different pitch and contains a downward movement –

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[30] Karlin & Wright, 197

[31] Karlin & Wright, 201

mostly by leap - but that varies in size (major third, minor third, minor second, perfect fourth). So even though the notes are, in fact, changing, the shape is the same and the listener hears this as a development of the initial motif or shape. In his textbook, *Fundamentals of Composition*, Arnold Schoenberg makes similar observations about how listeners perceive motific development. I will explore examples of dramatic variation using the tools I mentioned above in the second case study of the score to the biographical mini-series "P.T. Barnum".

Spotting the Film – Where the music goes and why:

Spotting the film is the process of deciding where in the film the individual pieces of music – called cues – will occur and what the function of the music will be. This is usually decided on during a meeting between the director and the composer called the 'spotting session.' "The purpose of the spotting session is not only to choose the places where the music is going to be synchronized, but also the music's nature."[32] For example, the director might ask a composer to help make a particular scene scarier, or sadder, or move faster, etc. So during the spotting session the director and composer will discuss the details about the ins and outs (start and stop points) of the individual cues and what the emotional context of each piece should be. Notes that are made during the spotting session include the time code[33] location of the in and out points of every cue, often along with descriptions of these points. "In general, music starts most effectively at moments of shifting emphasis."[34] Another way to think of this is when there is a change in the emotional direction or drama of the story – someone receives some bad news, someone realizes that he/she is in danger, etc. There are usually visual cues (an actor's facial reactions or a shift in camera angle), or audio cues (a piece of dialogue or a sound effect) that help to change the drama and might trigger the start of a piece of music. As an example I will point out the in point in the cue I discuss in the first case study. I chose to begin the cue shortly after the brother, who is left sitting alone in the office, exhales in frustration. At that moment in the film, all the 3 people who were in the previous sequence are annoyed and it is the high point of frustrations that they all experienced at the end of the scene.

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[32] Lalo Schifrin, *Music Composition for Film and Television* (Boston: Berklee Press, 2011), 16

[33] Time code can be either visual (a burned in set of numbers on the screen) or audible (existing on a audio track that other pieces of equipment can "hear"). Its main function is to chronologically identify every frame of a video.

[34] Karlin & Wright, 35

Figure 3 below is two pages from the spotting notes created by my music editor after the spotting session for "Suzanne's Diary for Nicholas" (2005). Notice the cue numbers. They follow the following format: a digit that denotes the act number (if television) or reel number (if a feature film), the letter M (for music), and a digit of the chronological order of the cue. So 2M3 would be the third cue in the second act or reel. After the columns of the start and stop time code numbers, there is the length of the individual cues followed by a description of the cue. Sometimes the description refers to the 'temp score.' This is pre-existing music that has been temporarily synchronized to the film so the director can experiment with pieces of music and, more often, that is mixed into the film so that when the 'rough cut' (still being worked on) version of the film is shown to studio executives or at test screenings, that there is at least some music in the soundtrack. There are pluses and minuses to temp scores. Jerry Goldsmith has said that "… it's a shortcut to trying to figure out what the director is all about …"[35] where others, such as music/film editor Michael Tronick, are concerned that "A director will get so used to temp music that it shackles the composer's creativity."[36]

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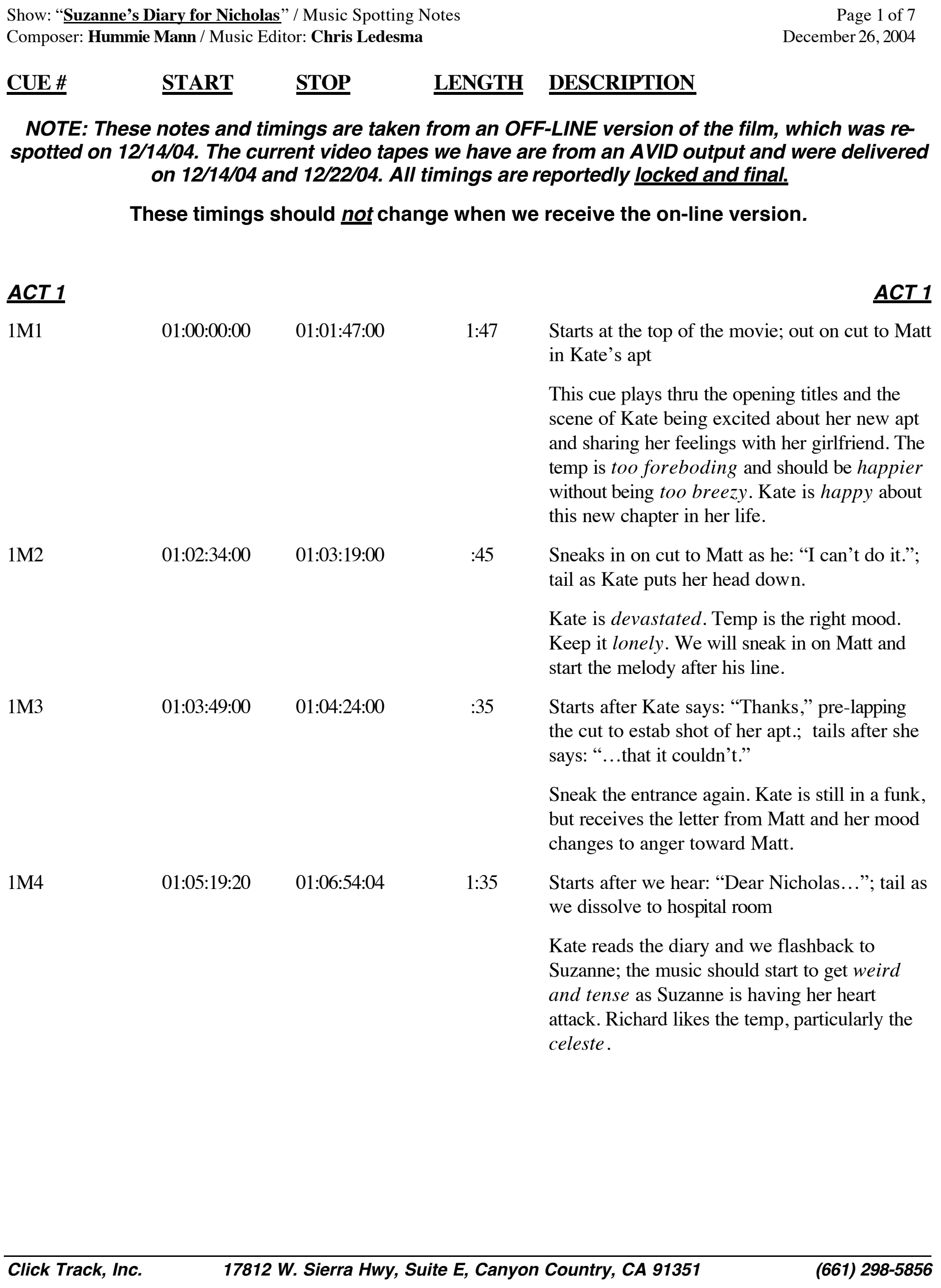
[35] Karlin & Wright, 30
[36] Karlin & Wright, 26

Figure 2



Show: "**Suzanne's Diary for Nicholas**" / Music Spotting Notes
Composer: **Hummie Mann** / Music Editor: **Chris Ledesma**

Page 1 of 7
December 26, 2004

NOTE: These notes and timings are taken from an OFF-LINE version of the film, which was re-spotted on 12/14/04. The current video tapes we have are from an AVID output and were delivered on 12/14/04 and 12/22/04. All timings are reportedly locked and final.

These timings should *not* change when we receive the on-line version.

CUE #	**START**	**STOP**	**LENGTH**	**DESCRIPTION**
ACT 1				***ACT 1***
1M1	01:00:00:00	01:01:47:00	1:47	Starts at the top of the movie; out on cut to Matt in Kate's apt This cue plays thru the opening titles and the scene of Kate being excited about her new apt and sharing her feelings with her girlfriend. The temp is *too foreboding* and should be *happier* without being *too breezy*. Kate is *happy* about this new chapter in her life.
1M2	01:02:34:00	01:03:19:00	:45	Sneaks in on cut to Matt as he: "I can't do it."; tail as Kate puts her head down. Kate is *devastated*. Temp is the right mood. Keep it *lonely*. We will sneak in on Matt and start the melody after his line.
1M3	01:03:49:00	01:04:24:00	:35	Starts after Kate says: "Thanks," pre-lapping the cut to estab shot of her apt.; tails after she says: "…that it couldn't." Sneak the entrance again. Kate is still in a funk, but receives the letter from Matt and her mood changes to anger toward Matt.
1M4	01:05:19:20	01:06:54:04	1:35	Starts after we hear: "Dear Nicholas…"; tail as we dissolve to hospital room Kate reads the diary and we flashback to Suzanne; the music should start to get *weird and tense* as Suzanne is having her heart attack. Richard likes the temp, particularly the *celeste*.

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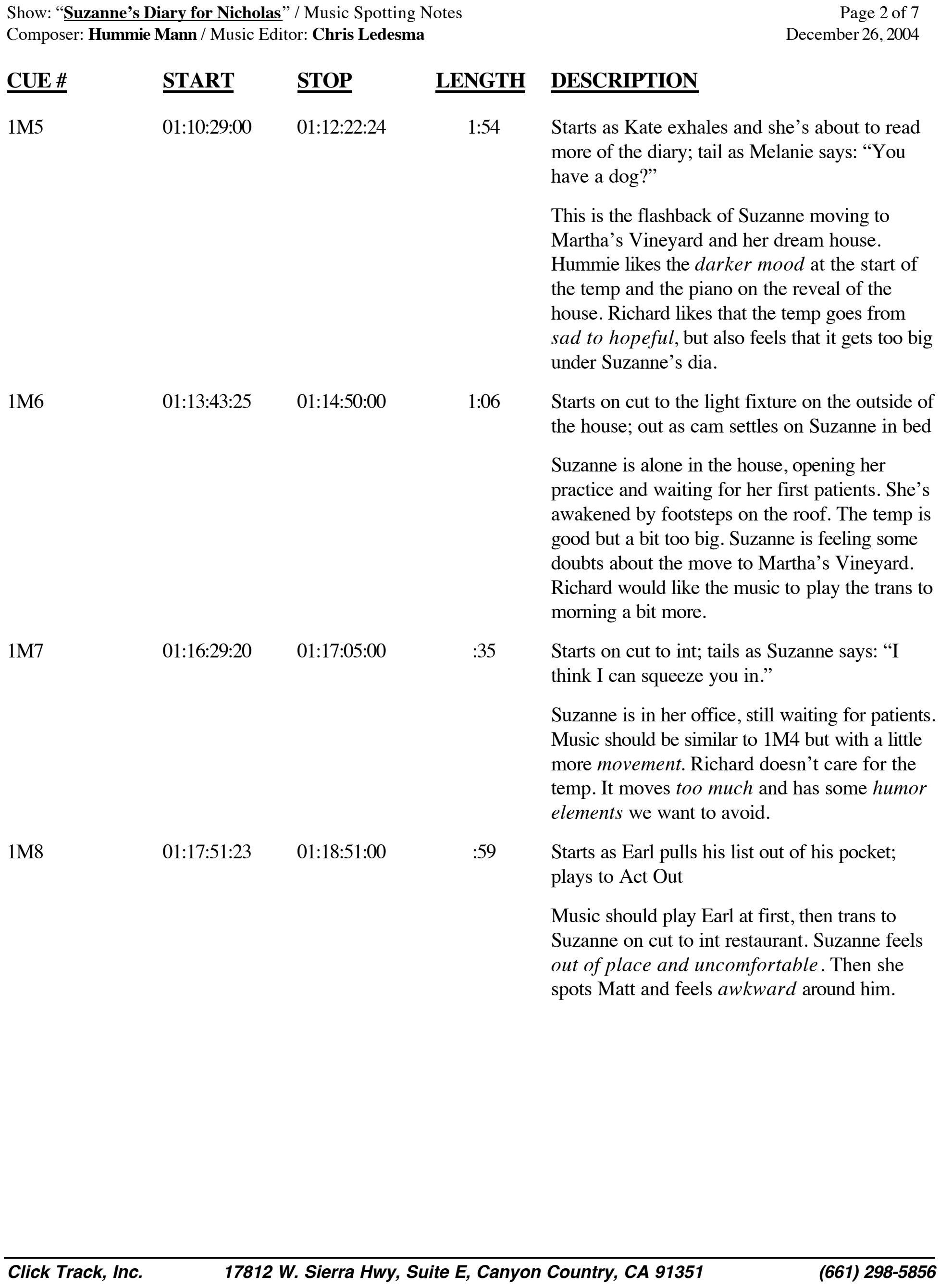

Show: "**Suzanne's Diary for Nicholas**" / Music Spotting Notes Page 2 of 7
Composer: **Hummie Mann** / Music Editor: **Chris Ledesma** December 26, 2004

CUE #	**START**	**STOP**	**LENGTH**	**DESCRIPTION**
1M5	01:10:29:00	01:12:22:24	1:54	Starts as Kate exhales and she's about to read more of the diary; tail as Melanie says: "You have a dog?" This is the flashback of Suzanne moving to Martha's Vineyard and her dream house. Hummie likes the *darker mood* at the start of the temp and the piano on the reveal of the house. Richard likes that the temp goes from *sad to hopeful*, but also feels that it gets too big under Suzanne's dia.
1M6	01:13:43:25	01:14:50:00	1:06	Starts on cut to the light fixture on the outside of the house; out as cam settles on Suzanne in bed Suzanne is alone in the house, opening her practice and waiting for her first patients. She's awakened by footsteps on the roof. The temp is good but a bit too big. Suzanne is feeling some doubts about the move to Martha's Vineyard. Richard would like the music to play the trans to morning a bit more.
1M7	01:16:29:20	01:17:05:00	:35	Starts on cut to int; tails as Suzanne says: "I think I can squeeze you in." Suzanne is in her office, still waiting for patients. Music should be similar to 1M4 but with a little more *movement*. Richard doesn't care for the temp. It moves *too much* and has some *humor elements* we want to avoid.
1M8	01:17:51:23	01:18:51:00	:59	Starts as Earl pulls his list out of his pocket; plays to Act Out Music should play Earl at first, then trans to Suzanne on cut to int restaurant. Suzanne feels *out of place and uncomfortable*. Then she spots Matt and feels *awkward* around him.

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It should also be noted that it is quite common that a cue in a film will need to support a variety of emotions and even use multiple themes. In this case, some of the discussion during the spotting session might be to identify the point where the music needs to change attitude – referred to as a 'sync point' or a 'hit.' An example of this is in cue 1M4 above, where the note from the director is that the music should get weird as Suzanne starts to have a heart attack. It is the composer's responsibility to compose the cue to meet these dramatic sync points, which may or may not be at a specific time code location, and to have the music change in an appropriate way. As another example,

> "If a couple is having an innocuous conversation about the day's activities and then the woman says, "By the way, I've got something to tell you. I'm leaving for South America tomorrow for three years," that's big news and delineates the scene".[37]

Obviously, the music would have been composed to change and reflect a dramatic shift in the drama at the end of her line of dialogue. Most sync timings are worked out to the 1/10th of a second and the musical form is tailored to match the required timings.

Scoring the Individual Cues:

Once the composer and director have decided on the placement and purpose of the cues in the film (spotting) and the composer has worked out the themes and their various emotional variations to be used in the score, the next step is to begin the actual scoring process – composing the individual cues. Here the composer analyses each cue and makes decisions about what themes to use, what dramatic support the music should provide and what the sync points in the body of the cue are. "The score must do what the audience expects it to do at all the right places: to lift them up, excite them, make them curious, and move them."[38] To make sure that the music meets all its sync requirements and matches the emotional changes at the right moments, the form of the music is laid out. Sometimes the sync points are subtly supported (a modulation, the start of a phrase or a change in instrumentation of the melody) and in other situations, they are more obvious (accented chords, dramatic musical gestures or large dynamic shifts). Some cues have very few sync points, as in the first case study where there are 7 sync points in the body of a cue lasting just over 2 minutes (not including the in and out sync points). Others have many, as in the final example in the third case study that has 42 sync points in a cue lasting just over 3 minutes (not including the in and out sync points). This is dependent on the policy of the score and the type of film.

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[37] Karlin and Wright, 156

[38] Karlin and Wright, 129

The main technique that enables a composer to match the form of the music so that it can be composed and performed to synchronize with the action in the film is the use of click tracks. Film music educator/composer/orchestrator David Spear explains that "What we do as film composers is to synchronize our music to fit the scene, like a tailor fits a piece of clothing to fit the person that he's measuring, and we measure the scene in the same way. And craft the music to fit the picture perfectly."[39] The click track can be thought of as a complex electronic metronome that is fed to each individual musician involved in recording the score through headphones. The musicians perform to the clicks while recording the cues of a score. This is very similar to the way a musician plays along with a metronome when practicing except that today's computer generated click tracks can be variable – change tempos - and include accelerandos and ritardandos. At the start of every cue the musicians hear some 'free clicks' that set the initial tempo by counting off a measure or two at the tempo of the cue (1 – 2 – 3 – 4) before they begin to play. Then they listen to and follow the click track while performing the entire cue – which yields very accurate music synchronization to the picture. When writing the score, the composer is able to calculate what tempo a piece has to be played at in order to be the exact correct length to match a given scene. At a slower tempo, the music would last longer and so on. Composer John Cacavas, best known for scoring the television series "Kojak" (1973 – 1978) and the film "Airport '77" (1977) explains that "The thing that takes the longest is figuring out the timing. Once I have that done and it's in front of me with the action indicated on the page, things seem to fall into place easier."[40]

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[39] Karlin and Wright, 111

It is, however, very common that once a composer has calculated the tempo that will allow the music to 'hit' the timings and reflect the changes in the film, the resulting form can be quite distorted from traditional musical 8 bar phrase lengths. For instance, a composer might have composed a theme with 8 bar phrases, but then discovers that the spot where he wants to use that particular theme in the film only allows him to use 6 ½ measures, or possibly it has to be 9 measures long. Additionally, most pieces of film music will have multiple hit or synchronization points. So a composer might be faced with the issue that in order to structure a cue to meet a variety of sync requirements, the form of the piece requires a first phrase of 8 measures, a second phrase of 9 measures, a third phrase of 6 ½ measures and a fourth phrase of 11 measures. Once the timing math is done, the issue that challenges film composers is the necessity to compose music with a distorted musical form, but to do so in a musical manner so that the audience is unaware of these distortions. Techniques of accomplishing this will also be demonstrated in the first and third case studies.

Summary:

Film scoring is unique in at least two ways from absolute music composition. The idea of creating themes that, by necessity, are required to be able to support multiple 'emotional variations;' and the need of the music to be malleable enough to follow the form dictated by an external element. Techniques of how I, and other composers have dealt with these issues are the focus of this thesis. I will explore the fact that film composition is unique in the world of composition because the form of the music has to follow an external, and often non-musical, control element that is calculated in 10$^{\text{ths}}$ of a second, demonstrating techniques that I have observed, developed and codified through my career as a professional film composer. Many texts about film composition speak to the issue of the technical element of music to film synchronization - how to calculate the musical form to meet timing requirements. However, few - if any - demonstrate how to manipulate the music to yield results where these ‘non musical’ form manipulations are composed to not be obvious to the listener. As will be demonstrated in this thesis, I will show that film music is not only manipulated on the level of phrase length, but also measure to measure and, in the case of animation, beat to beat. Additionally, I will demonstrate techniques that I have successfully used in my own compositions, and taught to my film composition students that allow them to manipulate their compositions to meet both the dramatic and technical requirements of scoring to picture.

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[40] Karlin and Wright, 111

4 - Working Process - Part 2

Summation of Techniques

When I first designed a course in film composition to teach at Bellevue Community College in 1998, I realized that in order to properly instruct others in the subject, I had to do a rather in depth self study of what it was I was actually doing. I had never documented the process that I practiced and had developed either by intuition, or more likely as a subconscious result of direct observation. Prior to becoming a full-time composer I had been extremely fortunate to function as an orchestrator and/or conductor and/or ghostwriter[1] on many films and television projects for a variety of composers. Still today I am occasionally asked to 'lend a hand' by some of the people for whom I used to work. Some of my clients and the projects I worked with them on included –
Marc Shaiman: "Misery" (1990), "City Slickers" (1991), "The Addams Family" (1991), "For the Boys" (1991), "Sister Act (1992)", "Mr. Saturday Night" (1992), "A Few Good Men" (1992), "Sleepless in Seattle" (1993), "Addams Family Values" (1993), "Speechless" (1994)
John Debney: "Jetsons: The Movie" (1990), "The Whole Ten Yards" (2004), "Georgia Rule" (2007)
Christopher Young: "The Grudge" (2004), "The Grudge 2 (2006)", "Ghost Rider" (2007) and "Drag Me to Hell" (2009)
James Newton Howard "King Ralph" (1991), "Dying Young" (1991), "Prince of Tides" (1991), "Diggstown" (1992)
Jerry Goldsmith: "main title from "Star Trek Voyager" series (1995)
Alf Clausen "Moonlighting" series (1985 – 1989), "Number One with a Bullet" (1987), "She Knows Too Much" TV movie (1989),"ALF" series (1986 – 1990),

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[1] It is quite common in television, which has some very tight deadlines, that there is more than one composer involved in writing the music for the program. Only the primary composer gets screen credits and the others are "ghostwriters". This became almost the norm when Mike Post and Pete Carpenter were scoring 8 television series simultaneously. Obviously they used others to get the scores completed. I did a lot of this type of work on "Moonlighting" and "The Simpsons" series.

"Christine Cromwell" series (1989 – 1990), "The Simpsons" series (1990 – 1991) and William Goldstein: "Fame" series (1982 – 1987).

These experiences allowed me the opportunity to observe and absorb the way that each of them worked and from these experiences I formulated my own methodology and approach to scoring for film.

It is impossible for me to point to any specific piece of music or experience when I became aware that there was a technique that finally became clear and concise in my mind, but I do believe that being allowed the opportunity to work with all these talented individuals did ultimately have an impact on my composing. My education 'in the trenches' had been more through a process of active observation, absorption and constant analysis of my mentor's work, rather than a step-by-step learning of techniques.

This, however, is not helpful in an academic environment. There are instructors who encourage their students to experiment and discover things on their own – through a process of trial and error. This, however, is not my teaching philosophy. I prefer to teach my students specific repeatable techniques. It has always been my belief that the study of music theory, being the codification of earlier composer's practices, allows us all to 'stand on their shoulders.' That way we can build on principles that have been tested and established. The codification of their techniques attempts to explain the inner workings of their music *after* it had already been composed.

During this period of self study, I researched to see if there were books and/or other sources of information that could help me teach the skills that I believe are important to master in learning the craft of composing dramatic music for film. I discovered, as I mentioned in the literature review, that there are a variety of texts that go into detail about the technical skills necessary to score a film - the use of clicks and click tracks and the math necessary to compute the length of phrases - but that there is a lack of information explaining how to actually compose the music: the 'music theory' of dramatic composition. Therefore I set out to create this type of curriculum.

I wanted to come up with a clear methodology and define an approach to the process of film scoring to make it less mysterious and confusing. This also required applying some new terminology to the subject matter. Most interviews that I have read with composers, and my personal observations in working environments, suggests that they all have a similar process to mine, but have never defined it in a set of steps in a single document.

Policy and Vocabulary

The terms 'policy' and 'vocabulary' of a film score were the first terms I defined. As I mentioned in the previous chapter the vocabulary is the musical characteristics of a score and the policy is the way that the score relates to the film. Composer Ennio Morricone speaks to the concept of vocabulary:

> "To function well in a film, music has to have and to conserve its own formal characteristics - tonal relations, melodic relations if we want, rhythmic relations, instrumental relations - in sum, a correct internal dialect. If this formal correctness and technique is present in the music and is applied to the images, the result will certainly be better."[2]

I use the terms 'organic' versus 'inorganic' to help describe if overall the score has a flavor that reflected the time period and style of the film, or if instead the flavor of the score was not derived from the style or period of the picture. Although these are the terms that I adopted for use in my teaching, one can infer that others recognize this concept in the following statement: "Deciding on a pure country-western style would eliminate the use of flat 9/raised 11th chords…"[3] The implication is that making use of some hip, jazzy sounding chords would be out of place or inorganic to a Western film.

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[2] Ennio Morricone and Sergio Miceli, *Composing for the Cinema:The Theory and Praxis of Music in Film,* trans. Gillian B. Anderson (Lanham, Maryland: Scarecrow Press, 2013), 54

[3] Fred Karlin, Rayburn Wright, *On The Track – A Guide to Contemporary Film Scoring,* Rev. ed. (New York: Routledge, 2004), 193

Technical Variation Techniques

The basics of the mathematical concepts needed to figure out the form of a piece in order to have it match the action on screen – in other words meet all the sync requirements – is available in a variety of texts. Also, today most of this is done using software. What *is* difficult to find codified is techniques of how to compose music that can meet all the timing requirements and still sound natural with the required distortions in musical form. Ennio Morricone commented that "This does not mean … that the music has to be fractured because of all the synchronization points …"[4] He gives a specific example here:

> "Let's make an example with a composition in 4/4 in which every measure lasts four seconds. If we want to put a sync point at the twenty-first second, we can make four measures of 4/4 and the fifth of 5/4 so we are able to put the accent on the first quarter note and not the second quarter note. This is essentially for a musical reason: one changes the meter in a way that puts the synchronization point on a strong beat."[5]

However, he does not discuss, nor have I found it discussed elsewhere, a technique to manipulate the form of a melodic phrase. I have found and developed melodic and harmonic manipulation techniques that allow for the expansion or contraction of themes to almost any length while maintaining a sense of musical integrity. These 'technical variations' of a piece of music, is demonstrated in the first case study.

Dramatic Variation Techniques

"Basically theme and variations is what film music is about"[6] is how Jerry Goldsmith views the scoring process. In my observations and experience, the themes are often used to represent a particular person, place or situation. The 'dramatic variations,' as I call them, are designed to support all the different emotional contexts where each theme would be used. In order to insure that the theme remains recognizable, much of these variations are realized by altering the accompaniment, or what I term the 'textures.' I have assembled a list of techniques that can be taught to change the dramatic effect, which includes harmonic variations (methods to change the chords that accompany the themes), textural variations (the type of accompaniment figures) and rhythmic variations (the level of propulsion or movement that would be appropriate for a particular dramatic situation). Along with these compositional techniques, changes in tempo, orchestration and register can also be effective dramatic variation devices. As an illustration, it is common to observe that a sad scene usually requires darker sounding chords - in very simplistic terms, more minor harmony. A dangerous scene makes more use of dissonance – "Generally speaking, an increase in dissonance equates with an increase in tension"[7]. Action scenes commonly have greater rhythmic propulsion – "Film scores are often required to bring propulsion and drive to a film, so this is a vital film scoring technique. Frequently, figures are written for the orchestra that are essentially rhythmic."[8]

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[4] Morricone and Miceli, 59

[5] Morricone and Miceli, 63

[6] Karlin and Wright,193

Controlling Dissonance

The use and control of dissonance in film scores is very important as that helps the score support a variety of dramatic situations – fear, danger, confusion, etc. Codifying a system of controlling and increasing and decreasing dissonance is another technique that I have worked to develop by combining concepts discussed by Paul Hindemith – his analysis of the character and qualities of specific intervals[9], with the teachings of Jazz arranger/composer Herb Pomeroy, who I studied under in my undergraduate program at Berklee College of Music. In film music it is important to know how to increase and decrease the amount of dissonance in a piece of music in order to match the shifting levels of danger in a scene.

Dramatic Orchestration

"Orchestral color in film is even more important than in concert music because it evokes specific emotional responses, …"[10] The study of orchestration, from a dramatic point of view, is somewhat different than a standard class in orchestration. Choices of instrumentation are made with regard to their impact and their emotional support to the picture. Additionally, since all film music is performed in a recording studio environment, there are different limitations - and advantages - than orchestrating for the concert hall.

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[7] Karlin and Wright, 267

[8] Karlin and Wright, 282

[9] Paul Hindemith, *The Craft of Musical Composition,* translated by Arthur Mendel (London: Schott & Co., 1942), 87-89

[10] Karlin and Wright, 297

It is quite common that instrumental choices are made to help support a film's locale. In Christopher Young's score to "The Shipping News" (2001), which takes place in Newfoundland, he incorporated pennywhistle and Celtic drums into the score after he "learned from the producers that most of the indigenous music there is Celtic influenced."[11] This was similar to my vocabulary choice made for "Year of the Comet" (1992) where the story begins in Scotland.

Also through my experience, as both a composer and orchestrator, I have found that there are instrumental choices that can have an effect on the way the audience perceives the emotional impact of the music. For example, the choice of a solo clarinet versus a solo oboe playing a love theme yields different emotional effect. The clarinet, which is traditionally played without vibrato, has a slightly more isolated quality that better supports an unrequited love relationship or a longing for a loved one. Using the oboe better supports an active romantic relationship. Composer Ennio Morricone made use of the 'lonely' sound of the clarinet in just this way in his score to "Cinema Paradiso."[12] At 1:30:34 we see young Salvatore reading a letter from his girlfriend Elena. They have been separated because Elena's family has taken her away for the summer vacation and he is longing for her return. Their beautiful love theme is played on the clarinet as we see him alone looking at the letter, and we hear her voice reading it. Just over 2 minutes later in the film, at 1:32:37, Elena appears, surprising him and as they kiss and embrace, their love theme is performed by the much more emotional string section.

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[11] Karlin and Wright, 299

[12] *Cinema Paradiso,* original US theatrical version, DVD, directed by Giuseppe Tornatore (1988; Burbank, CA: Buena Vista Home Entertainment, 1990)

Another orchestration issue is the fact that all film scores are performed only in a recording studio environment. Because of this there are a variety of orchestration techniques that can be used for interesting results that would simply not work in a live situation due to balance issues. For instance in his scores to the "Peter Gunn" series (1958-61), composer Henry Mancini discussed the use of alto flute in his orchestrations and that "A prime consideration is the use of the microphone to amplify the sound. The beautiful sound of the alto flute does not project very far unless helped out by amplification."[13] Additionally, he discusses the use of 4 bass flutes saying that "Two microphones were set up with the men playing in very close to pick up this elusive sound."[14] These orchestrations are only possible due to the close mic recording techniques available in the recording studio. In an orchestral concert performance these beautiful sounds would be almost inaudible.

Summary:

These subjects are quite comprehensive and simply cannot all be covered thoroughly in the body of this thesis. Therefore, I have had to choose certain specific works to feature in the case studies that allow me to present only some of these areas in greater detail. I have chosen works from different periods in my career primarily because I wanted to have the clearest example of the techniques used, which in some cases were older scores.

As a point of interest, this thesis will become a portion of a planned textbook on film scoring techniques based upon the work in my career and my teaching of the subject for the last 15+ years. My plan is to advance that project after the completion of this thesis. It will allow me to go into much more detail and cover a wider range of subject areas than is allowed in the limited space I have here.

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[13] Henry Mancini, *Sounds and Scores: A practical guide to professional orchestration,* 3rd ed. (Los Angeles: Northridge Music, 1986), 51
[14] Mancini, 57

5 - Case Study 1

Year of the Comet

In order to best illustrate the issues that I will discuss within the first two case studies, I would like to suggest that the reader first listen to a specific audio example or series of examples prior to reading the discussion of the techniques used. I believe that this will allow me to better illustrate the technique that I am discussing in each of these case studies as in some instances the 'invisibility' of the technique is one of the main issues making the technique successful. It is difficult to point out the technique and then ask the listener to not listen for it. However, once the discussion of a particular technique has been completed, a repeated listening of the audio example(s) will reinforce the success of the discussed technique.

Audio Example:

For this case study, please listen to the attached audio file - "Comet Altered" (track 1) Note: this piece has been edited from a longer cue in the film to include only the section of the music that illustrates the technique I am discussing.

Film/Scene Background:

"Year of the Comet" was written by William Goldman, directed by Peter Yates and starred Penelope Anne Miller, Tim Daily and Louis Jordan. It was produced by Castlerock Films and was released in 1992. I would like to point out that this film was the first major film that I scored in my career and that the techniques that I will discuss here are ones that I have used in all the other 40+ scores that followed. The reason that I chose to feature this score to illustrate this technique is because it is such a clear and obvious example. So although the piece was composed outside my study period, this in depth explanation and analysis are current in their presentation.

The film sequence that is scored by this cue is a montage of Maggie - our main character - traveling from London by car and ferry to Scotland. We learned earlier in the film that she works in her family's wine auction business and has a real passion for wine. In the scene just prior to this sequence, she is seen arguing with her father and ultimately resigning from the business out of frustration. Her father is unwilling to send her on a work trip to go and catalog a client's wine cellar using the excuse that he considers her as being too young for such an assignment, even though she is 27. Her older brother, usually the person sent to do these types of jobs, pipes in that it would inappropriate for the company to be "represented by a woman." So in the first section of this cue (edited out), her father runs after her, apologizes and ultimately does allow her to take on this assignment. The point of this second section of the cue is to dramatically underscore the fact that this is the start of a great life adventure for her as it unfolds in the film.

Compositional Technical Challenge:

In this cue, Maggie's theme is first introduced in the film as she travels to Scotland. I felt that it was important that the theme be stated in such a way so that the audience can begin to 'learn' and identify the theme with her character. Besides it being crucial that the theme support the correct on screen emotion, I also wanted it stated with the least amount of obvious unnatural form alterations as possible.

As I have mentioned earlier, much of film music functions as a type of 'Themes and Variations.' These variations fall into 2 categories: 'dramatic variations' – how the themes are used to accompany the different emotional settings needed to support the story; and what I call 'technical variations' - variations that deal with the form of the music. This form is dictated by the timing requirements allowing the music to synchronize with the action in the film. More often than not, both of these variations are incorporated simultaneously.

For "Year of the Comet," I made the decision that one of the themes would be based on our main character – Maggie. Because the story begins with Maggie making a significant wine discovery while off on this first work trip to Scotland, I decided, as part of my vocabulary decisions, to add the flavor of that region by making use of Celtic instrumentation - featuring pennywhistle, hammered dulcimer and bohdran. The next step in the overall scoring process was to analyze the dramatic variations that would be necessary to score the other various moments where Maggie's theme would be used in the film. In other words, when starting to consider how to score any film, one must first choose what characters, situations or locations will require their own themes; where in the film each of these themes will be utilized; what the different dramatic contexts of those moments are; and then make certain to compose each theme malleable enough to support the different dramatic settings or variations required. It is also important that while creating the thematic material, a composer be aware that technical variations – expanding and contracting phrase lengths - will likely be required as the timing requirements of the film will always dictate the form of the music - what I am calling the 'technical variations.'

In this cue, I chose to manipulate the form of the music in such a way as to synchronize the starts of the phrases of the piece to match the timings of cuts or edits in the sequence. The goal of the technique is to alter the musical form but make the music feel as natural as if the form was more 'regular' - in 4 and 8 measure phrases.

When I have played this specific cue in lectures or classes, all listeners – musicians and non-musicians alike - are completely unaware of the form irregularities until they are pointed out to them. Most importantly, they are not distracted by them. The techniques are used to 'trick' the listener into perceiving the beginning of each phrase occurring where I want it to sound like the start of a phrase, and not where phrases would usually begin - typically 8 bar phrases. Since you initially listened to the piece without any sense of what to be listening for, did you recognize the fact that this piece has a fairly unusual musical form? If you did not, then the technique of invisibly manipulating the musical form was successful.

Explanation of the Technique:

Due to the fact that in film scoring the form of the music is dictated by the timing requirements of the picture, and is often at odds with 'standard' musical form, the composer must learn to make these alterations sound and feel as natural as possible. In the second chapter of this thesis, I quoted a number of sources where the necessity of altering the form of the music was discussed. Ennio Morricone spoke of hitting a timing on a strong downbeat by changing one measure in a phrase of 4/4 bars to 5/4, and Jeff Rona pointed out that not every phrase had to be consistently in 4/4 or even that a phrase *had* to be 4 measures long. Although both of these composers, and many other texts that I researched, discussed the technical need of form alteration, nowhere is there a musical technique discussed which demonstrates a method to achieving this. I have observed that there is a combination of melodic and harmonic techniques that make these form alterations possible. Once understood, practiced and mastered, a composer can manipulate form with ease and not create any musical 'speed bumps.'

An example that demonstrates the use of adding and subtracting beats from a melodic theme can be easily observed in a sequence from "Raiders of the Lost Ark" (1981). After the opening sequence where Indiana Jones is seen raiding an ancient temple of a golden idol, he is caught by his nemesis, Belloch, who along with a group of natives steal the idol from Indy. As Indy runs toward the waiting water plane, John Williams makes the initial statement [A] of the well known Indiana Jones theme (at 11:51), but with a variety of meter changes to allow for music/film synchronization[1]. The original theme is all in 4/4, whereas this statement has some obvious metric changes. Once the plane is in the sky and Indy discovers he is sharing the seat with the pilot's pet snake (12:24), Williams uses the second section of the theme [B] using rhythmic augmentation, but in a phrase that is 11 bars long ending with a 2/4 bar that has a pickup to restate the 1st part of the theme [C] and then transitioning to some new material to play the cut to the university where Indy teaches. This example clearly shows the use and the need of musical form phrase alteration common in film scoring. A simplified transcription of this section of the cue is below.

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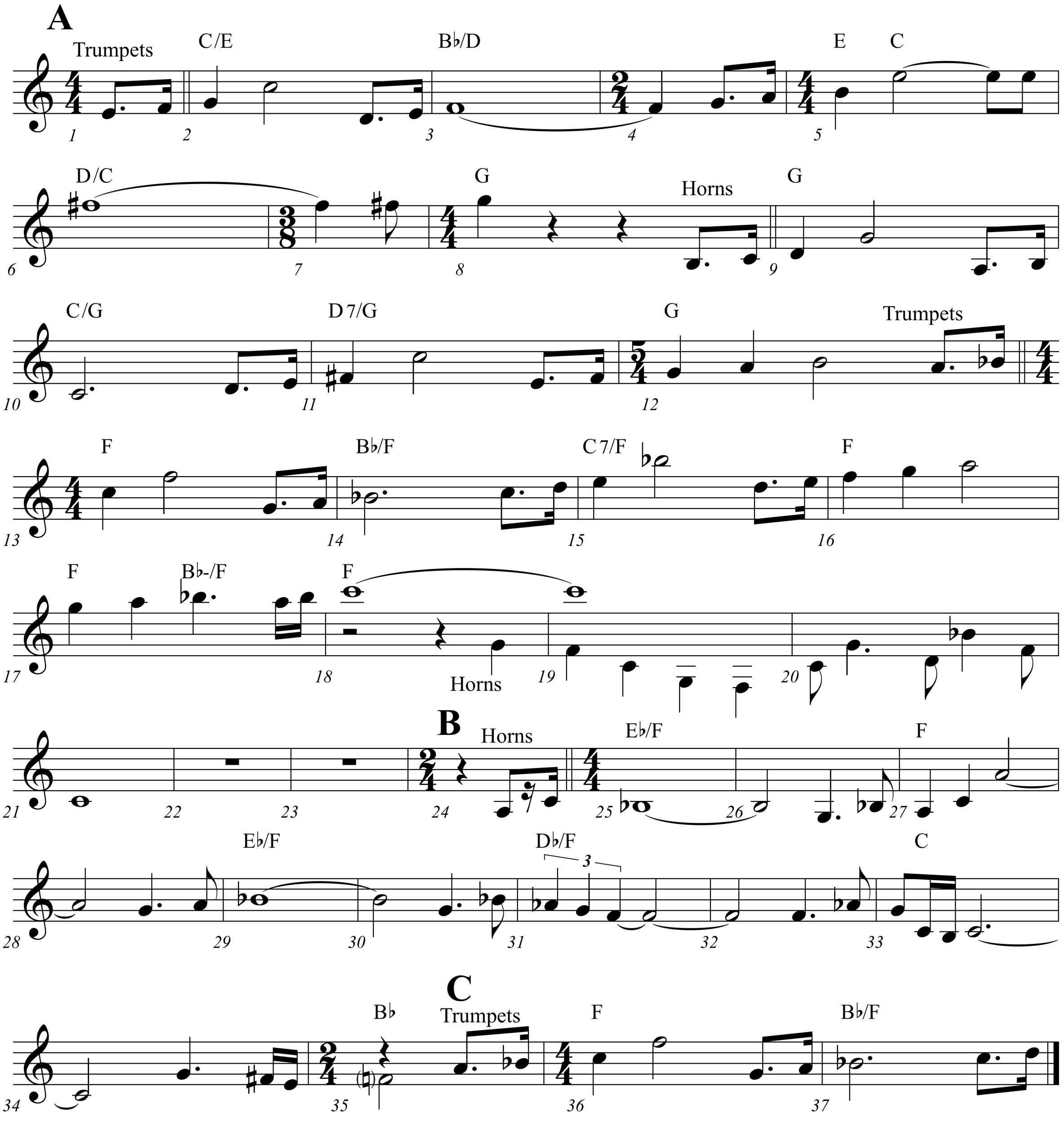
[1] *Indiana Jones and the Raiders of the Lost Ark,* DVD, directed by Steven Spielberg (1981; Hollywood, CA: Paramount Pictures, 2003)


A
Trumpets
C/E
B♭/D
E
C
D/C
G
Horns
G
C/G
D7/G
G
Trumpets
F
B♭/F
C7/F
F
F
B♭-/F
F
Horns
B
Horns
E♭/F
F
E♭/F
D♭/F
3
C
C
B♭
Trumpets
F
B♭/F

In order for me to best illustrate the use of phrase contraction and expansion as incorporated in this first example, which allowed me to 'hit' the action with the starts of each musical phrase, we need to first take a look at the original theme as it was used in the end credits[2] of the film - in 'standard' 8 bar phrases ('Regular Version'). The attached '3 Line Sketch'[3] has a 2 bar introduction and then each subsequent phrase is 8 measures in length. The form of the piece, starting in measure 3, can be observed as follows:

	meas. 1 – 2	Introduction
A	meas. 3 – 10	Initial statement of 1st section of the main theme
A'	meas. 11 – 18	Starts with the same material as A, but changes in m.14
B	meas. 19 – 26	Initial statement of the 2nd part of the theme
B'	meas. 27 – 34	Same 1st 4 bars as B with an octave transposition in the melody, then proceeds to new material
C	meas. 35 – 42	3rd part of the theme
D	meas. 43 – 50	4th part of the theme leading to a modulation
A	meas. 51 – 58	Return to A section of the theme, in a new key
A'	meas. 59 – 66	Starts with the same melody as A, then comes to an end

At this point I would suggest that the reader listen to the 'Comet Regular' audio file (track 2) and follow along with the 'Year of the Comet – Regular Version' 3 line sketch that follows.

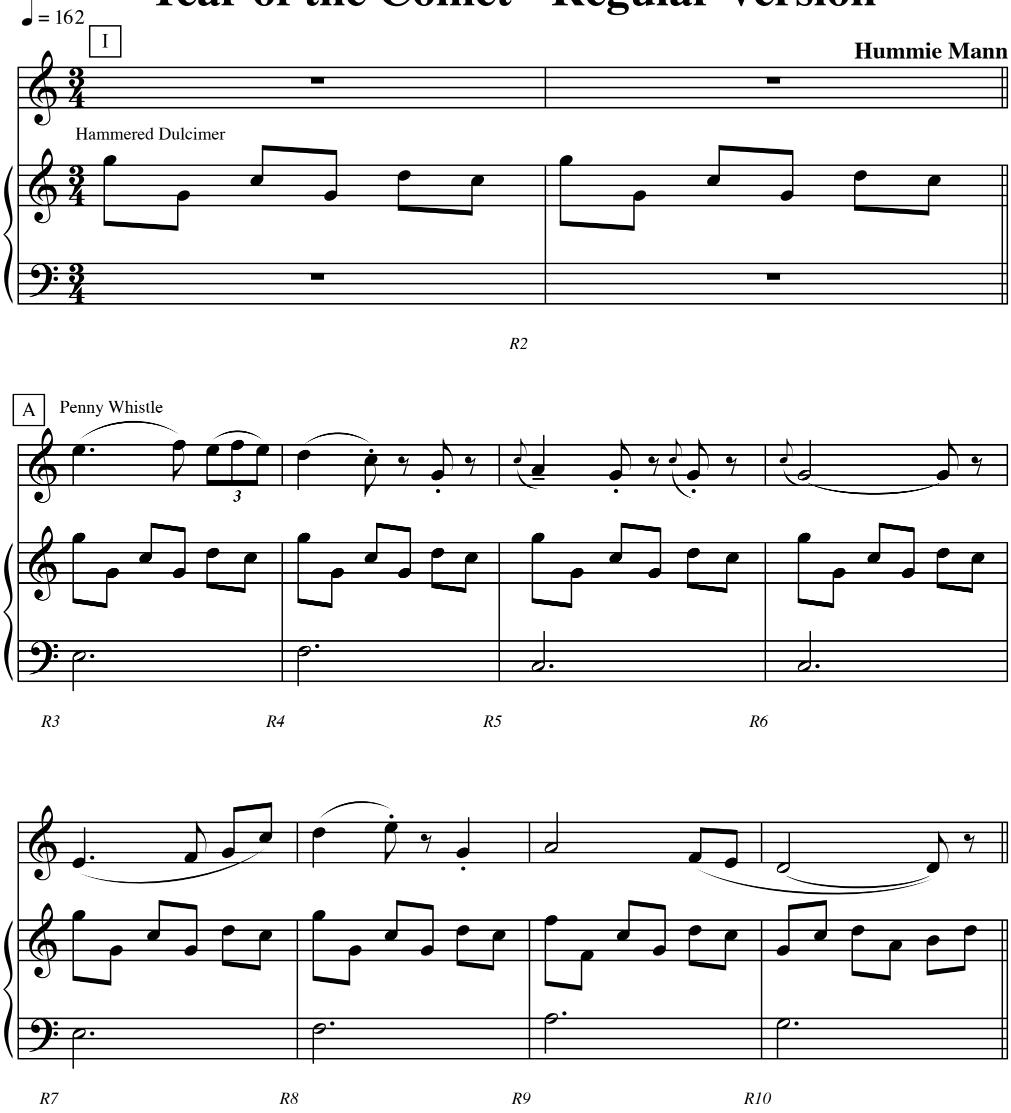
---

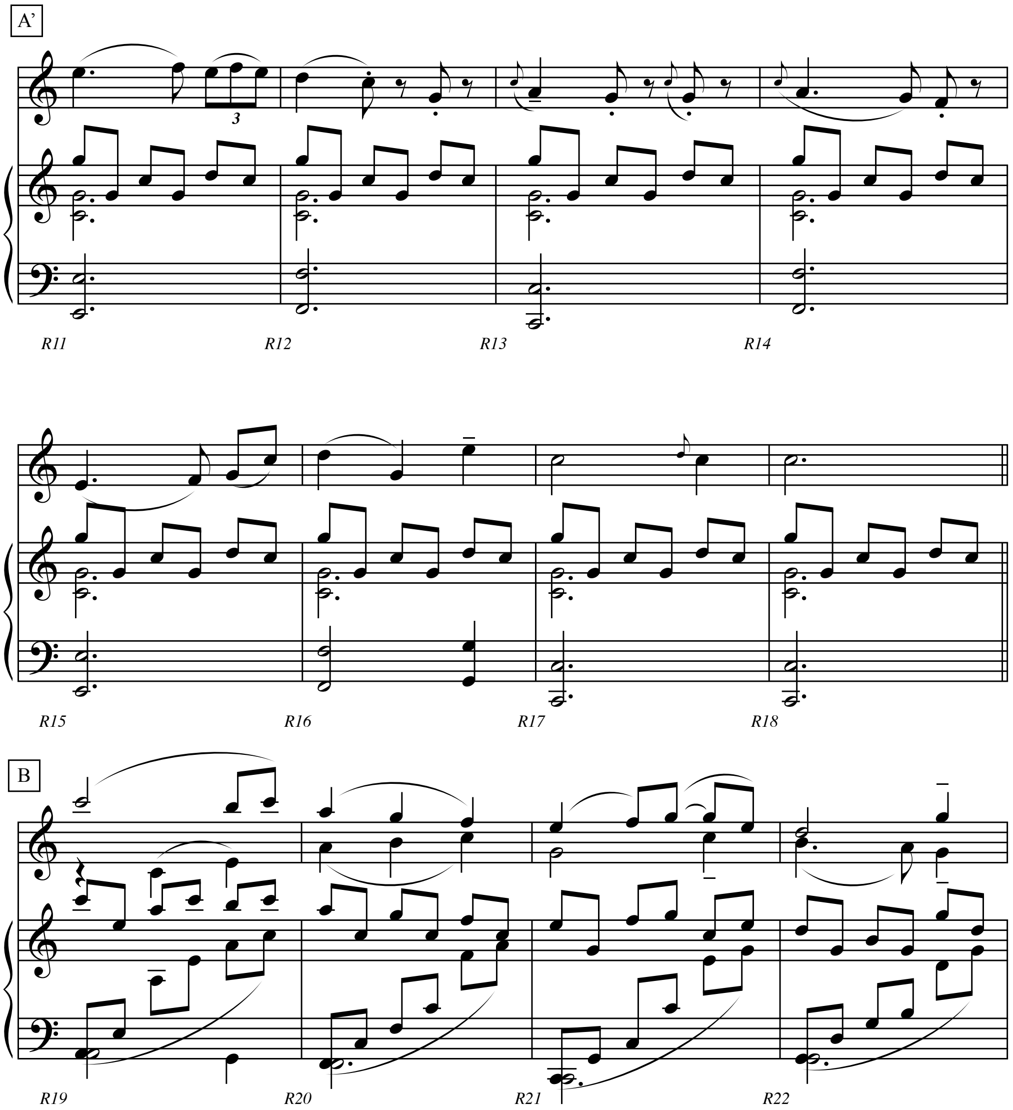
[2] End credits refers to the final piece of music in a film score that plays under the list of names of all the personnel involved in making the film that travels from the bottom to the top of the screen. This piece is often a re-cap of the main themes used in the score, but performed in their more "standard" musical form.

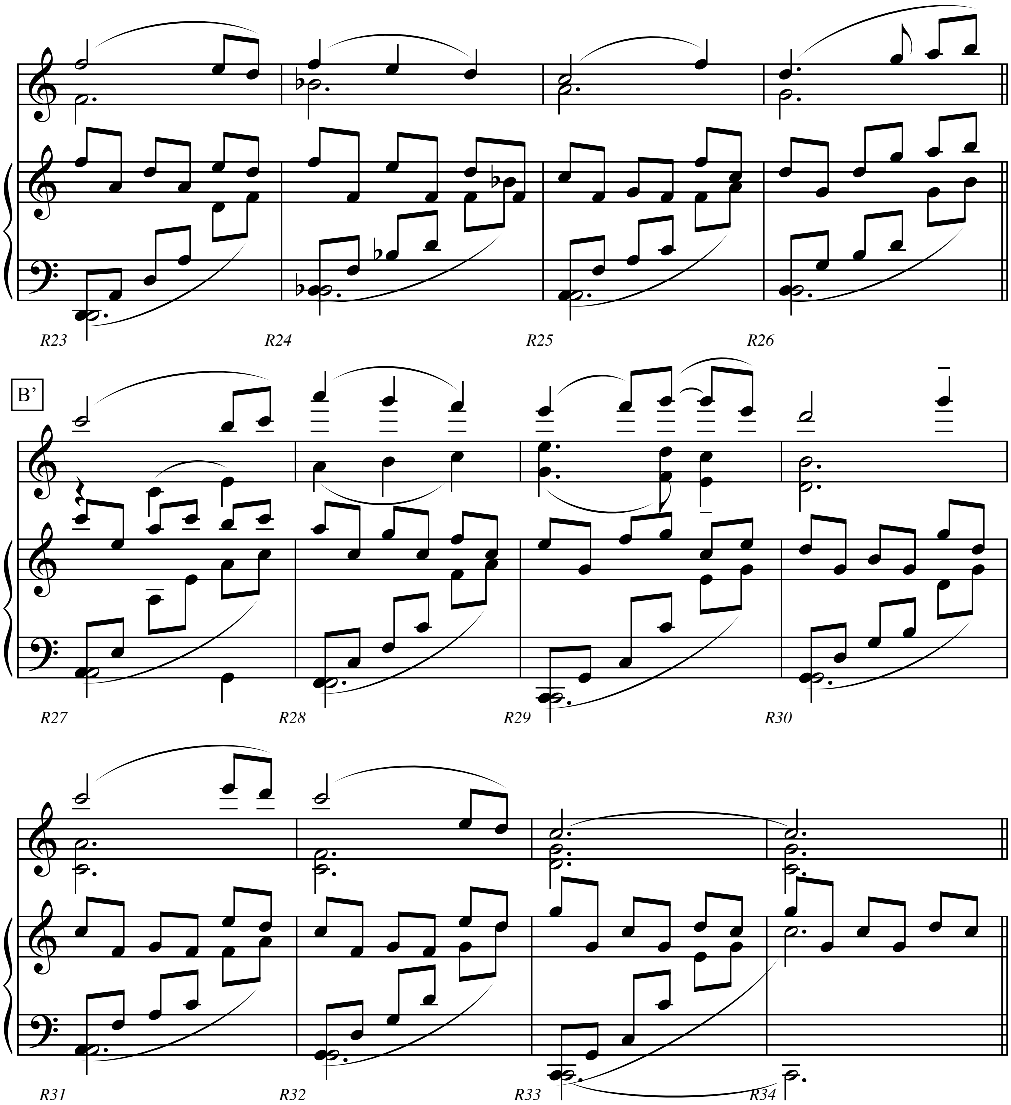
[3] A "3 Line Sketch" is the composition in its most basic form - the melody or melodic elements are written on the top stave and the harmonic/textural elements of the accompaniment on the bottom grand staff. This is the first step of scoring a scene where a composer would work out the timings and lay out the form of the piece.

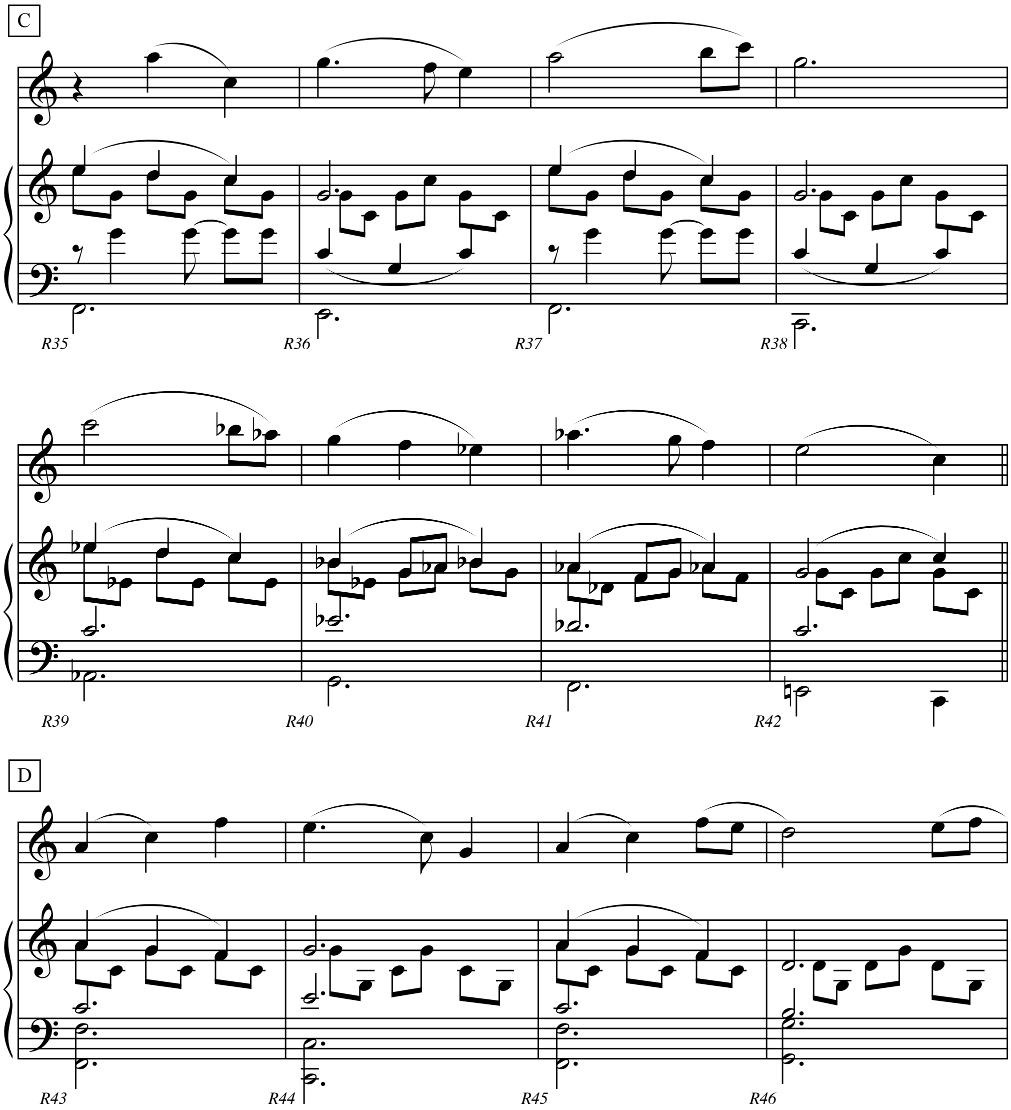
Year of the Comet - Regular Version

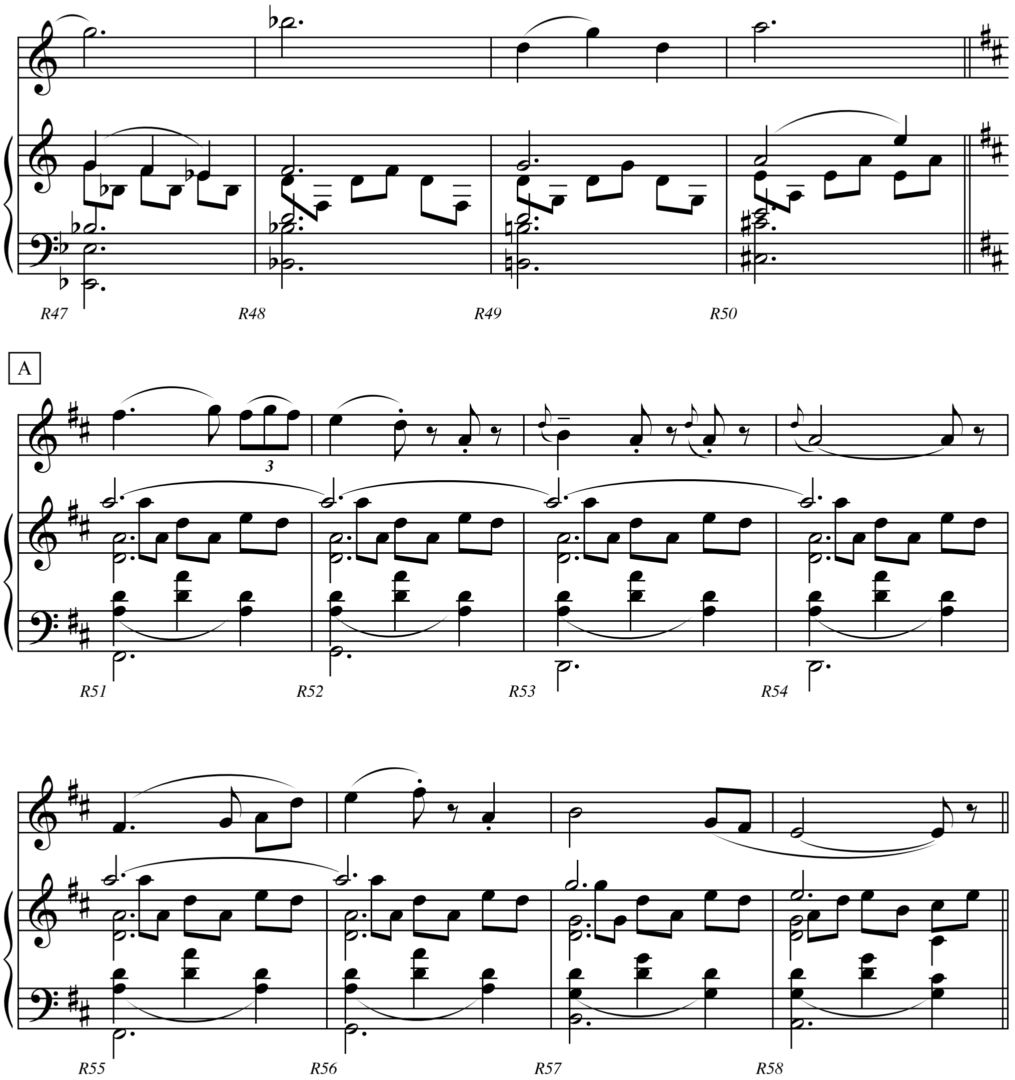
Hummie Mann

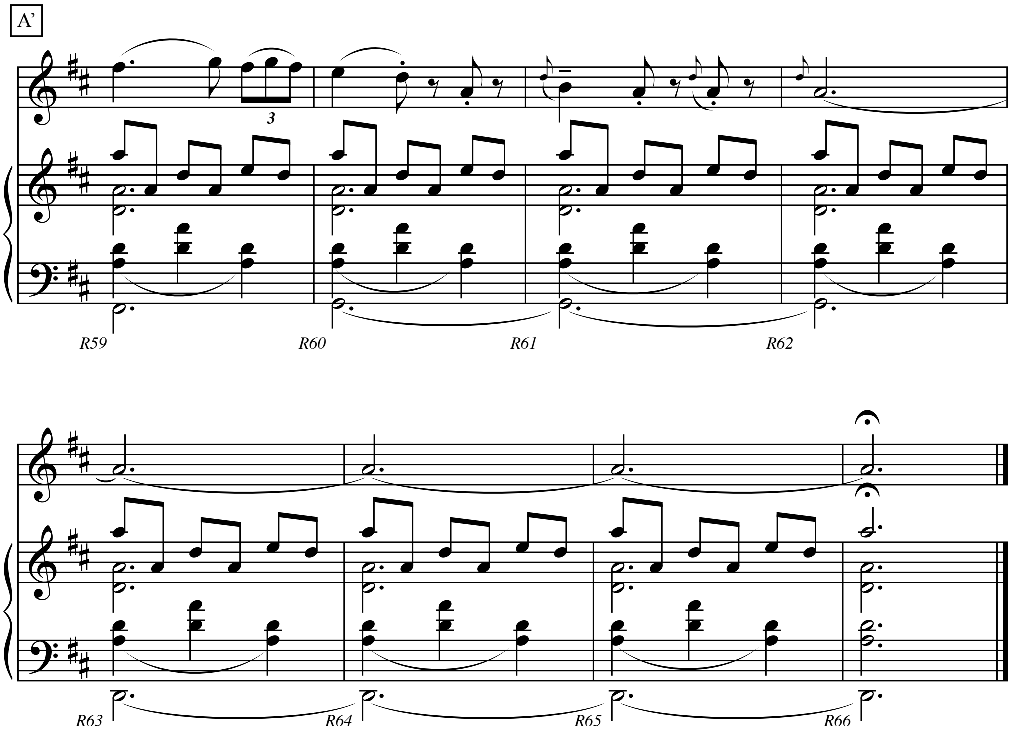

♩ = 162
I
Hammered Dulcimer
R2
A
Penny Whistle
3
R3
R4
R5
R6
R7
R8
R9
R10


A'
3
R11
R12
R13
R14
R15
R16
R17
R18
B
R19
R20
R21
R22


R23
R24
R25
R26
B'
R27
R28
R29
R30
R31
R32
R33
R34


C
R35
R36
R37
R38
R39
R40
R41
R42
D
R43
R44
R45
R46


R47
R48
R49
R50
A
3
R51
R52
R53
R54
R55
R56
R57
R58


A'
3
R59
R60
R61
R62
R63
R64
R65
R66

We will now compare the form of these 2 versions of the piece. For clarity I will refer to the measures in the 'Regular' version as: R1, R2, R3, and so on. In the Altered version I will use the same convention: A1, A2, A3, etc. Since both pieces are similar in orchestration, we are able to focus only on the changes in form. A side by side comparison of the phrase lengths is below and then I will discuss some of the techniques that were used to hide the fact that the phrase lengths were altered creating some 'unnatural' odd length phrases that, if done properly, do not stick out or distract the listener.

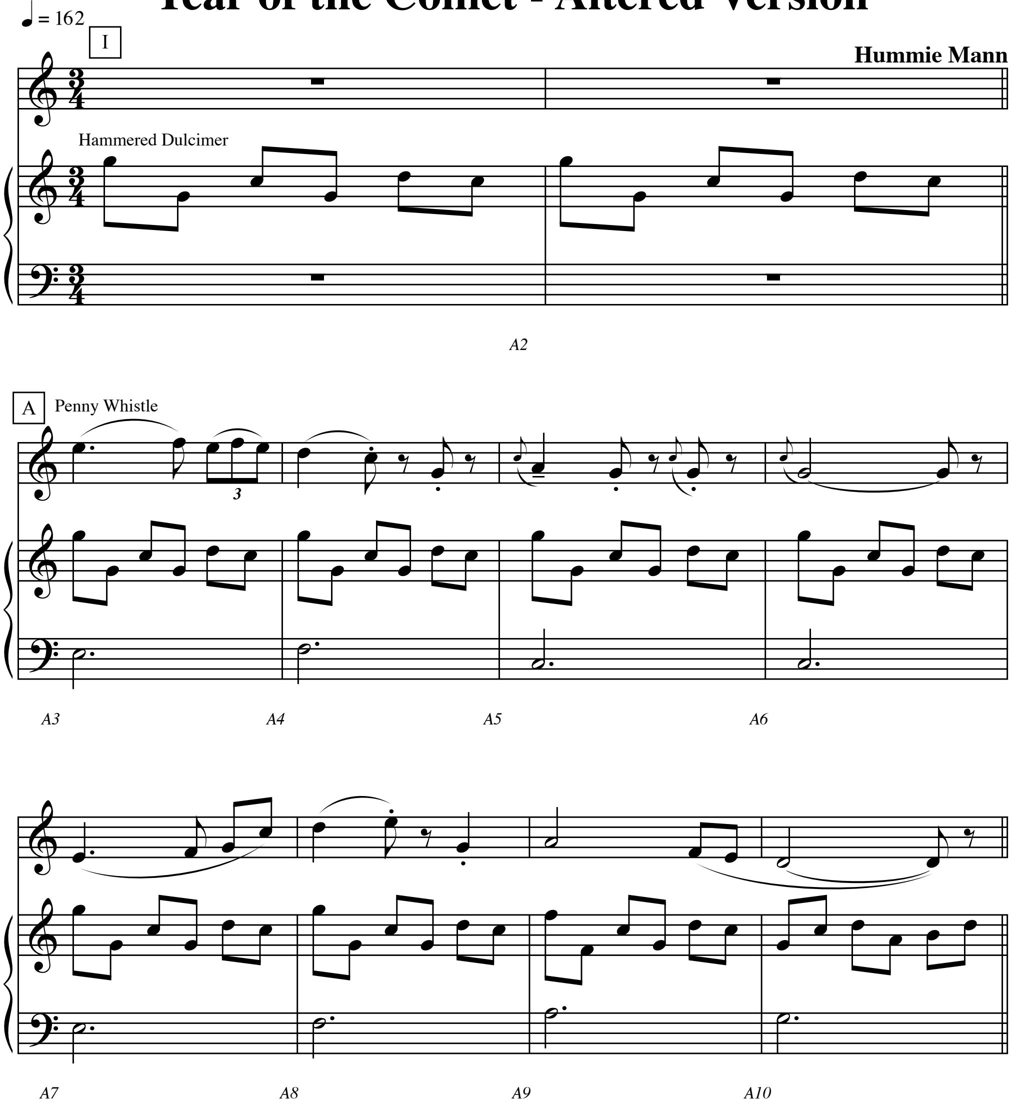
	Regular	Bars	Altered	Bars
Intro	R1 – R2	2	A1 – A2	2
A	R3 – R10	8	A3 – A10	8
A'	R11 – R18	8	A11 – A22	12
B	R19 – R26	8	A23 – A31	9
B'	R27 – R34	8	A32 – A40	9
C	R35 – R42	8	A41 – A48	8
D	R43 – R50	8	A49 – A51	3
	(modulation)		(modulation)	
A	R51 – R58	8	A52 – A59	8
A'	R59 – R66	8	A60 – A64	5

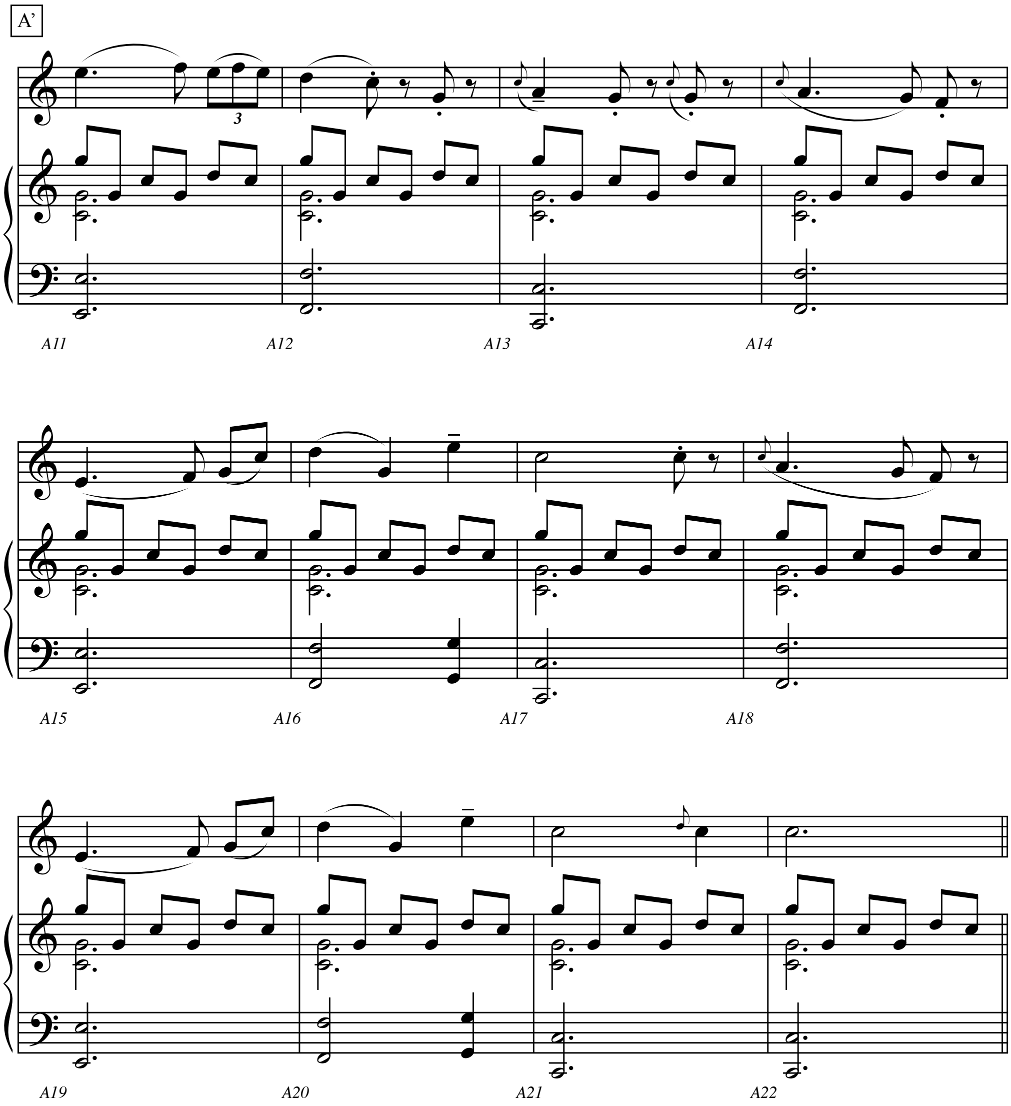
As we can see, in the Regular version there are eight 8 bar phrases, but in the Altered version only three of the phrases are 'regular' 8 bars in length.

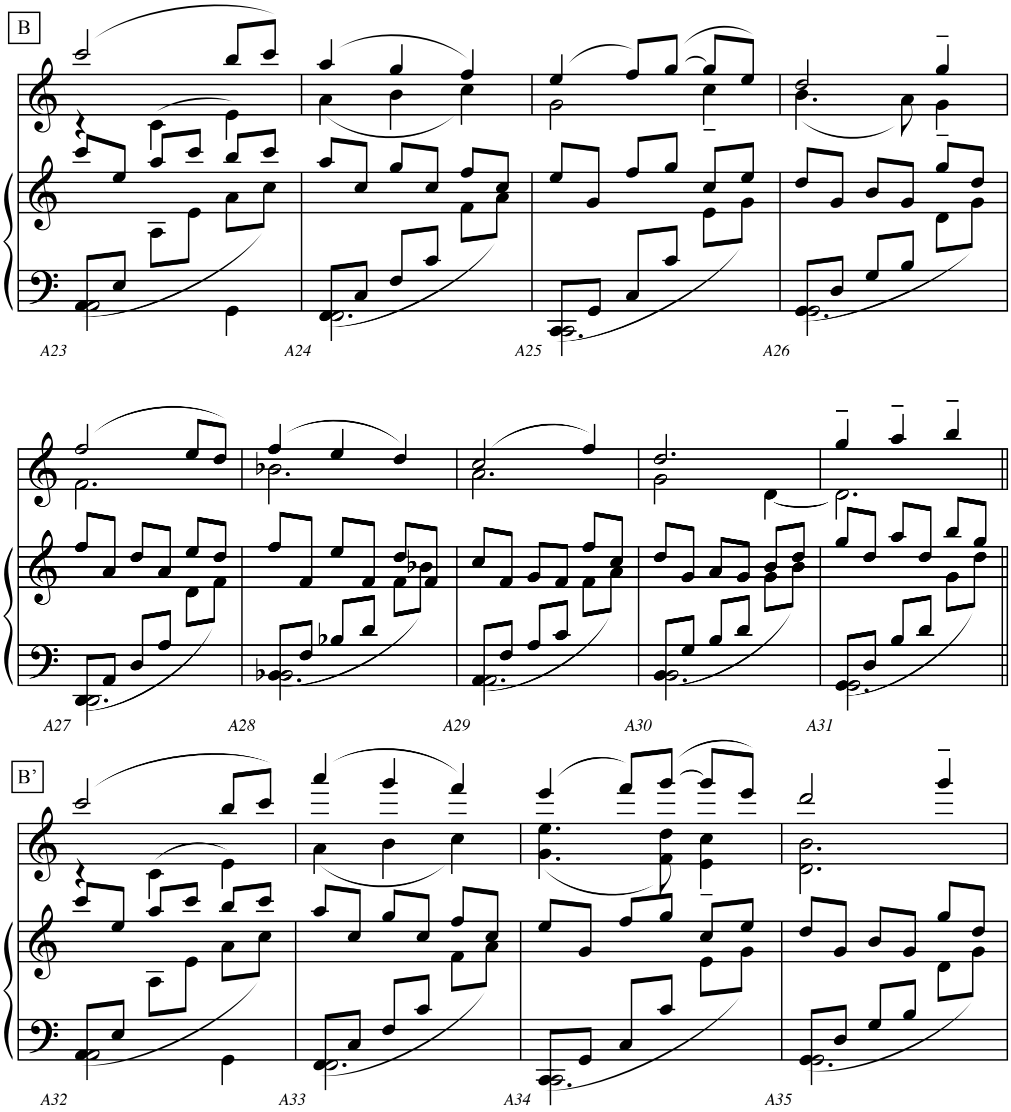
At this point I would suggest that the reader once again listen to the 'Comet Altered' audio file (track 1) and follow along with the 'Year of the Comet – Altered Version' 3 line sketch below.

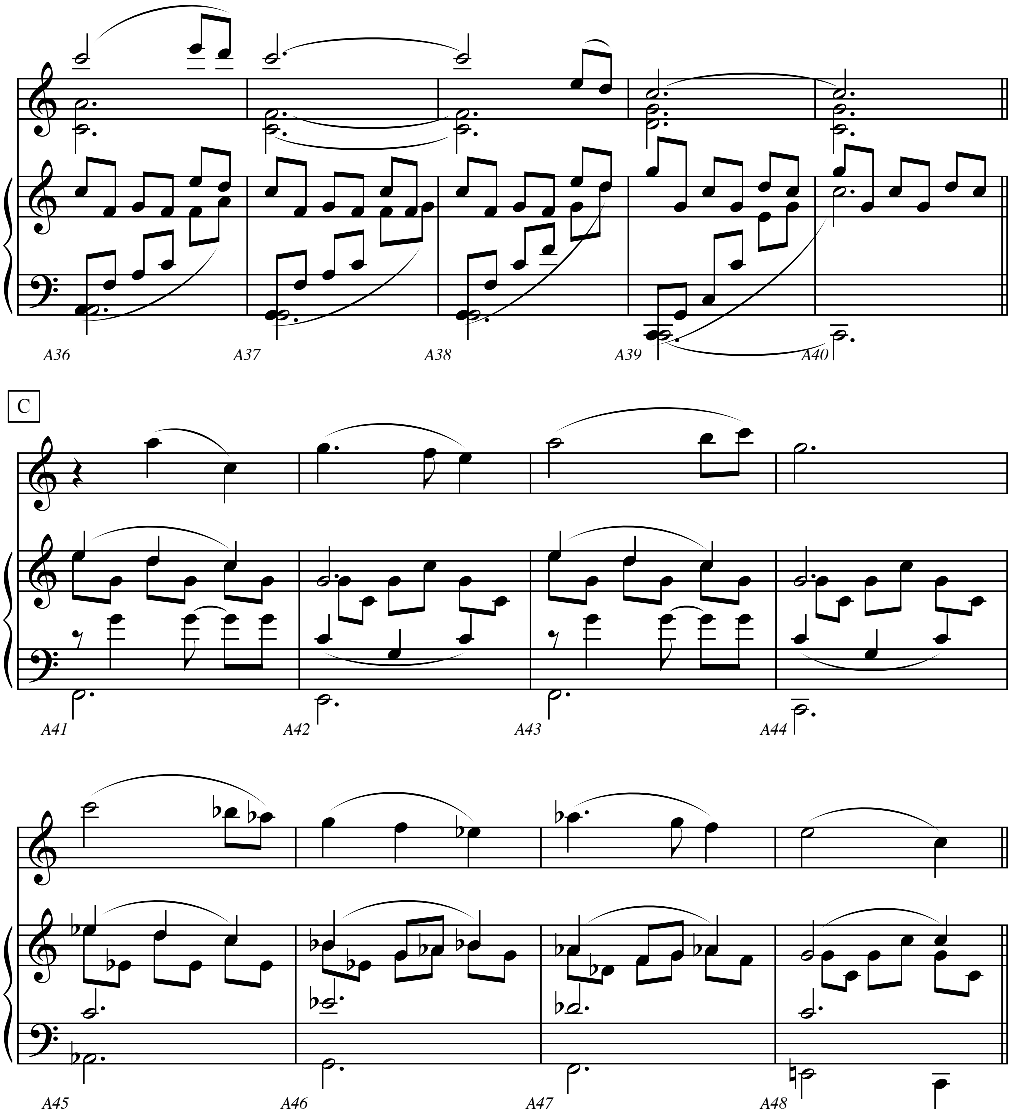
Year of the Comet - Altered Version

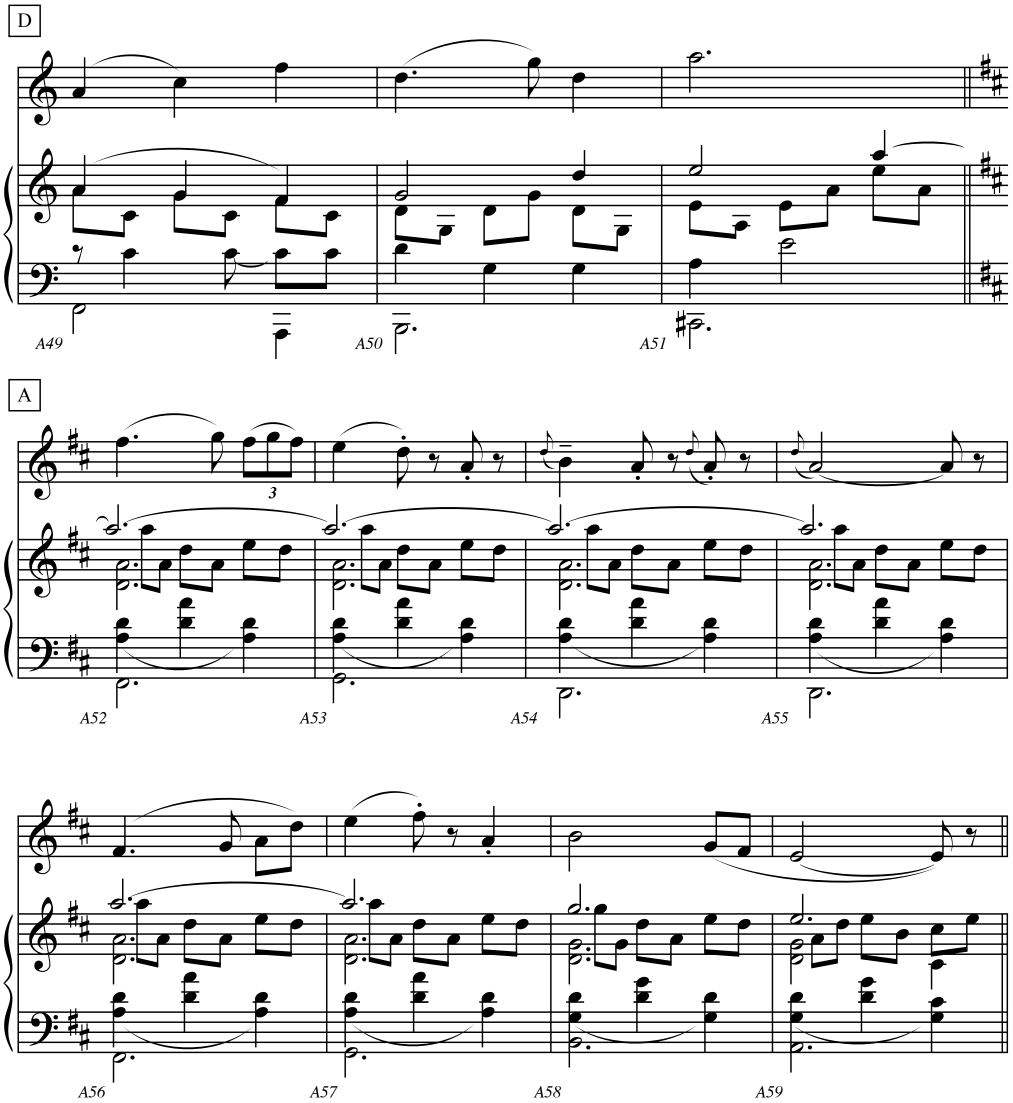
Hummie Mann

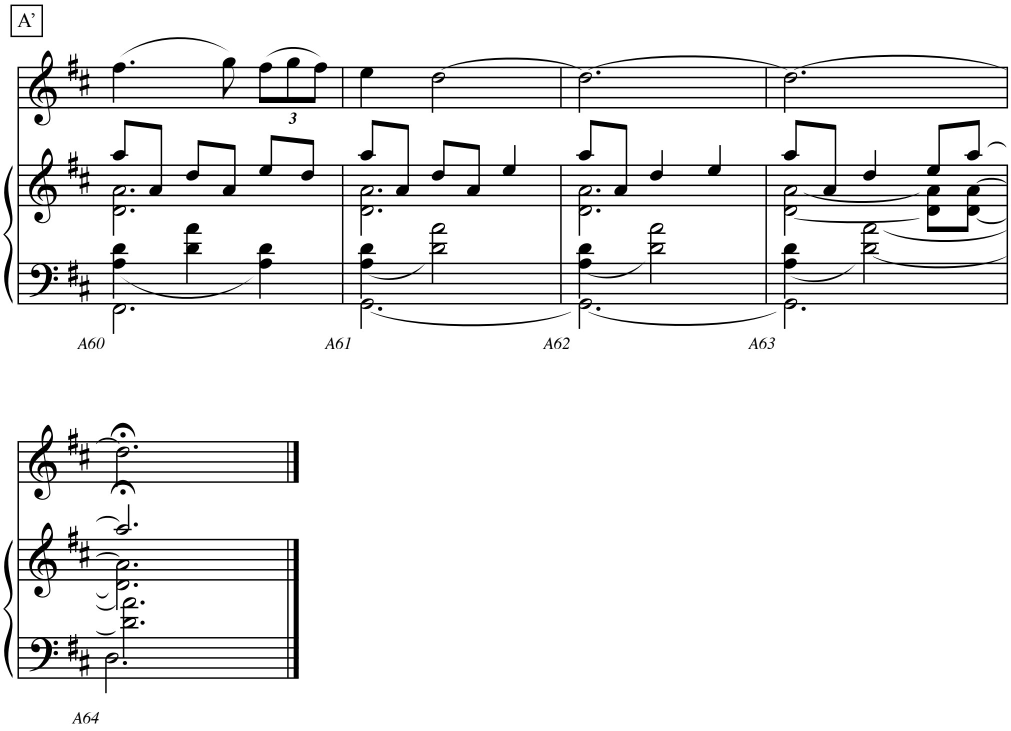

♩ = 162
I
Hammered Dulcimer
A2
A
Penny Whistle
3
A3
A4
A5
A6
A7
A8
A9
A10


A'
3
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
A22


B
A23
A24
A25
A26
A27
A28
A29
A30
A31
B'
A32
A33
A34
A35


A36
A37
A38
A39
A40
C
A41
A42
A43
A44
A45
A46
A47
A48


D
A49
A50
A51
A
3
A52
A53
A54
A55
A56
A57
A58
A59


A'
3
A60
A61
A62
A63
A64

To understand what is going on, one must first make some observations about how the underlying structure of musical form can be observed to work. It should be noted that this observation is made considering the standard phase length form of tonal centered ‘classical’[4] music - “Music of the era from *c.* 1600 to 1900 often shows a “regular” phrase structure in units of four measures.”[5] – and American popular song where the 32 bar song form is common: “The AABA format was [the] song form of choice for Tin Pan Alley songwriters of American popular music…”[6] examples of which are the songs “Yesterday” (McCartney) and “Over the Rainbow” (Arlen/Harburg).

In a measure of music in 4/4 time, it is generally accepted that the beats have a relative strength pattern of: STRONG-weak-strong-weak (S w s w). “In quadruple meter [4/2, 4/4, 4/8, etc.] the downbeat is the strongest beat, while the third beat is the next strongest. Beats two and four are normally weak beats.”[7] This same pattern also happens in a 4 measure phrase:
| S | w | s | w |.

Expanded below is the standard relative strength locations found in an 8 measure phrase.

| S | w | s | w | S | w | s | w || S | w | etc.
1 2 3 4 5 6 7 8 9 10

One of the common harmonic patterns that we often see occurring is that dominant chords (V7) regularly resolve to tonic chords (I or VI-) from a relatively weaker position to a relatively stronger one. This pattern is in no way a universal truth, but it is an extremely commonly used and heard pattern. With this knowledge then, it is possible to harmonically manipulate the listener to hearing certain down beats of measures as the strong start of a musical phrase (S) - a double bar line, so to speak. For example, if a dominant chord sounds for 2 measures - in both the 8th AND 9th bars of a phrase – then resolves to a tonic sound in measure 10, the listener will perceive that resolution point as the start of the next musical phrase – and it will sound like it is occurring on a S position even though based on the measure location, it is occurring in a weak location. This is a departure from the more common 8 measure phrase where measure 9 is perceived as a strong position and measure 10 is perceived as a weak position.

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[4] In this instance the term ‘Classical’ music is meaning the popular description of instrumental music that includes the broader body of work from the Baroque, Classical, Romantic eras. Another term might be ‘Art Music’ or ‘Absolute Music’.

[5] Willi Apel, ed., *Harvard Dictionary of Music,* 2nd Edition (Cambridge: Belknap Press, 1974), 668

[6] Songstuff. “A Guide to Song Forms – AABA Song Form.” Accessed July 3, 2014. http://songwriting.songstuff.com/article/aaba-song-form/

[7] Joseph L. Rivers, *The Fundamentals of Tonal Music: Concepts and Skills* (Tulsa, OK: Secret River Press, 2010), 24

This manipulation of creating the sense of a strong location in a usually weak position is also helped with melodic elements as well. Melodic pick-ups (anacrusis) most commonly lead into the down beats of important or strong measures and certain melodic figures tend to sound like pick-ups. Also common is that pick-ups are notes of shorter duration than the notes occurring on the following down beat that they are leading into. Some examples of this are the songs: “Happy Birthday to You” and “The Star Spangled Banner”. In both of these examples the pick-ups occur leading into the 1st and 3rd bars of the phrase (both strong locations). Again this is not a universal rule, but rather an observation of the use of a melodic element and how it commonly occurs. As we will see in the third case study, when dropping or adding beats to a phrase, the use of pick-ups helps to define which beats are perceived as Strong beats (down beats). So if there is a melody that sounds like a pick-up occurring in measure 9 of a phrase, that can help ‘trick’ the listener into perceiving measure 10 as being in a S position, or possibly the start of the next phrase which is usually expected to be heard on a strong measure.

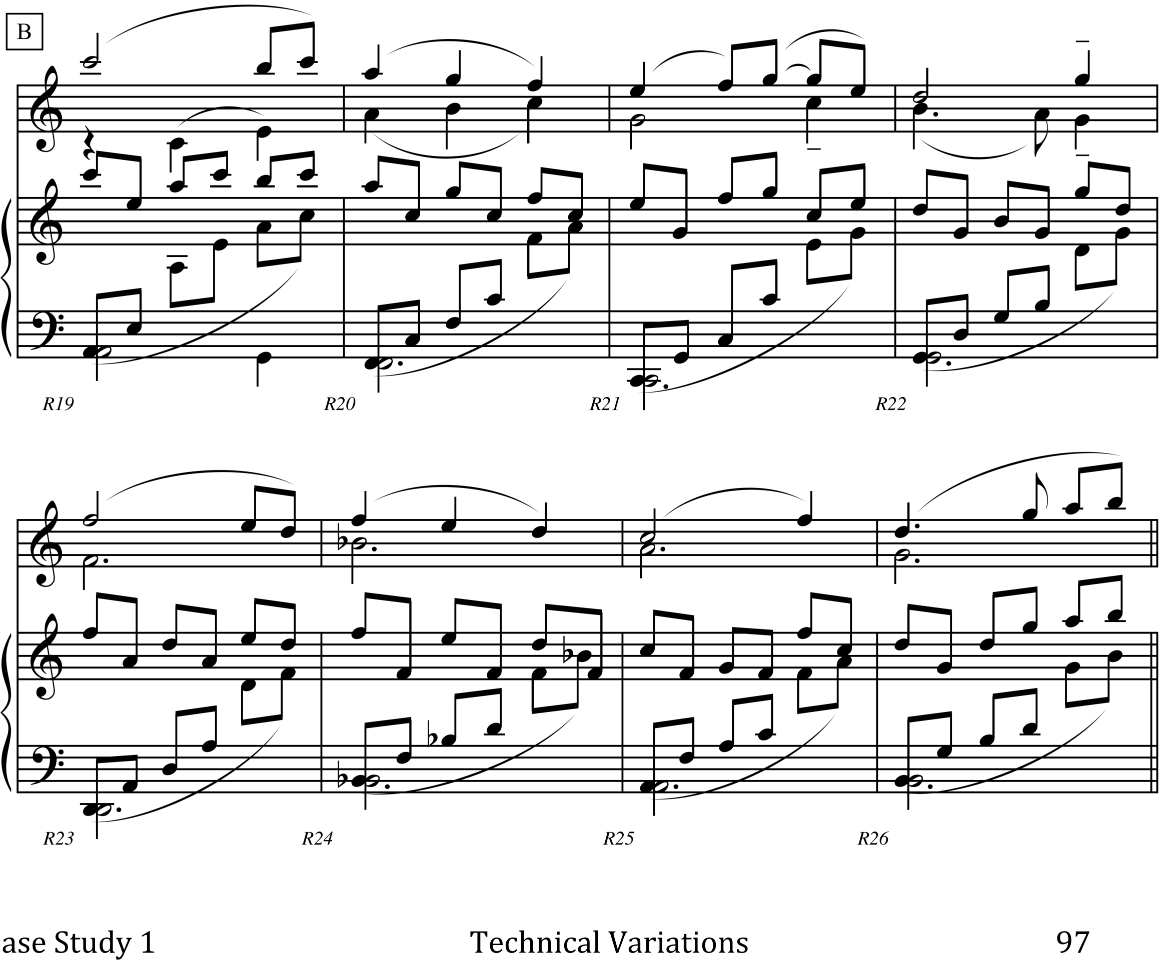
By using the concept of controlling the listener’s perception of where phrases begin with the help of dominant harmonic resolution – in this example, by sustaining a dominant chord through measures 8 and 9 and then resolving it into measure 10 - as well as using a melodic pick-up from measure 9 leading into measure 10, we can trick the listener into hearing the start of the second phrase as beginning in measure 10, in other words making measure 10 to be perceived as a strong position and therefore creating a natural sounding 9 Bar first phrase.

| S | w | s | w | S | w | s | w | w || S
1 2 3 4 5 6 7 8 9 10

If we now look at the Regular and Altered versions of Year of the Comet, I will show where this technique is being used to manipulate the form of the piece.

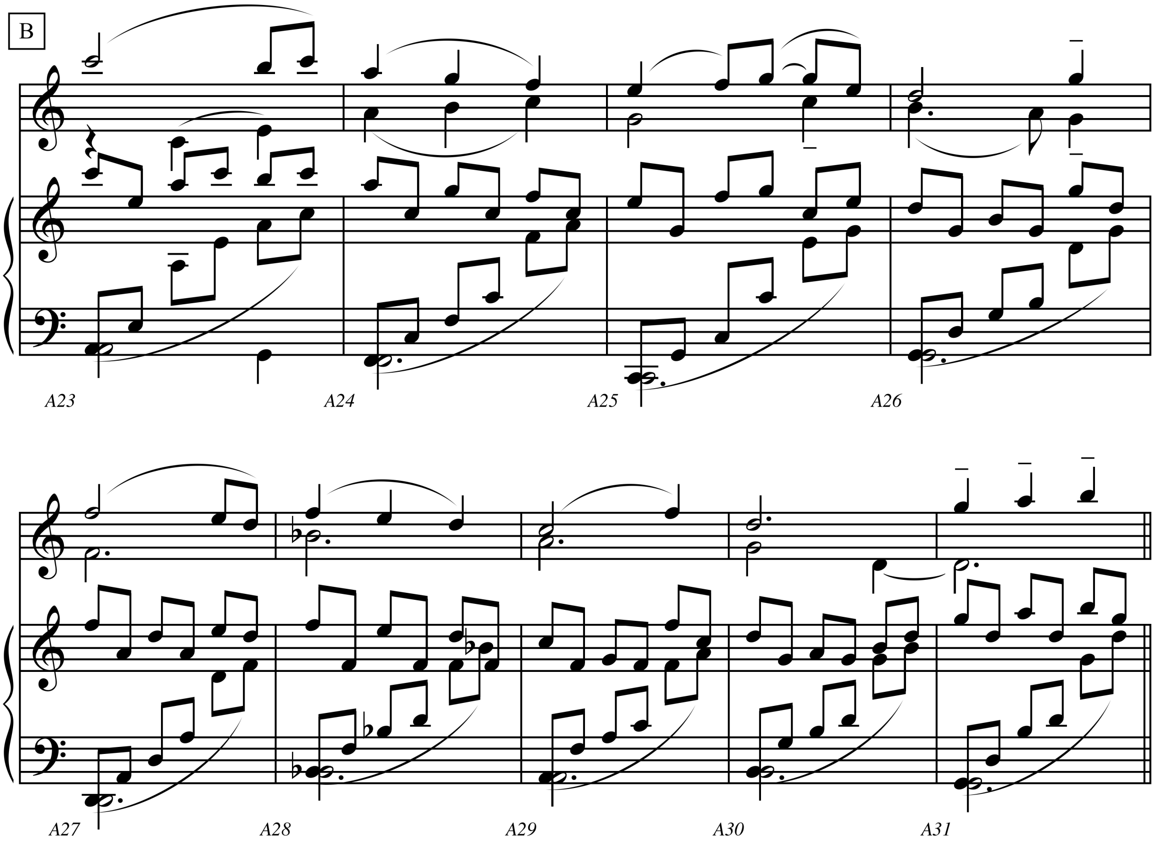
By comparing the B section of the two pieces - Regular version bars R19 – 26 and Altered version bars A23 – 31 - we can see the technique just discussed being implemented.

In the Regular version bar R26 has a 1st inversion dominant chord (G/B in contemporary notation) that resolves to the start of the next phrase which begins in measure R27. This follows the standard resolution pattern of a dominant chord in a weak position (8th measure of a phrase) resolving to a tonic chord in a strong position (1st measure of the next phrase). Notice as well the melodic use of eighth note pick-ups leading into the strong position as well.



If we now look at the Altered version we can see that the dominant chord (G/B) in the 8th bar of the phrase (A30) does not resolve in to the next bar, but instead progresses to an extension of the dominant chord sound – G in root position – before resolving to measure A32, creating a 9 bar phrase. Note as well that the pick-up melody now occurs in bar A31, but stated here as quarter notes. This melodic phrase helps make the 9th bar sound like a weak position as well. These two elements, having the chord and melody resolving to the down beat of measure A32, make the listener perceive this measure as a strong position resulting in an 'invisible' 9 bar phrase.

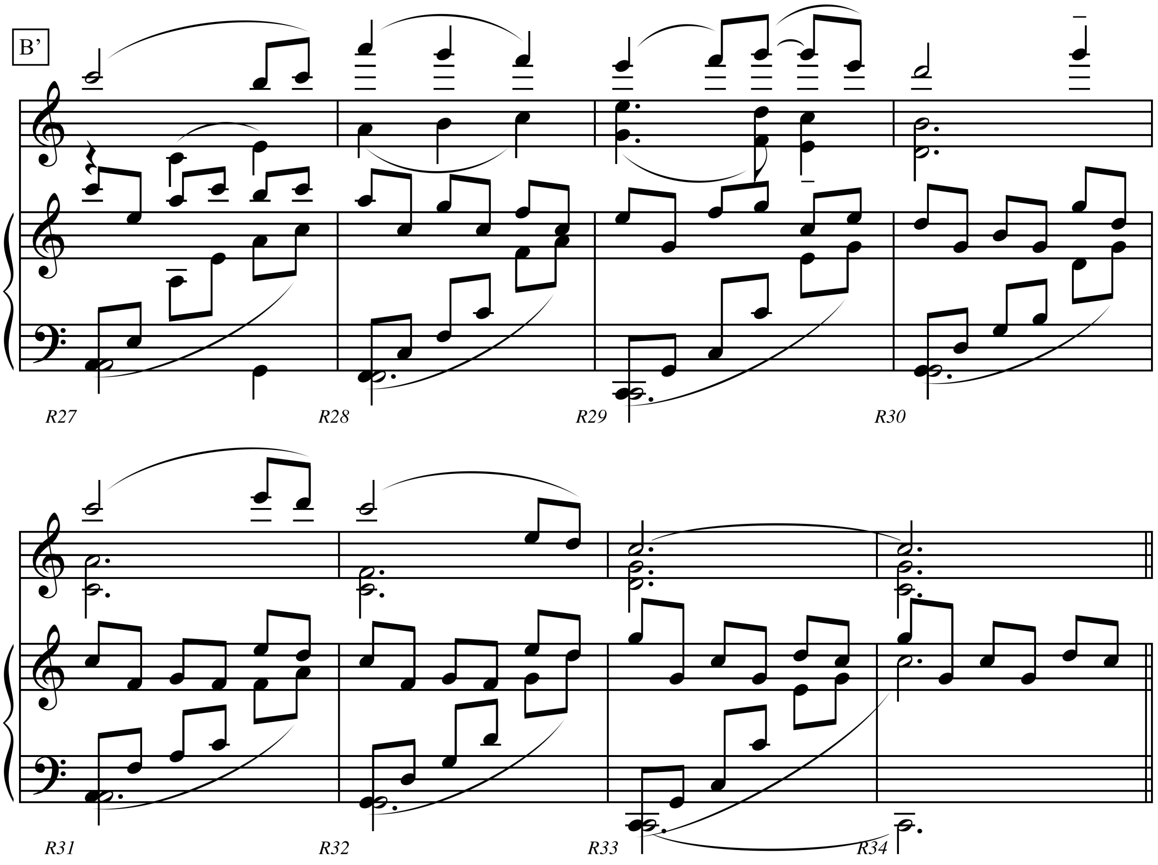
							G/B	G	A-	
S	w	s	w	S	w	s	w	w	‖ S	etc.
A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	
1	2	3	4	5	6	7	8	9	10	



By using this technique, the composer is able to choose what measure he/she wants the listener to perceive as the strong measure in a phrase, which allows phrase length manipulation to occur with the least amount of obvious musical phrase distortion. We will now look at the other unusual phrases in the Altered version and discuss how the technique is being applied to each phrase, as they are variations of what we have just observed.

Taking a close look at the B' phrase that occurs in R27 through R34, we see that the resolution of the suspended dominant chord (V7sus4) in bar R32 resolves to bar R33. As discussed earlier, dominant chord sound usually resolves from a *relatively* weaker position to a *relatively* stronger one. The resolution bar in this case is the 7th bar of the phrase – the secondary strong measure.

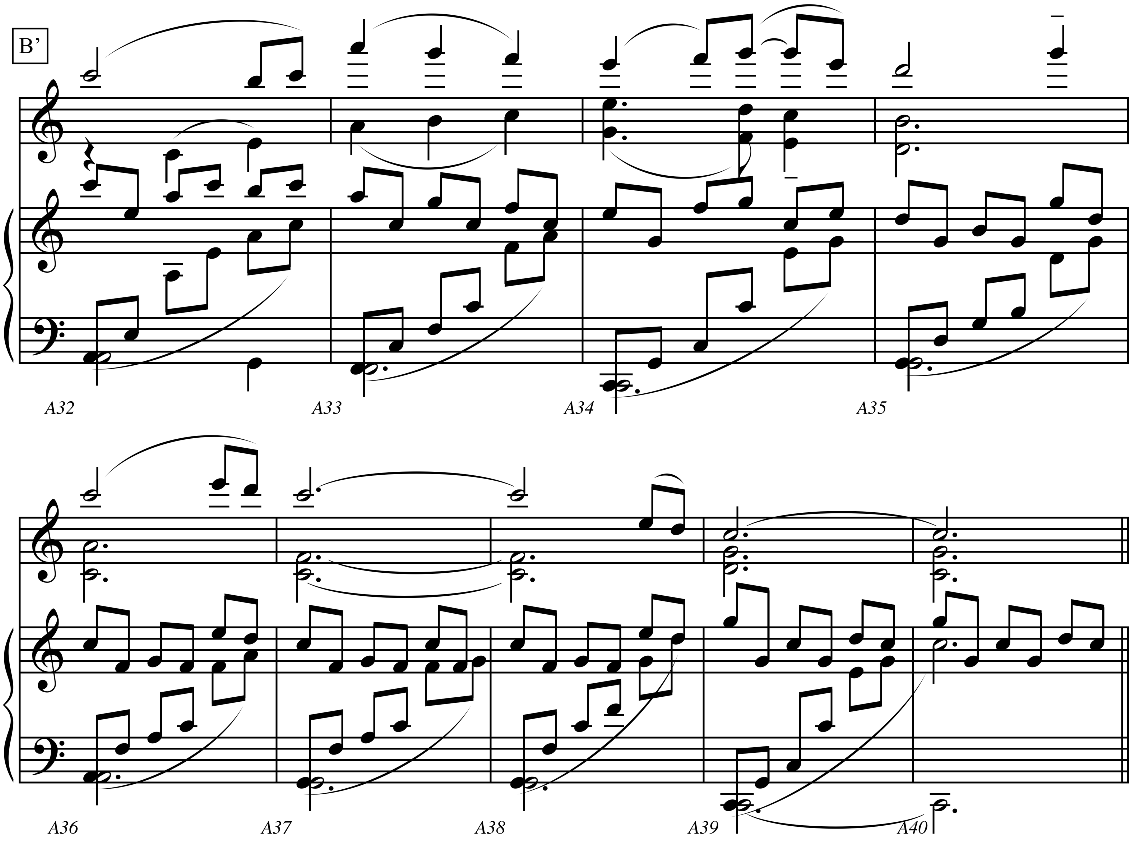
					G7sus	C		
S	w	s	w	S	w	s	w	S
R27	R28	R29	R30	R31	R32	R33	R34	
1	2	3	4	5	6	7	8	9



Comparing this to the 9 bar phrase that occurs in A32 through A40, we can see that the dominant chord extension occurs in a different location in the phrase as compared to the first example, but still uses the technique of expanding the length of time that the dominant chord is sounding (A37 & 38) therefore delaying its resolution point to the tonic chord (A39). In this way another 9 bar phrase is created with the following perceived strong/weak pattern:

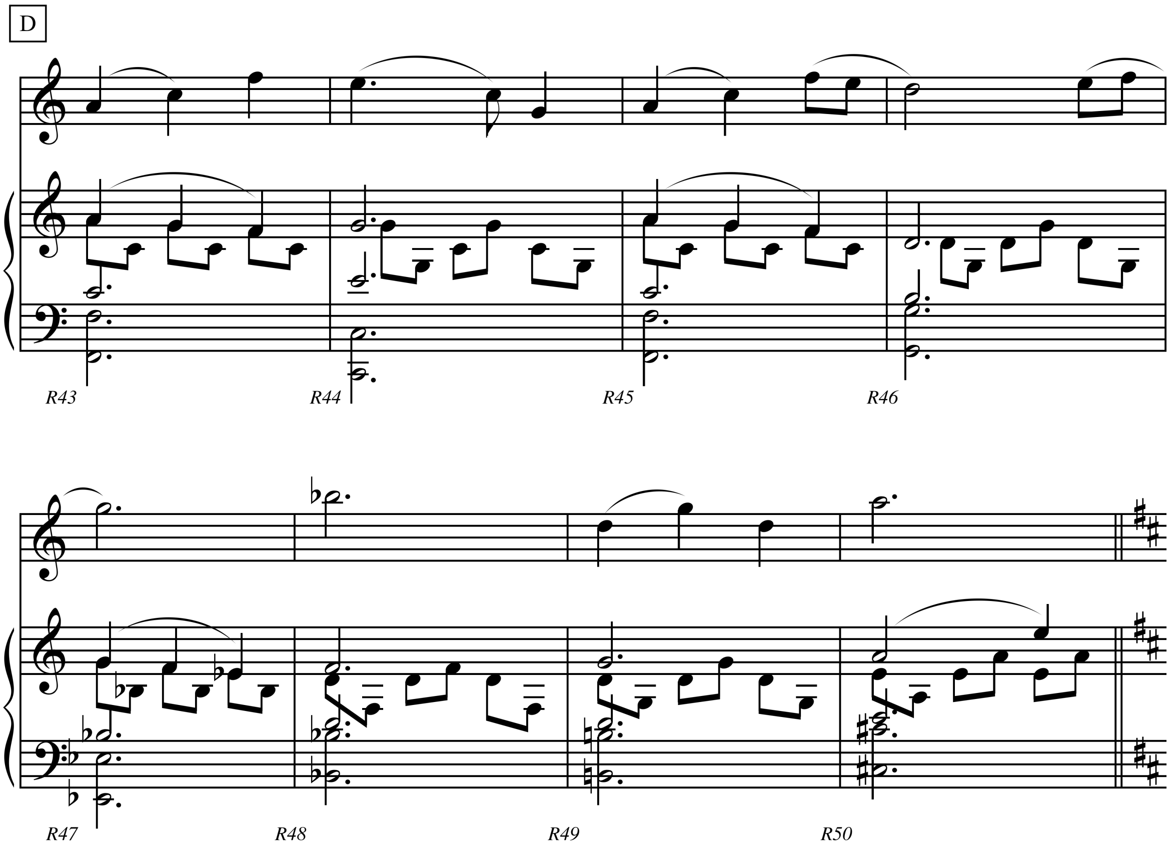
					G7sus		C		
S	w	s	w	S	w	w	s	w	S
A32	A33	A34	A35	A36	A37	A38	A39	A40	A41
1	2	3	4	5	6	7	8	9	10

Notice as well that the pick-ups were moved to lead into the measure where the progression resolves to the tonic chord sound (A39).



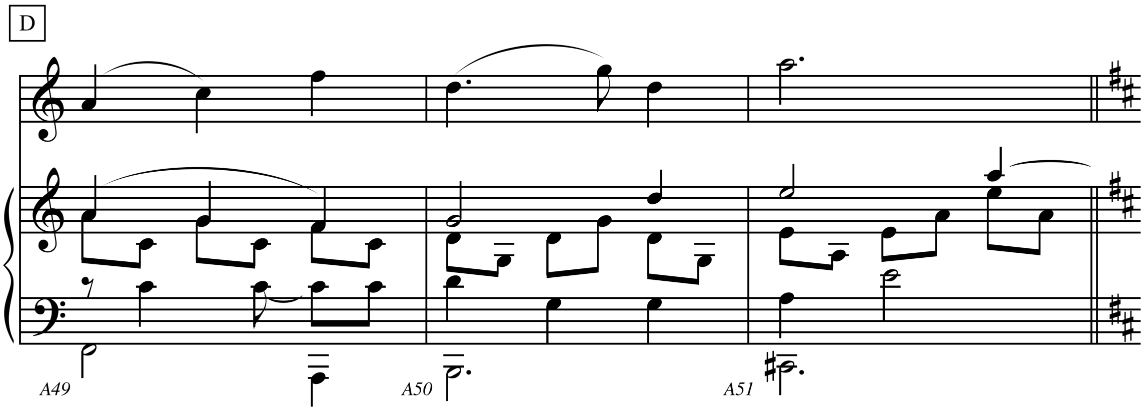
Creating natural sounding 9 bar phrases, or any other odd numbered phrase length, is one of the most challenging compositional situations that film composers have to deal with. In this example there are 2 more unusual length phrases that we still need to discuss. The next looks at a severe contraction of an 8 bar phrase to a 3 bar phrase.

Section D of this piece occurs in measures R43 through R50. In the altered version these 8 measures are reduced to 3 measures allowing really only enough of the phrase to set up the modulation to the new key center. Comparing the 2 versions we can see that they both start on the same IV chord and have the same melody in their respective first bars (R43 and A 49). In the regular version the last 2 bars of the phrase move harmonically from a first inversion V chord (G/B) directly to the first inversion V chord (A/C$^{\#}$) of the new key we are modulating to – D major. This sounds perfectly fine as we have a dominant resolution into our new key from a weak position to a strong position in the phrase.



The altered version uses these same last 2 chords of the phrase as the 2nd and 3rd chords of a 3 bar phrase, but again the dominant resolution makes the chord we are resolving to, in what would be a relatively weak position, sound like a strong position.

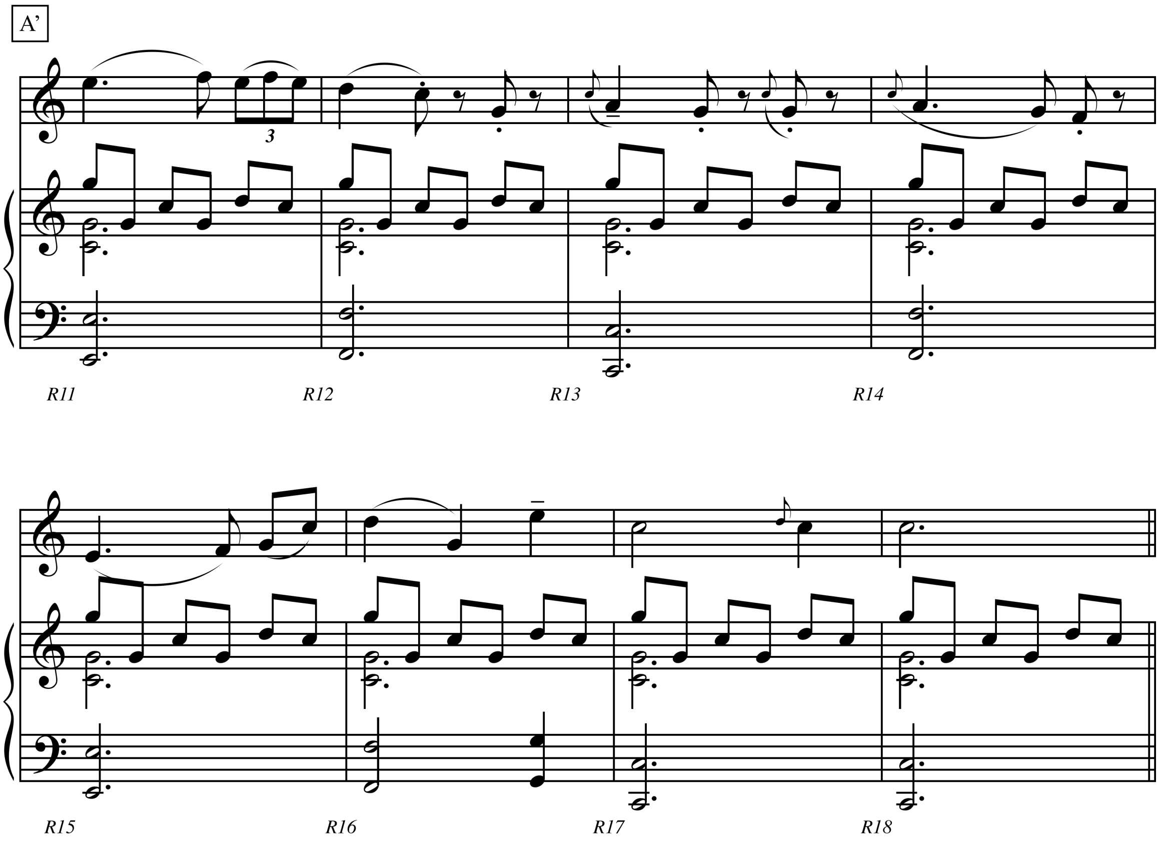
F G/B A/C# D
| S | w | s || S
A49 A50 A51 A52
1 2 3 4



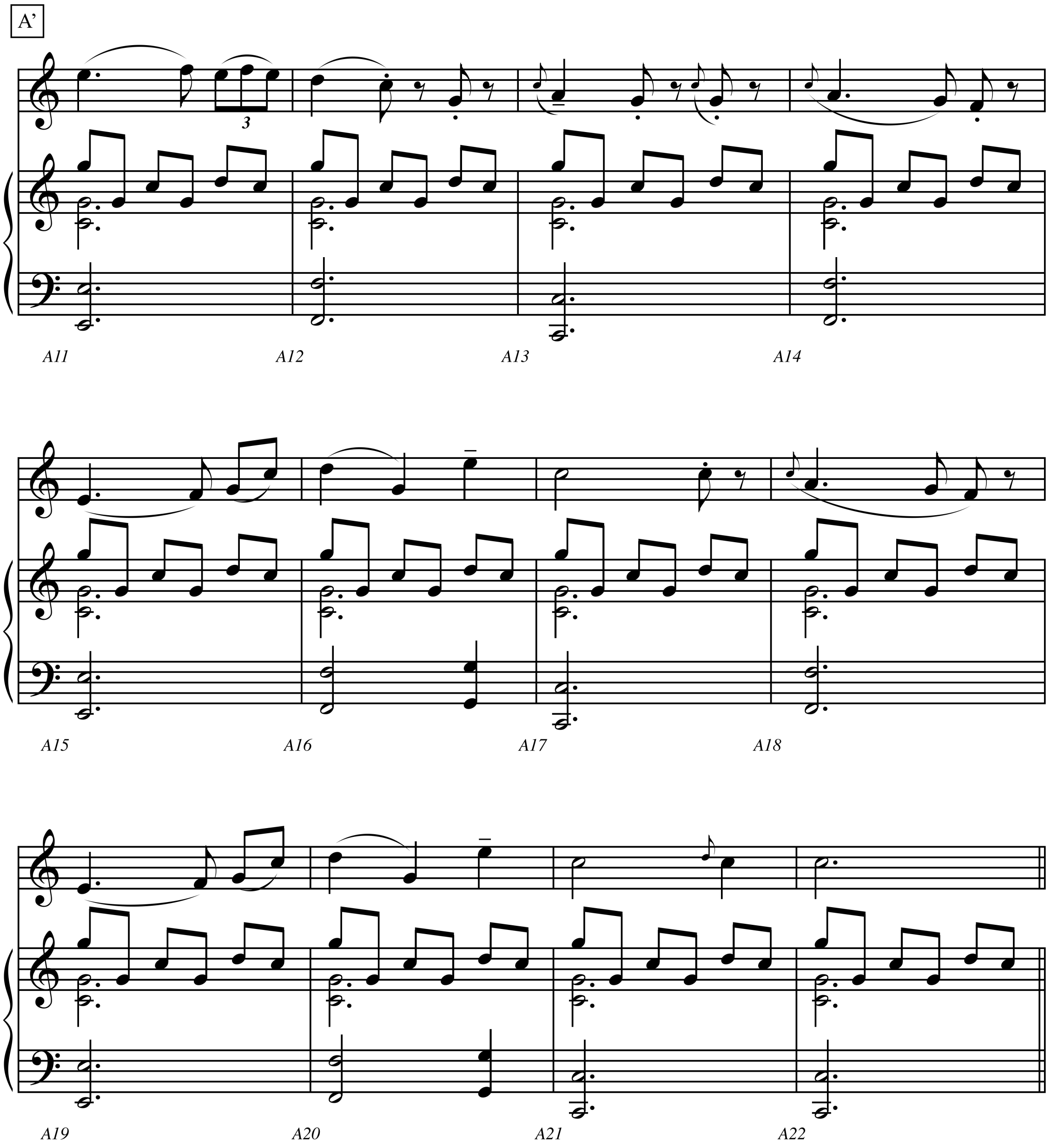
Notice that the melodic element in the altered version is based on the melody from the 1st, 7th and 8th bars of the regular version phrase with a slight rhythmic variation to match the rhythm of the original 2nd bar of the phrase from the regular version.

Finally we will take a look at the A' section of the piece – measures R11 – R18 and A11 – A22. In this situation the 8 bar phrase had to be expanded by 4 additional bars. This is a fairly easy expansion as 4 bars is a regular length phrase, so the only issue was to make sure that when we arrived at the 8th measure in the phrase, that there was something compositionally making the phrase not feel as if it was coming to an end. This involved both a harmonic element and a melodic one.

Here is the regular 8 bar version of the A' section:


A'
3
R11
R12
R13
R14
R15
R16
R17
R18

Firstly notice that the final 4 bars of the expanded version (A19 – A22) are the same as the final 4 bars of the regular version (R15 – R18).



In the expanded version, the final 4 bars is a repetition of the previous 4 bars but with a melodic and harmonic change in the 8th bar to signal to the listener that the phrase does not stop there. Firstly there are pick-ups in measure A18 leading into A19, the 3rd 4 bar phrase of this section, and also the chord changes from what would be a final sounding tonic chord sustained through bars 7 and 8 of the phrase (as ultimately happens in the final 4 bars of this 12 bar phrase) to a subdominant chord in A18 which changes the listeners perception that this phrase is not finished.

The technique here is one that I have used and taught as a way to manipulate phrase length by measure. Once the basic principles are understood (and mastered) it is possible to create natural sounding phrases of any measure length. It takes practice to look at a musical phrase and see the expansion and contraction possibilities, but the ear can be tricked into perceiving any phrase length as sounding natural once you understand how to create the sound of a Strong location harmonically - using chord resolutions, and melodically - using pick-ups.

It would be great if all film music synchronization points would always line up on full measure downbeats as this example does. However film composers often have to drop a beat, or half a beat from a musical phrase in order to make the music sync to the picture. In the "Raiders of the Lost Ark" example that I cited earlier, the phrases are changed not by full measures, but by beats. I will demonstrate phrase manipulation on the beat level in the third case study.

I would suggest that the reader now re-listen to both the regular and altered versions of this piece, following along with the music. I have also included the video of this cue (track 3) so that the reader may hear the entire cue and see how the phrase manipulation is working with the edits in the film. I believe that even understanding the technique, one will appreciate how the phrase length alterations do not stick out in a form of musical 'speed bump' and that the music flows just as if the piece was all in regular 8 measure phrases.

6 - Case Study 1

Year of the Comet

Audio and Video Examples

7 - Case Study 2

P.T. Barnum

Film/Scene Background:

This four-hour mini-series, starring Beau Bridges and directed by Simon Wincer, first aired in September 1999 on the A & E Network. It recounted the life story of Phineas Taylor Barnum, possibly best known for being the creator of the 3-ring circus. His life was full of intense highs and extreme lows: experiencing the death of a number of his children as well as the loss of his first wife, coming close to bankruptcy multiple times and losing an elaborate custom built mansion to fire. He went back and forth from being poor to wealthy numerous times ultimately passing away at a high point in his career. But the wealth and success he would experience alone was not enough to satisfy him. He obsessively worked to gain acceptance into high society and spent much of his life trying to prove that he was more than just a 'showman' and deserved the respect and recognition that he so much desired. Once again, I would like to point out that the techniques discussed here could be found in all the other scores that I have composed. I chose to feature this score because it is rather unusual to have a score that incorporates so many different dramatic variations of one theme. So although I composed this score outside my period of study, this in depth explanation and analysis is being written about for the first time in this thesis.

Compositional Technical Challenge:

Another challenge that faces film composers is the creation of themes that can be used to reflect or support dramatic changes. These are what I have referred to as the 'dramatic variations.' Using the example of "Raiders of the Lost Ark"[1] again, one finds a variety of dramatic uses of Indiana Jones's theme. Besides the escape sequence discussed in the previous case study, we hear a variation of Indy's theme, in the middle of a cue, as we see a car pulling up to his house at night (at 20:22). This variation is not heroic, as we usually associate to this theme, but instead is much quieter and understated featuring the melody played by a low register clarinet. In a subsequent scene where he is travelling by plane on his way in search of the Ark (at 22:58), there is another dramatic variation of the theme, this time with more rhythmic propulsion and dissonant harmonies in the accompanying horn texture; the melody is played by high winds. In this case there is also use of augmenting the long sustained notes of the theme which distorts the form, but sounds completely natural.

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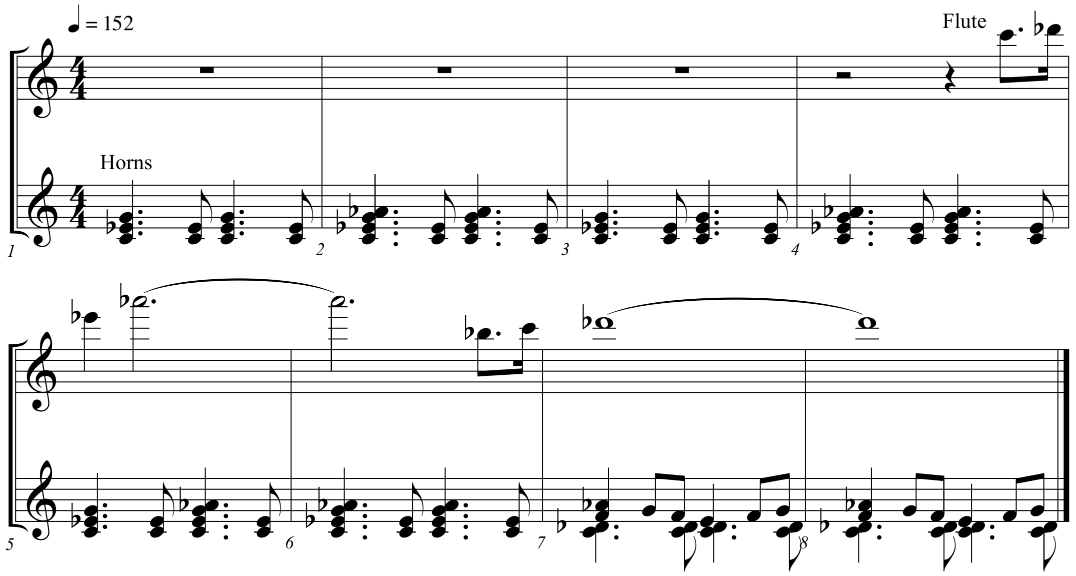
[1] *Indiana Jones and the Raiders of the Lost Ark,* DVD, directed by Steven Spielberg (1981; Hollywood, CA: Paramount Pictures, 2003)



Yet another dramatic variation of the theme occurs when Indy, now with Marion, travels to Cairo (at 33:43). Here different textural propulsion is used to support the theme played by a solo trumpet. Each of these variations uses the theme as an identifier of Indy's character, but because of the differences of the harmony, accompaniment texture and instrumentation, they each supply a rather different dramatic support. Heroic versions of snippets of Indy's theme occur when we see Indy in action – when he knocks over a statue to escape the Well of Souls where he and Marion have been buried alive (at 1:14:22), as he rides off on a horse in pursuit of the Ark that is being transported by truck on its way to Germany (at 1:22:33), as we cut to him riding on a ridge as he catches up with the German convoy (at 1:22:55) and later in the film when he is found climbing aboard a German sub (at 1:37:35). The film is full of dramatic variations of this theme as well as the Marion/Love theme and the Ark theme, the three recurring themes of the film. Each dramatic variation is somewhat different to support the emotion, movement and level of tension of each scene, but always immediately identifiable.

In this case study, the theme I composed for the character of P.T. Barnum needed to be able to support a rather wide variety of different emotions that his character experiences or goes through in the course of the story. It is not all that difficult to compose a piece of music that expresses a particular emotion, but for the film composer, the challenge is creating a melodic identity (a theme or letimotif) that can be manipulated enough to express the range of emotions that a specific character experiences during the course of the film. I will discuss a variety of the techniques that I used to accomplish these dramatic variations on the theme I composed for P.T. Barnum.

As we have previously discussed, the first step in the process is coming up with the vocabulary of the score. For this project I decided to do some historical research since I was dealing with an historical figure. P.T. Barnum lived from 1810 to 1891 and so I wanted the music to reflect that time period as much as the costumes, sets and dialogue did – in other words to be organic to the film. Firstly, I wanted to get a sense of the style of popular American music that was being written and listened to during that time period. I discovered that songwriter Stephen Foster, whose compositions include "Camptown Races", "Oh! Susanna" and "(I Dream of) Jeanie with the Light Brown Hair", lived from 1826 to 1864, a period within the life span of P.T. Barnum. So I felt that the flavor of his compositions would certainly reflect the period I was trying to portray. Also another popular musical influence of the time was the American Brass Band, these ensembles were often heard performing in outdoor Gazebo bandstands that were in the public commons or parks in the city/town centers.[2]

These two musical influences helped me create the vocabulary of the miniseries. From Stephen Foster's songs, I extracted the harmonic language of the main themes of the score: mostly diatonic triadic progressions with some use of secondary dominant and diminished passing chords, as well as the use of chromatic "line clichés" (for example: C Caug C6). This research also informed the type of melodies that I would compose – singable and melodic. The Brass Band sound was an element that I included in the orchestration style after purchasing some CDs of arrangements from the era and studying them.

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[2] Library of Congress. "Band Music from the Civil War Era." Accssed Sept. 25, 2013. http://memory.loc.gov/ammem/cwmhtml/cwmhome.html

Once I had chosen my vocabulary, the next step was to decide on the number of themes I needed and what dramatic contexts each of the themes had to support. Although I usually make the decision about the themes on my own, they are always something that I ultimately play for and discuss with the director. In this case study we will focus only on one of the themes, the one that I created for the main character, P.T. Barnum.

In analyzing the film, I came up with a list of specific emotions/situations that the theme would have to support:

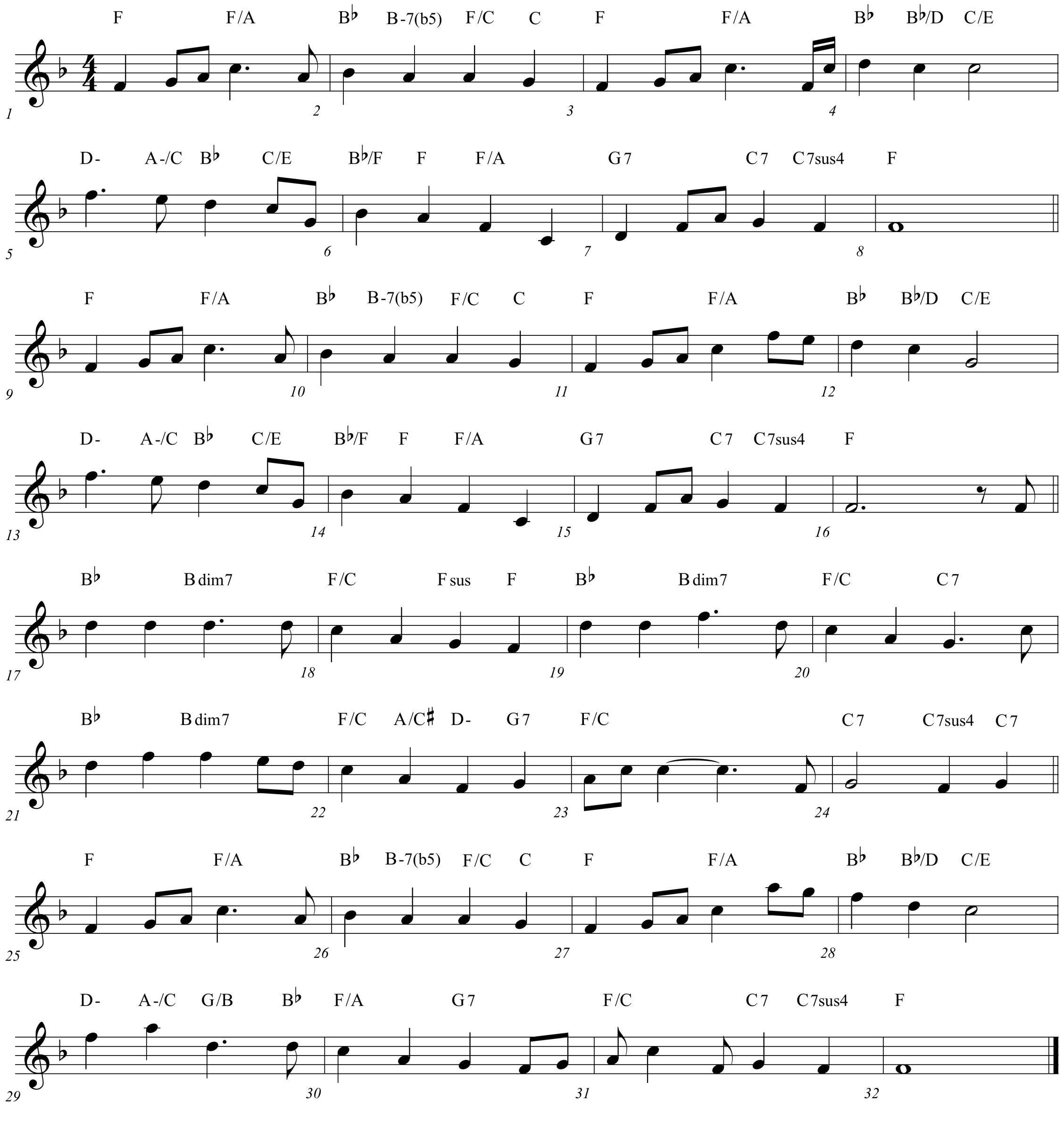
- Contented (Life is good) – When the film opens we meet P.T. who is ill and in bed. He is obviously living in the lap of luxury with maids and butlers attending to his every need. This version of the theme had to reflect the lifestyle of a successful, contented man living in rather opulent comfort.
- Circus March – The main title of the mini-series made use of P.T.'s theme played as if it were a circus march. This occurred over a visual montage of stills of a street parade. In this moment the imagery did not require support of any particular emotion, but I felt that since P.T. is so closely associated with the circus, this would be an excellent way to support the visuals and remind the audience of that fact.
- Excited – The first occurrence of this version of the theme was used to score a flashback sequence of P.T. as a young man rushing home at the news that his wife had just given birth. It also recurred in sequences when he was rushing back to share some good news with his family.

- Triumphant – Quite a few times in his life P.T. was able to prove the naysayers wrong and basked in the glory of his achievements. This cue was used to score his triumphant Grand opening of his first museum (that consisted of unusual artifacts and live acts including the bearded lady and Tom Thumb).
- Strong Willed/Defensive – This version of the theme was used while P.T., arguing with his wife, was defending his position for his need to continue his work - which included a lot of travel. She is blaming his single-minded pursuit of wealth and acceptance as the reason for their infant daughter's recent death as being a "message from God".
- Playful – Although he spent a lot of his time traveling and away from his wife and family, when he was at home he enjoyed spending time with his children and playing games with them. This version was used to underscore a moment where he challenged one of his daughters to a game of Hopscotch.
- Sad – Ultimately, P.T. passes away at the end of the mini series and this solemn version of the theme scores the emotions of those he left behind. This was a particularly interesting challenge as his last spoken words were recorded to be him asking about the box office receipts from the previous night. He died a contented man.
- Happy Go Lucky – This version was used in the end credits of the program.

It would be difficult, if not impossible, to say what particular film or viewing experience had influenced the way that I approached scoring each of these emotions. As mentioned in the second chapter of this thesis, I had a lot of professional experiences working alongside other composers and likely absorbed a lot from observing their work. But I also believe that since I was very interested in music from a fairly young age, and I was hooked on television, that my youthful observations of how dramatic music worked with visuals must have sunk in. Today, I know that if I get stuck or have a period of writer's block, I will go and watch a film or listen to a CD that might help me establish a musical direction or concept. As I discussed in the previous case study, once I knew that

Celtic flavor would play a role in the vocabulary of my score to “Year of the Comet”, I listened and studied recordings by the Chieftains as an aid to ‘learning’ that style of music. Also, because of having studied a variety of harmonic systems, I feel that I am able to decipher what system the music I am trying to emulate is making use of.

Below is a lead sheet of the main theme I composed for P.T. Barnum:


F F/A B♭ B-7(b5) F/C C F F/A B♭ B♭/D C/E
1 2 3 4
D- A-/C B♭ C/E B♭/F F F/A G7 C7 C7sus4 F
5 6 7 8
F F/A B♭ B-7(b5) F/C C F F/A B♭ B♭/D C/E
9 10 11 12
D- A-/C B♭ C/E B♭/F F F/A G7 C7 C7sus4 F
13 14 15 16
B♭ Bdim7 F/C Fsus F B♭ Bdim7 F/C C7
17 18 19 20
B♭ Bdim7 F/C A/C♯ D- G7 F/C C7 C7sus4 C7
21 22 23 24
F F/A B♭ B-7(b5) F/C C F F/A B♭ B♭/D C/E
25 26 27 28
D- A-/C G/B B♭ F/A G7 F/C C7 C7sus4 F
29 30 31 32

Audio Examples:

I have included 8 audio examples of the dramatic variations of P.T.'s theme which should be listened to now. Although they are in the same order as listed above, the listener may want to not look at the list and see if the musical variations on their own are recognizable as expressing the emotions/situations just listed. Afterwards I will discuss the specific compositional techniques used in creating dramatic variations.

Explanation of the Technique:

As I am sure you recognized, each of the audio examples was based on the main theme yet each one had a different emotional context. Some were happier, sadder, more serious, more playful, etc. This demonstrates the concept of dramatic variations. However, it should be pointed out that while composing the theme, I had to take into consideration all of the different dramatic moments that the theme had to support. Knowing that, from my analysis of the film, I had to constantly test that the theme could be manipulated to score each of these different dramatic moments during the initial composing of the theme. In other words, before committing to the final version of the theme, I was simultaneously checking that it was malleable enough to use in all the required emotional settings. This did require numerous re-writes and 'tweaks' of the melodic and harmonic elements, which are the basis of the theme.

I will now discuss some of the 'tools' that composers use to create dramatic variations. As stated earlier, one of the goals in creating these variations is to make sure that the original theme - melody - stays recognizable. As a point of illustration, although it could be argued that the retrograde inversion of a theme is considered to be a variation, it often makes the theme completely unrecognizable to the listener. In film usage, that would not serve our purpose. I know that this statement might be at odds with the teachings of some other professors, and schools of study, but I have tested this assertion using the following method. Taking well known Christmas Carols, I have played the retrograde inversion of "Jingle bells" for my students and have never had any one of them immediately identify it. Furthermore, the retrograde of the first phrase of “Deck the Halls” is similarly not immediately identifiable. So keeping the theme or motif mostly intact is very important. As you will see, however, some variation in the melody may be incorporated into the different versions.

Another thing that is important to point out is that in film composition, the accompaniment is often the element that supports the dramatic context of the scene and the melody has more to do with identifying the character, place or situation. Another way of looking at it is that the harmonic/textural element is the emotional and propulsive element while the melody defines who or what is involved. So as you will see in the list below, many of the techniques deal primarily with the harmonic/textural elements and fewer with the melodic elements.

Here is a list of techniques or ‘tools’ that can be used to create dramatic variations of a theme (melodic element). Also, you will notice that very often these tools are used in combination with each other. For instance, in the example that I offer in the use of tempo, below, John Williams not only used tempo as a tool, but reharmonization and instrumentation as well. It is actually rare that one will find only one tool used in isolation.:

- **Tempo:** This is not only the actual speed of the music but also the ‘implied tempo’ - how fast does the music ‘feel’ it is moving. The more movement or propulsion in the accompaniment figures or textures, the faster the music seems to move. Often action scenes are supported by busier propulsive music, where pensive or tension scenes have a more subdued simpler rhythmic element. As mentioned earlier when discussing the main theme from “Raiders of the Lost Ark”, its most common dramatic usage is to score heroism. In that setting the tempo is usually quite bright (between 120 and 132 bpm). However the very first variation that we hear as the car pulls up in front of Indy’s house at night (at 20:22) is much more subdued and relaxed at a tempo closer to 80 bpm. Besides the actual tempo difference, there is less rhythmic propulsion in the more subdued use of the theme implying that it is moving much slower.

- **Reharmonization:** Altering the chords that support a given melody can go a long way to color the dramatic setting of a theme. A simple example of this would be a melody accompanied by only major chords sounds brighter or happier than the same melody accompanied by minor chords. To score the impending danger during the use of Indy's theme in the scene earlier discussed when he is flying on his way in search of the Ark (at 22:58) – the notated example above, John Williams states the melody of the theme accompanied by the use of chords voiced in such a way as to bring out the harmonic dissonances in the accompaniment voicings. As discussed earlier, dissonance is one of the main techniques for creating a sense of tension or danger in a score.
- **Accompaniment textures:** Not only can this have an effect on the perceived amount of propulsion/movement, but also a 'broken' or non-constant texture can help support particular emotions such as shyness, nervousness, uncertainty and hesitancy. In other words an accompaniment texture that has the rhythmic element of constant eighth notes, for example, will give a sense of more self assuredness or confidence than one where the rhythmic element of the accompaniment is non-constant or broken. In "Philomena"[3], scored by Alexandre Desplat, there is the use of an underlying repeated constant six eighth-note triplet figure, that begins on the harp, accompanying a sequence of flashback scenes (at 5:52). We see young Philomena, who has become pregnant after a tryst with a young man at a fair, enduring an inquisition by the Abby nuns followed by a time cut to a later painful breach birth sequence. The nuns are certain that Philomena has sinned and that the pain she endures during childbirth is the penance for her sin. Later in the film, journalist Martin Sixsmith, is working with a much older Philomena trying to locate her son. When Sixsmith is looking at a series of photographs on the wall in the

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[3] *Philomena*, DVD, directed by Stephen Frears (2013; Los Angeles, CA: 20th Century Fox Home Entertainment, 2014)

Abby office, a broken version of this figure is used (at 25:36). Here the first 4 notes are played but the fourth is sustained as a long note, breaking the propulsion. This non-constant figure, also performed on harp, is repeated on cuts/reveals to various photos of nuns as Sixsmith, who is a non-believer, has a sense that there is a clue here but is uncertain of what the photos, which oddly includes one of actress Jane Russell, might reveal.

- **Meter:** Changing the overall meter of a piece from 4/4 to 3/4 can also affect the emotional response that a listener perceives. One of the themes in "Cinema Paradiso"[4] receives treatment in both 3/4, (at 8:11) when it is first introduced scoring young Toto - childlike and innocent, and 4/4 (at 36:26) scoring the usual daily goings on in the town square where he lives. Additionally, the use of odd meters (5/4, 7/4, etc.) in a theme that the audience has already heard in either 3/4 or 4/4, can be somewhat off putting and create a sense of tension, confusion or hesitancy. Unexpected changes of meter, as Jerry Goldsmith became known for using in many of his action cues, is used to create a sense of unsettling and surprise. In "Basic Instinct"[5], Goldsmith first introduces a theme in 4/4 when Nick and his partner are 'on the trail' of the suspect, Catherine, as they drive along a coast highway (at 9:31). Later in the film, Nick, convinced that Catherine is the killer, follows her as she races along the same section of road. In this 'dangerous pursuit' version (at 40:14), Goldsmith alternates meters back and forth from 4/4 to 7/8 to create an unsettling effect for the listener. All the metric manipulations mentioned require extending or abbreviating melodic note durations in unexpected or uncomfortable ways, which can enhance and support many of the emotions just mentioned.
- **Counter-lines, Contrapuntal/moving inner lines:** Useful in helping create a sense of propulsion and can also support a sense of

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[4] *Cinema Paradiso*, original US theatrical version, DVD, directed by Giuseppe Tornatore (1988; Burbank, CA: Buena Vista Home Entertainment, 1990)

[5] *Basic Instinct*, Special Edition, DVD, directed by Paul Verhoeven (1992; Santa Monica, CA: Artisan Home Entertainment,2001)

seriousness and dignity. I have observed that film music is generally not contrapuntal in nature, but more often composed as a melody accompanied by a rhythmic propulsive texture. Contrapuntal writing, using melodic counterlines and even linearly conceived inner voices seems to harken back to an older style of 'classical' composition and its prevalent use of counterpoint. This connection seems to suggest to an audience a sense of importance and seriousness.

- **Orchestration/Instrumentation:** The way that a theme is colored can change a variety of factors – a fairly obvious example would be that a melody played by a trumpet would have a much more powerful and forceful quality than the same melody performed on a flute. An example that I discussed earlier in chapter 4 of this thesis from "Cinema Paradiso,"[6] is where the love theme being performed on a clarinet is longing and lonely as opposed to being more romantic when it is being played by the strings.
- **Register:** Listeners perceive lower register melodies to be darker and more serious, powerful and menacing than higher register melodies. This often appears in scores as a low pedal to introduce a sense of danger or tension. There are many examples of this in "Basic Instinct"[7] where cues begin with a simple low tone. Early in the film it is revealed that Catherine, the main suspect in a murder case, has described the exact murder in a book she wrote a number of years earlier. As this is being revealed in the story, we see detective Nick reading the book and calling his partner to discuss the similarities to the crime (at 17:12). Other elements are an electronic pitched percussive effect that echoes/decays – supplying the cue with broken propulsion, and the occasional quarter note statement in the strings playing a major 7th above the pedal tone (a dissonant interval when exposed in this manner).

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[6] *Cinema Paradiso*

[7] *Basic Instinct*

Certainly other elements of music, such as dynamics, also play a role in the dramatic effect of a piece of music. It is the infinite number possible of combinations of all of these elements, and the skill of the composer in combining them, that keeps the score sounding new, interesting and creative.

Example PTB 1 – Contented (track 1) [Cue # 1M2 – "Obituary/Cows"]

This version of the main theme is probably the closest one to the original incarnation of the theme. Dramatically it needed to give a sense of a successful, contented life. Note that there is very little movement (propulsion) in the accompaniment making the piece have a sense that there is not much action or activity. This lends itself to a sense of contentment, relaxation and comfort – having time and not being in a rush. Color wise the use of a brass choir playing the block chords of the accompaniment harmony in the first phrase was meant to be an homage to the Brass Bands of the era. It is much more common that long sustained chords (pads) appear in the string section – so here my orchestration of the first phrase was an attempt to imitate the flavor of a brass band accompanying a melody, in this case performed by the strings. In the second phrase, after a modulation, which is used to help support a time cut [8], we go to a more standard orchestration of sustained string pads accompanying a solo trumpet. Here, as we see the opulent house in which P.T. loves, I am going for a lush, rich sound with low string voicings. The bridge is performed by piano, not a usual member of the orchestra, paying homage to popular music of the period and then finally the introduction of the banjo – an instrument that is associated with American music. At measure 29 through 32 a horn counterline is added to add a greater level of importance and dignity to the piece. This is the first section of a longer cue that I have edited.

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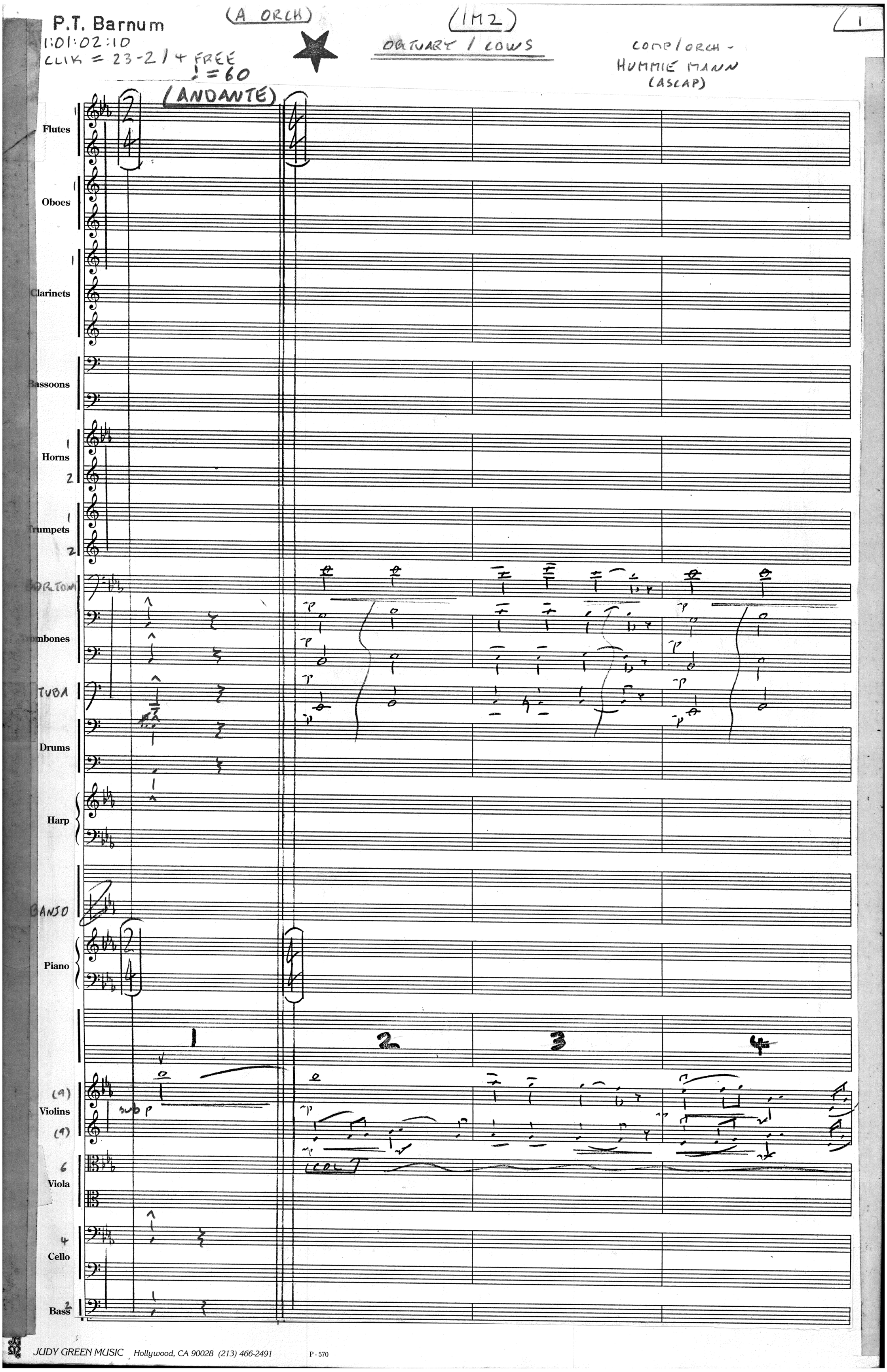
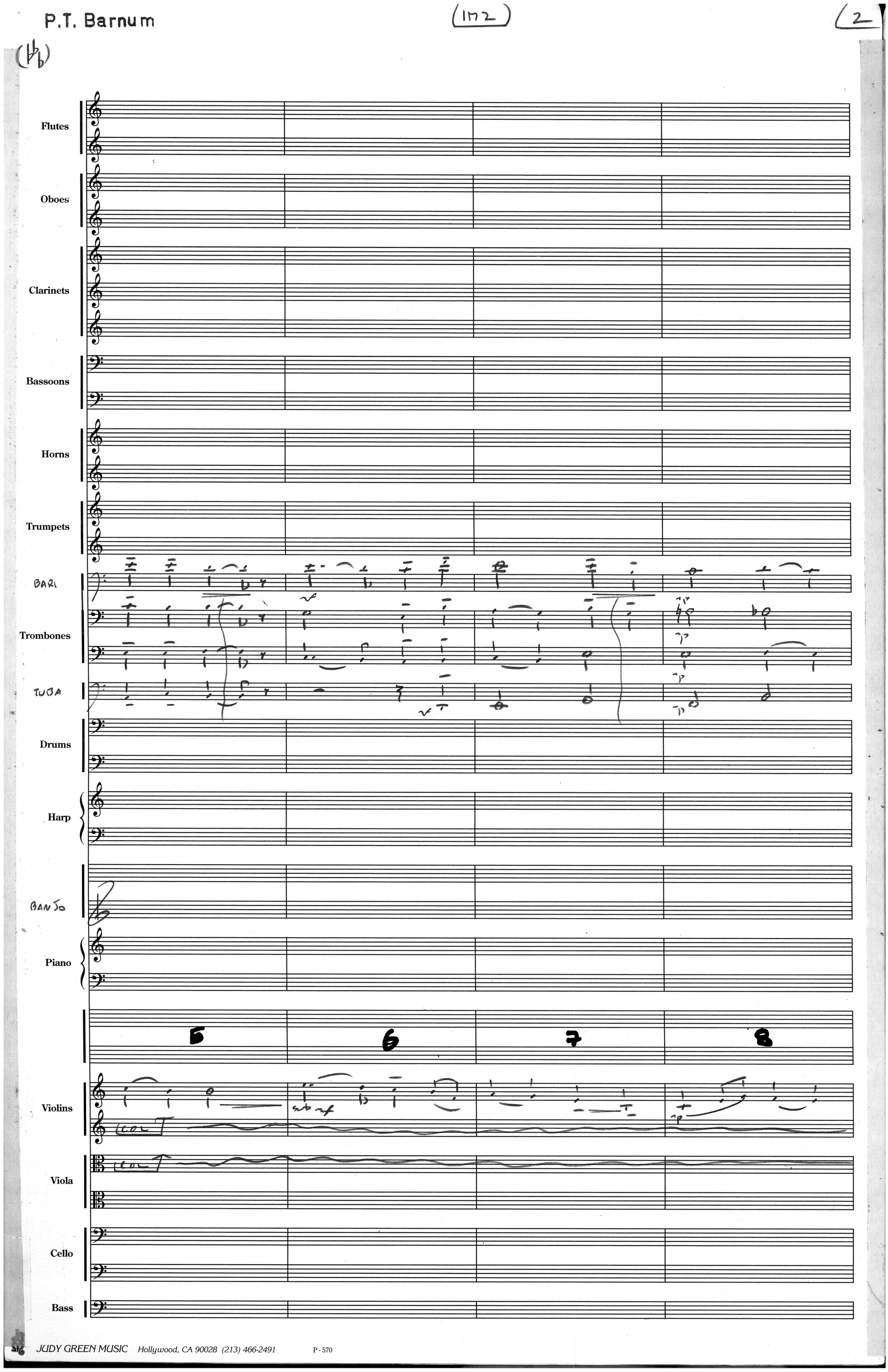
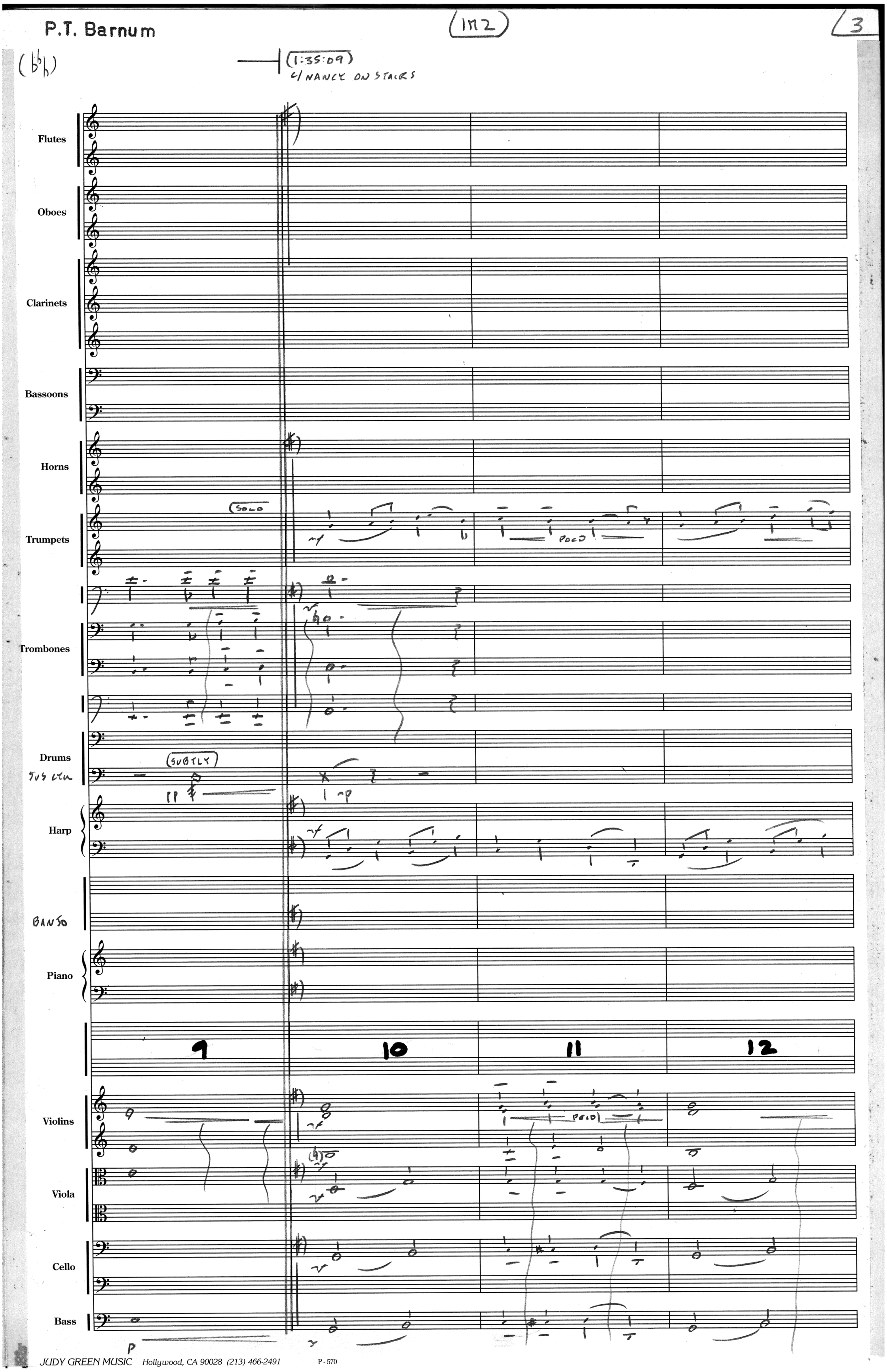
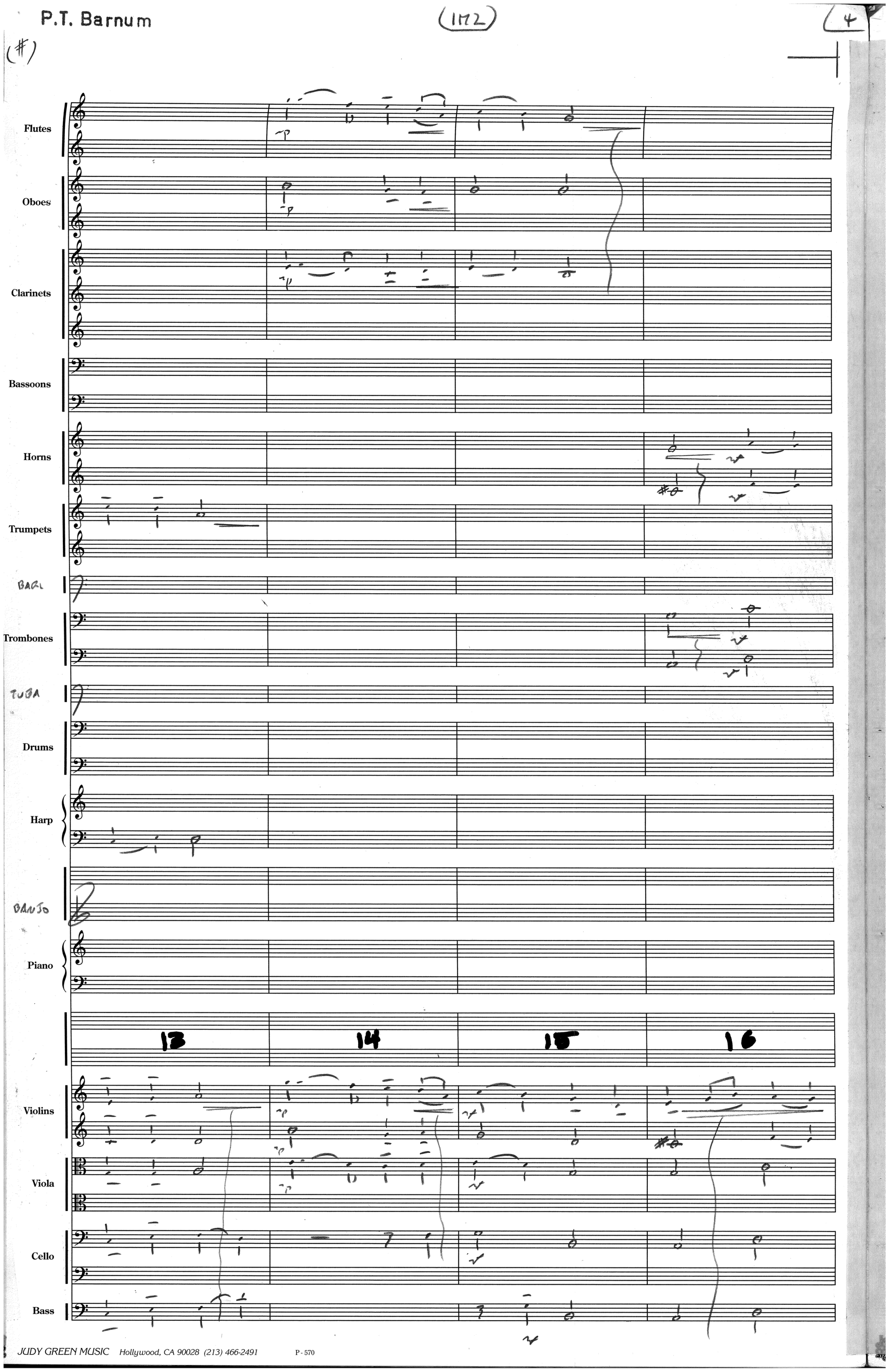
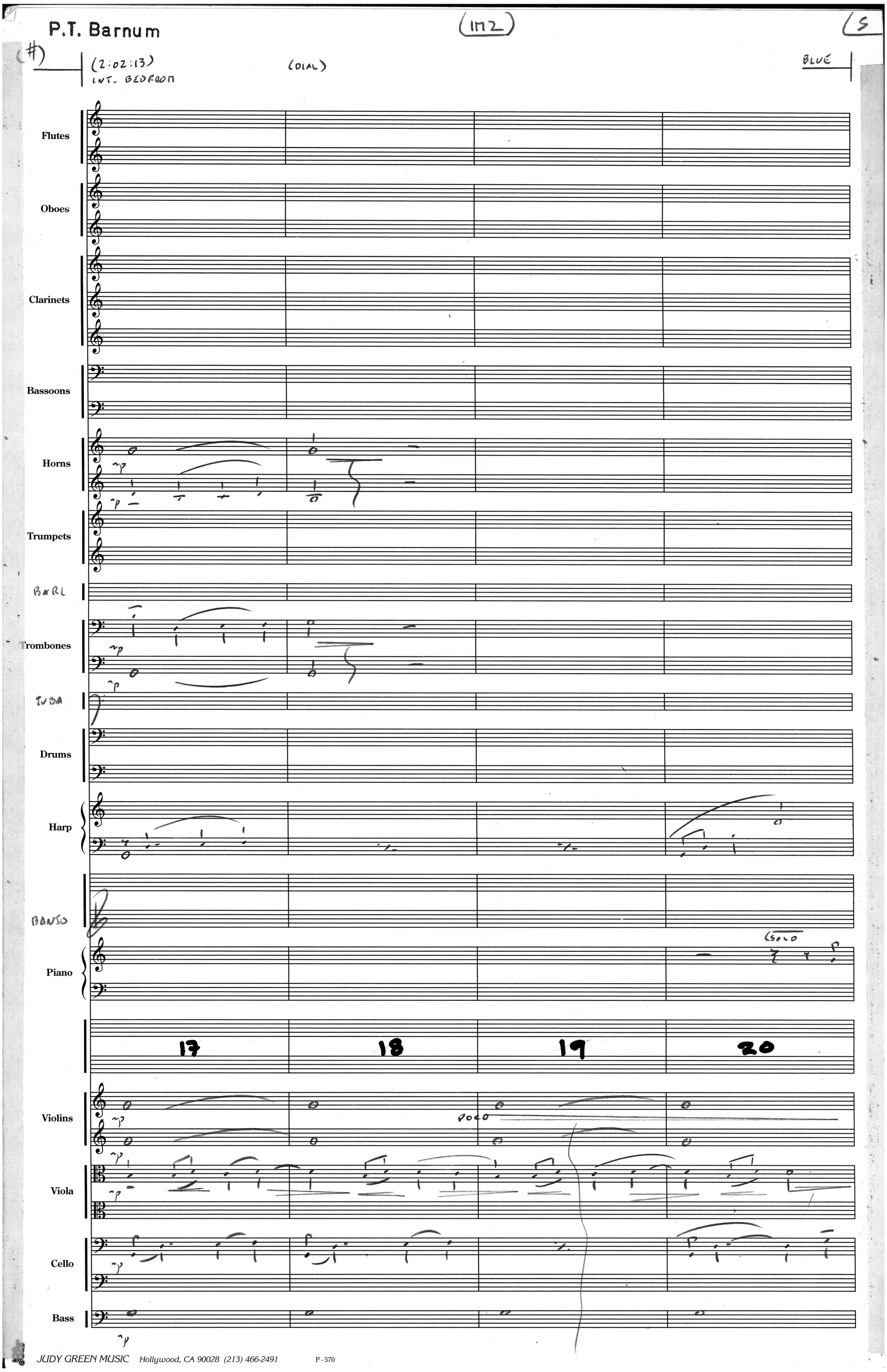
[8] Time Cut – a cut from one scene to another where it is obvious that time has passed.

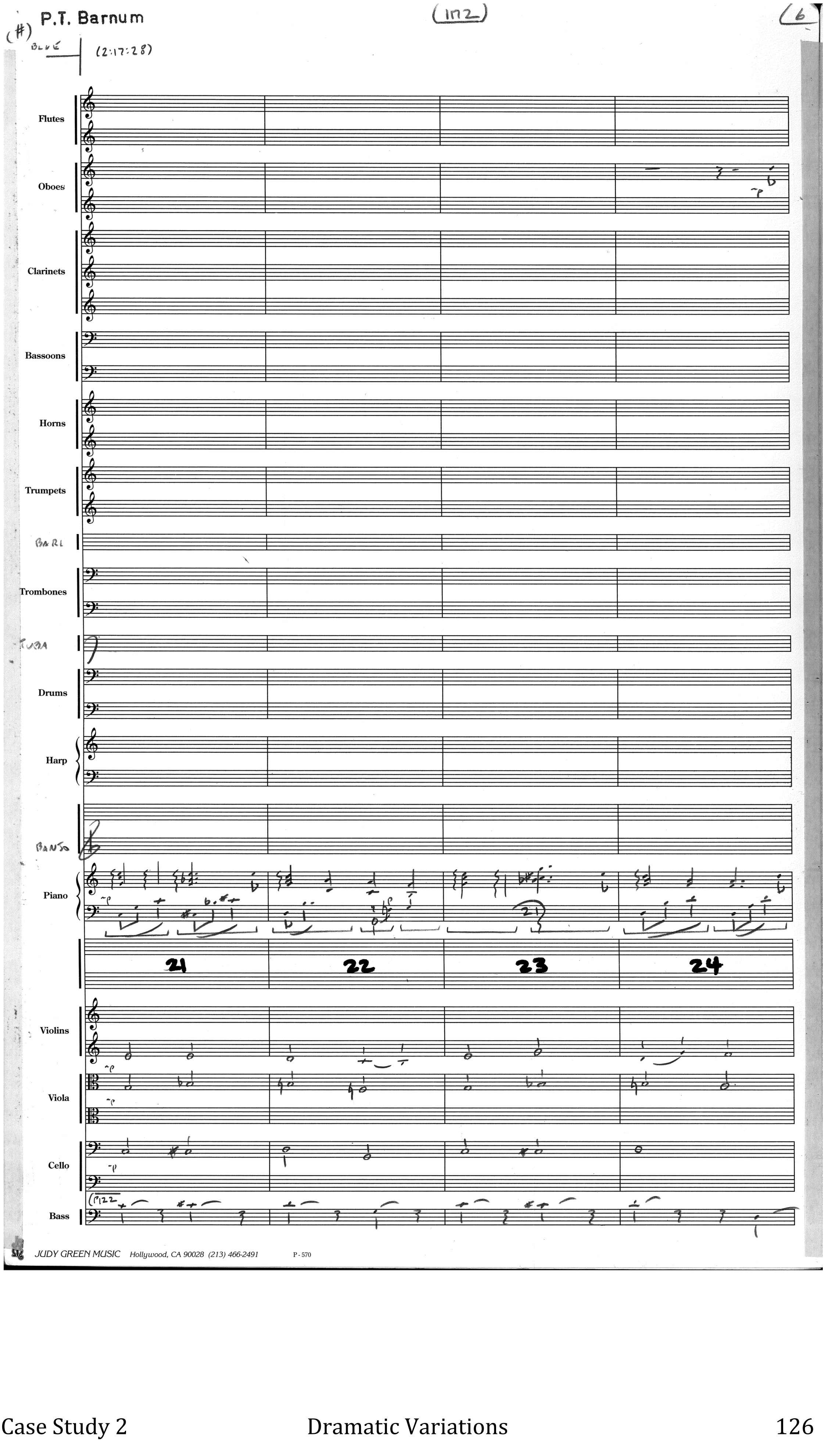

P.T. Barnum
(A ORCH)
(1M2)
1
1:01:02:10
CLIK = 23-2 / + FREE
♩ = 60
OBITUARY / COWS
COMP/ORCH -
HUMMIE MANN
(ASCAP)
(ANDANTE)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARITONE
Trombones
TUBA
Drums
Harp
BANJO
Piano
1
2
3
4
Violins
sub p
(COL)
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

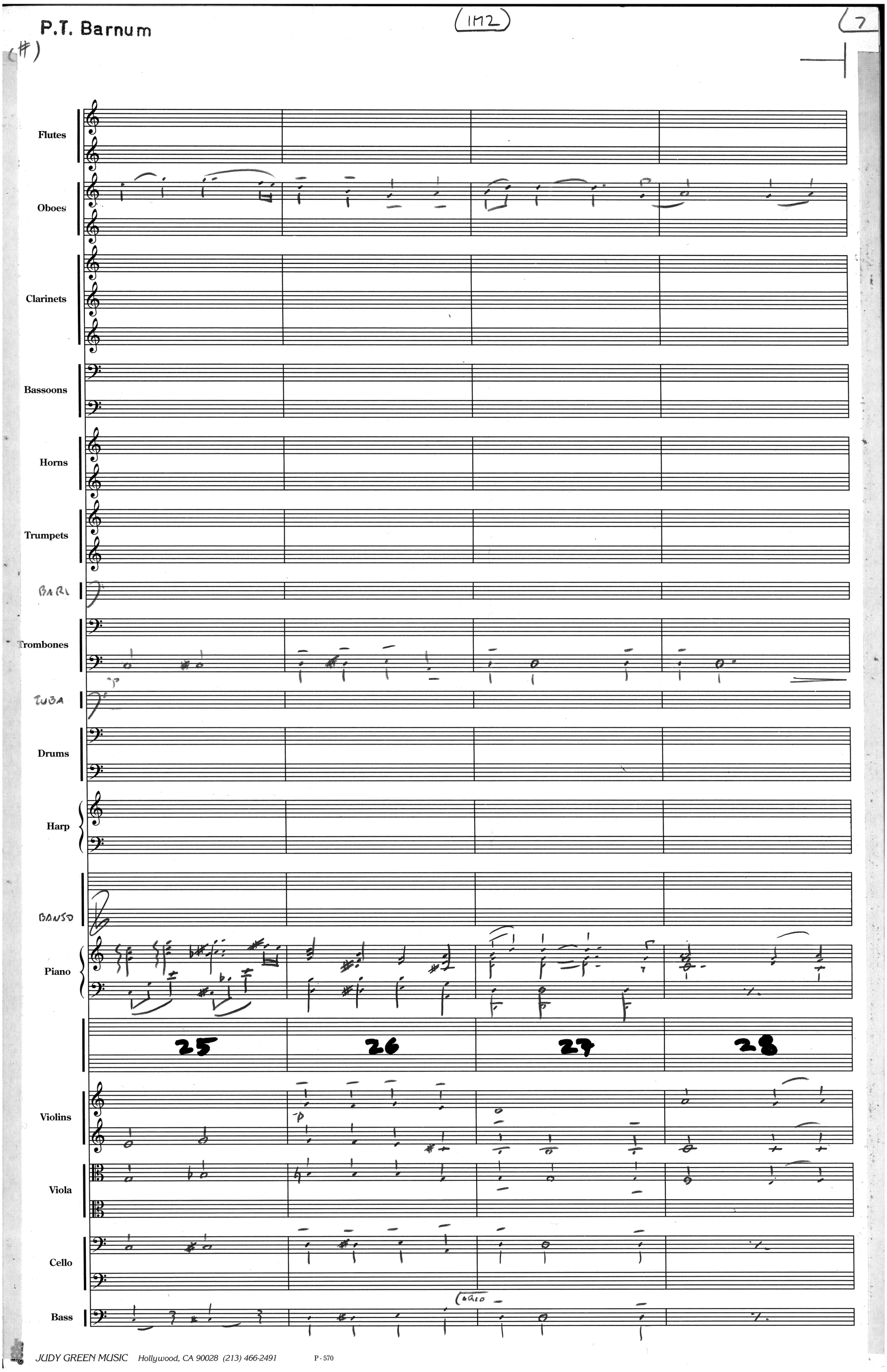

P.T. Barnum
(1m2)
2
(F♭)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
5
6
7
8
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

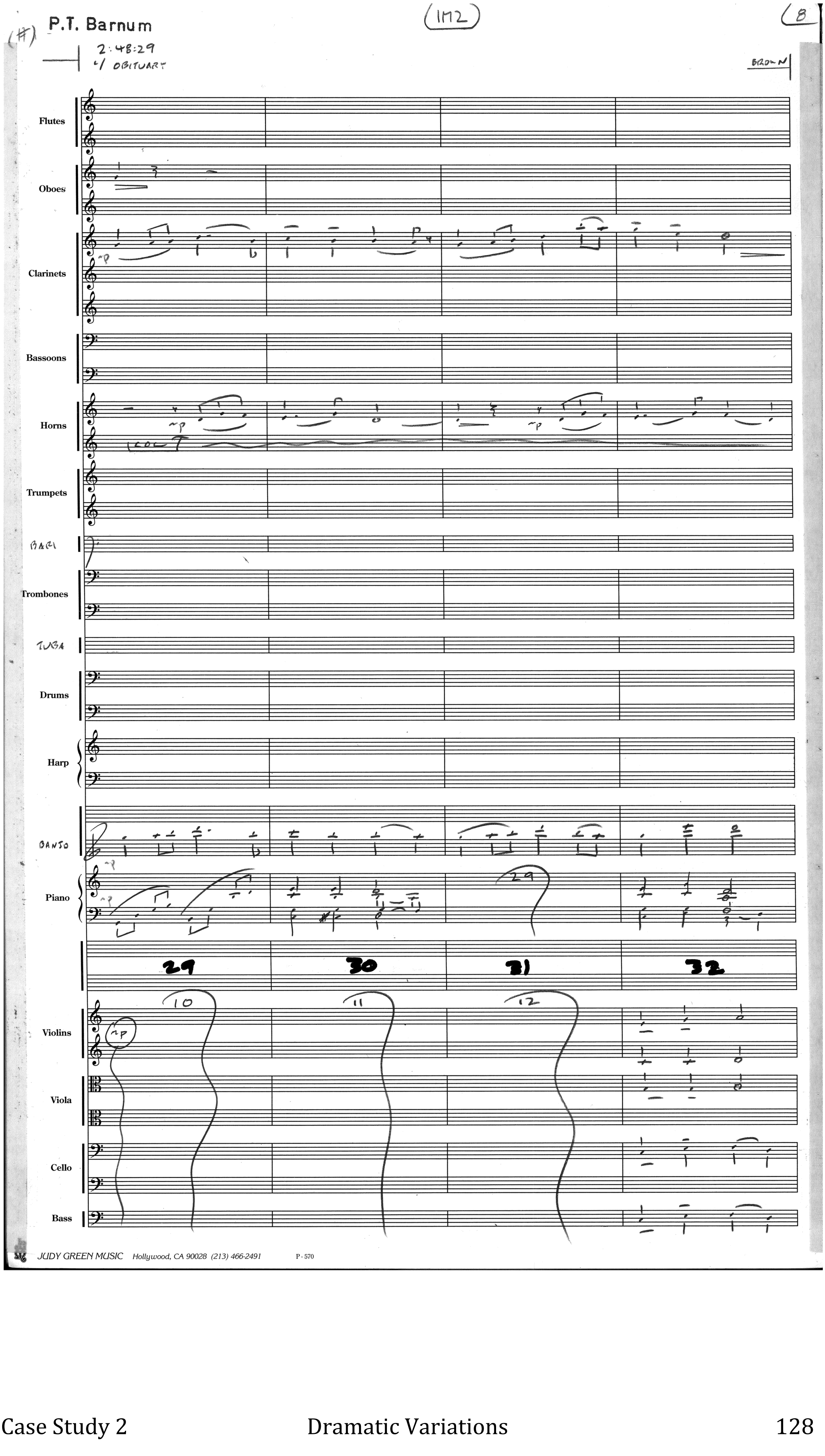

P.T. Barnum
(1M2)
3
(♭♭♭)
(1:35:09)
c/ NANCY ON STAIRS
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
(SOLO
Trombones
Drums
SUS CYM
(SUBTLY)
Harp
BANJO
Piano
9
10
11
12
Violins
Viola
Cello
Bass
POCO
p
mf
mp
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

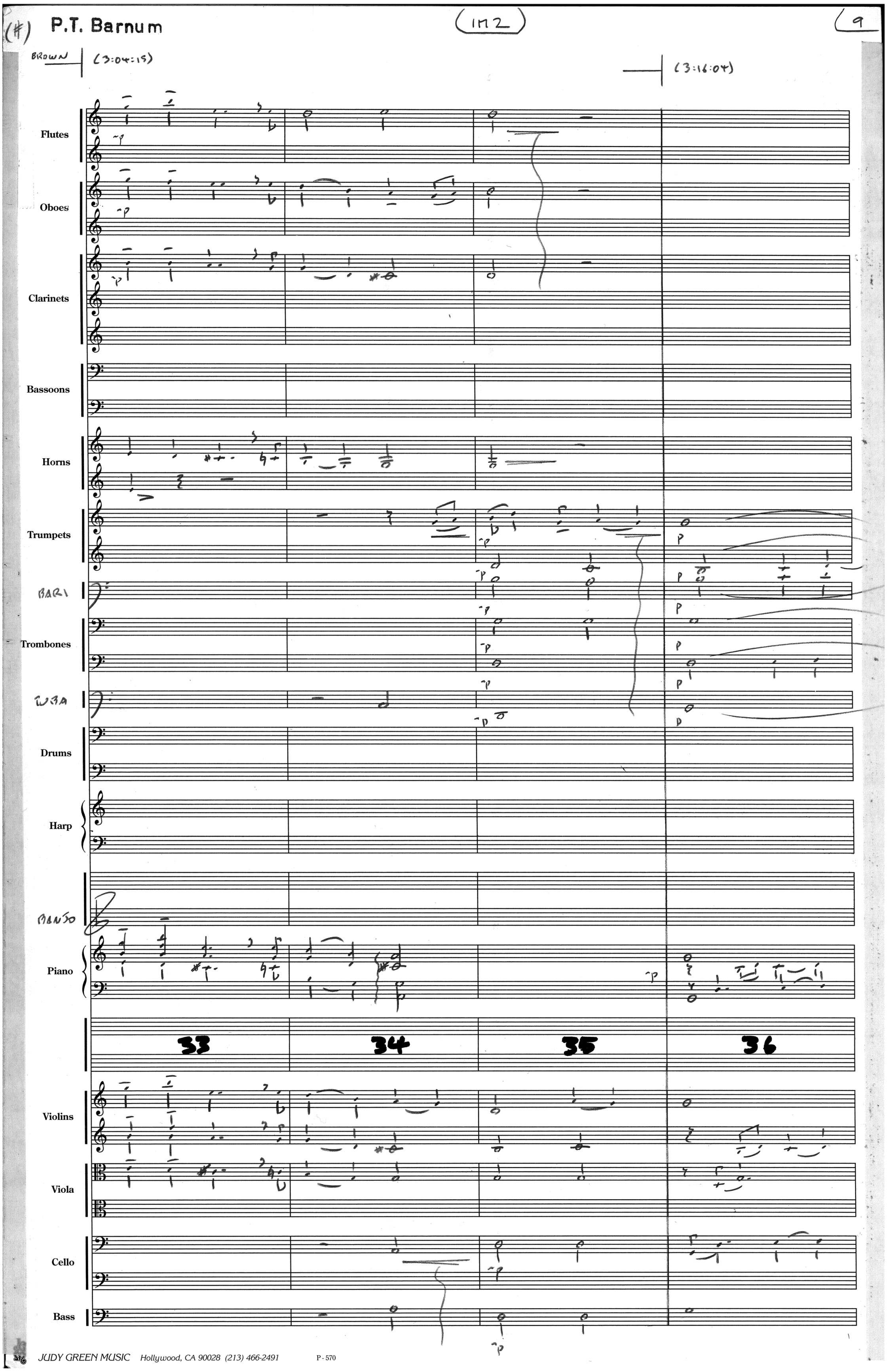

P.T. Barnum
(1M2)
(4
(#)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
13
14
15
16
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

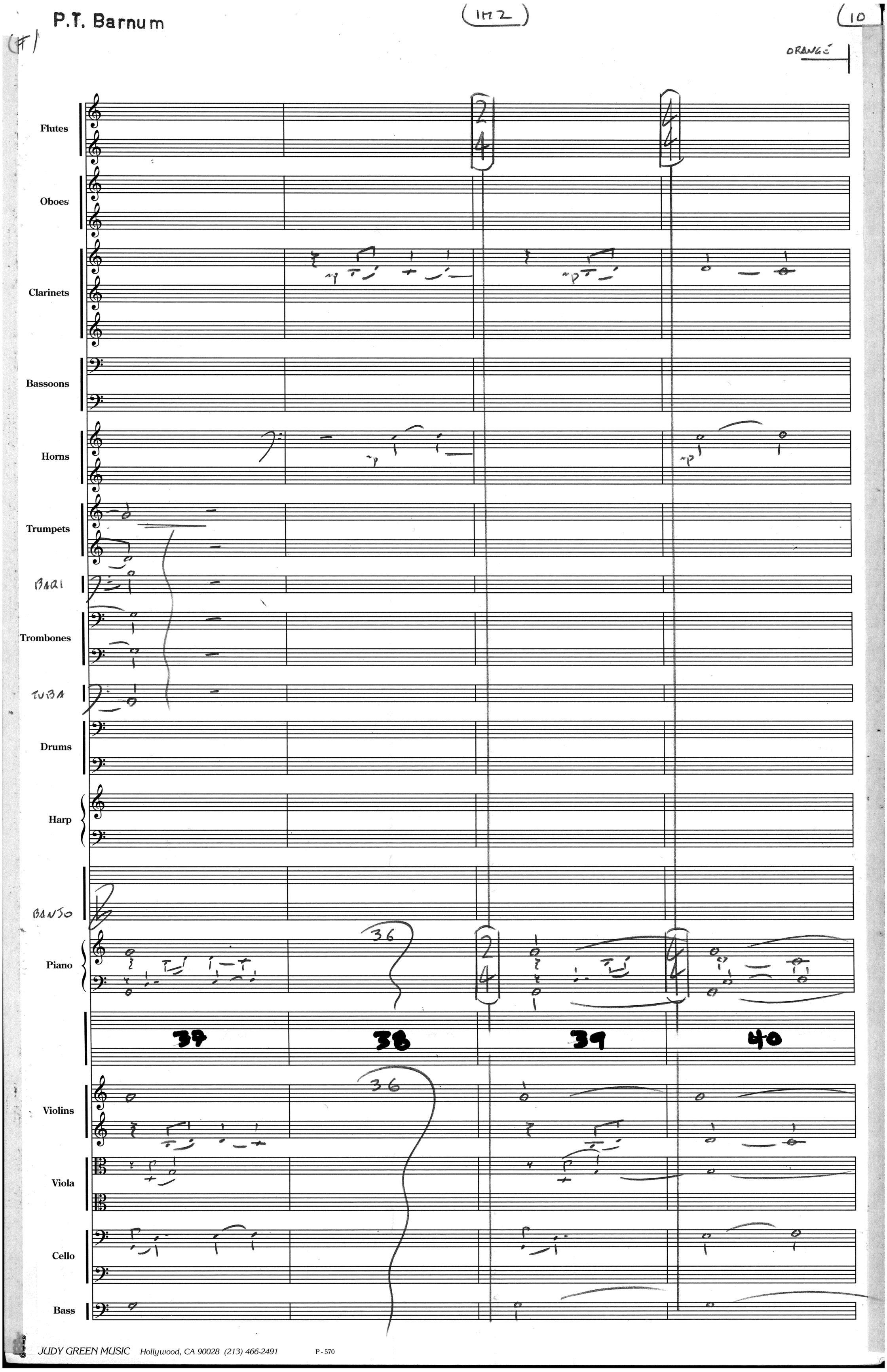

P.T. Barnum
(1M2)
5
(#)
(2:02:13)
INT. BEDROOM
(DIAL)
BLUE
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
SOLO
Piano
17
18
19
20
Violins
poco
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1112)
6
(#)
BLUE
(2:17:28)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
21
22
23
24
Violins
Viola
Cello
Bass
PIZZ
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1M2)
(7
(#)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
p
TUBA
Drums
Harp
BANJO
Piano
25
26
27
28
Violins
p
Viola
Cello
Bass
(ARCO)
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


(#)
P.T. Barnum
(1M2)
8
2:48:29
w/ OBITUARY
BROWN
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
29
30
31
32
10
11
12
Violins
Viola
Cello
Bass
~p
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


(#) P.T. Barnum
(1M2)
9
BROWN
(3:04:15)
(3:16:04)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
33
34
35
36
Violins
Viola
Cello
Bass
p
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1M2)
(10
(#1
ORANGE
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
36
2/4
4/4
37
38
39
40
Violins
36
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

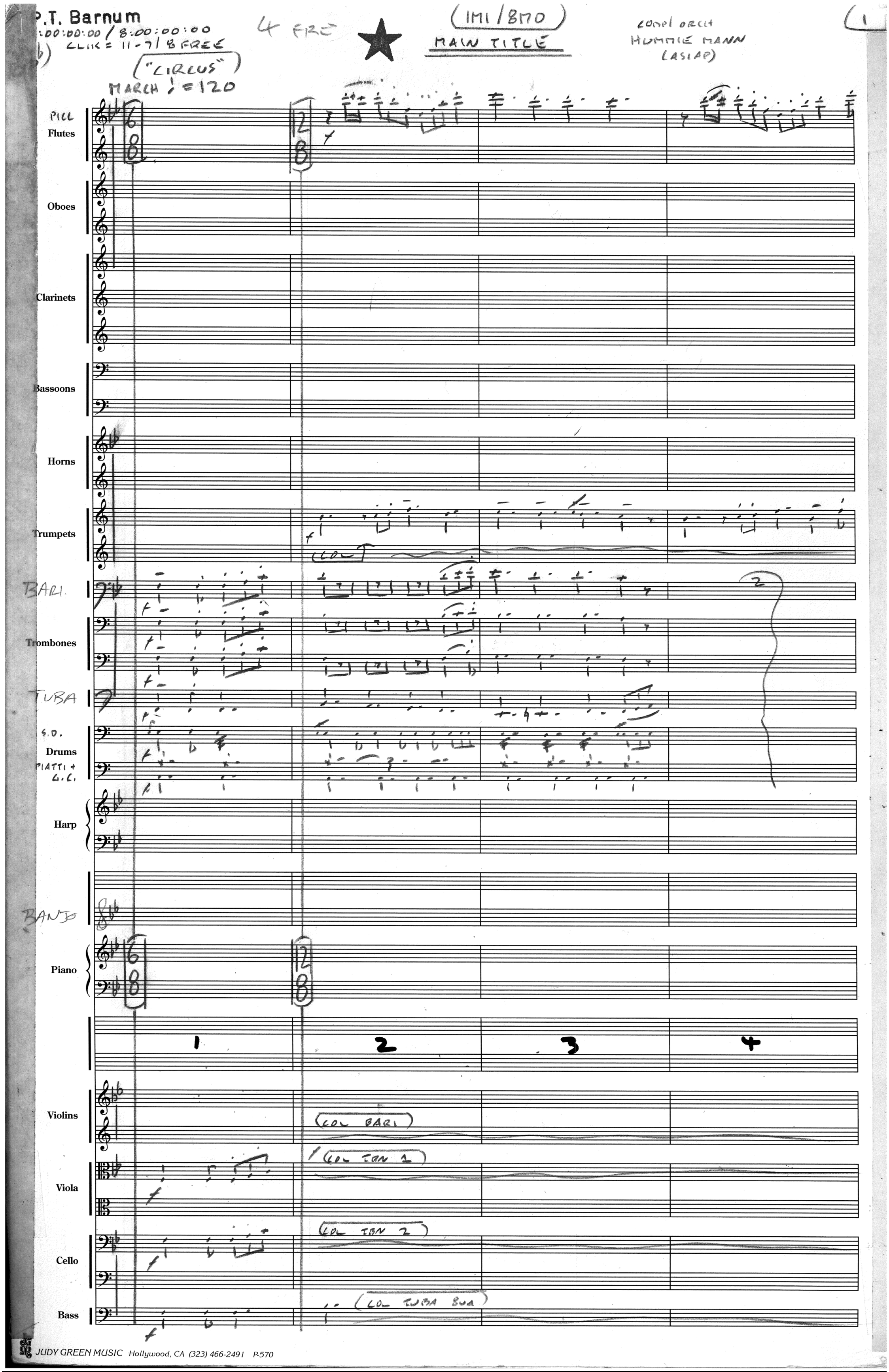
Example PTB 2 – Circus March (track 2) [Cue # 1M1/8M0 – "Main Title"]

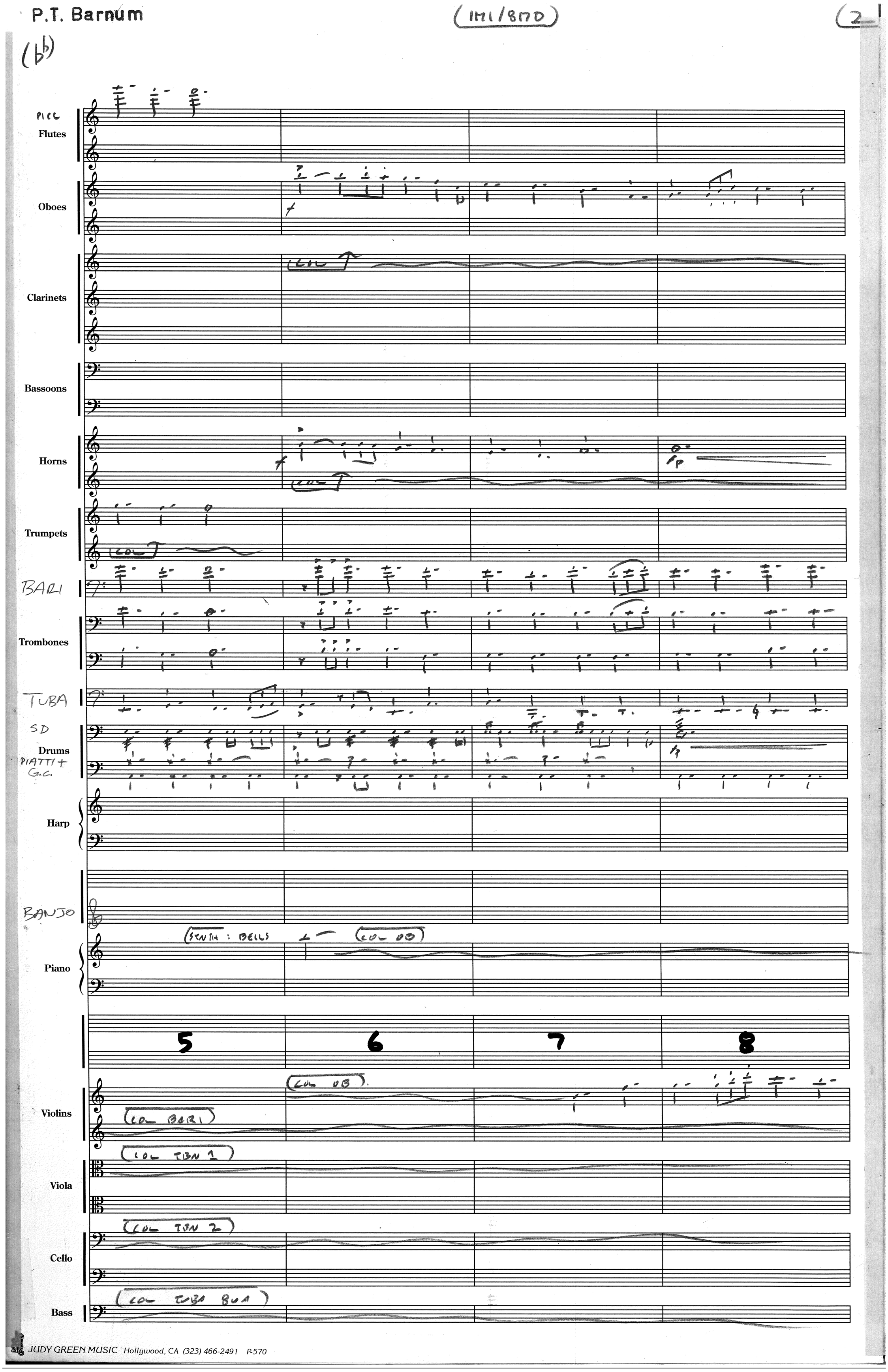
This cue was used to underscore a montage of still photographs of a circus parade marching down the main street of a period American town. This was the Main Title of the mini-series where the visuals do not tell part of the story, but give the viewer a sense of time and place while the credits are superimposed on top of the images.

There are a variety of techniques at work in this version of P.T.'s theme. Firstly the tempo is much brighter and appropriate to a march (approximately 120 BPM). There is an underlying rhythm to the texture of a 12/8 feel and a descending bass line common to marches. The melody also plays into the 12/8 feel with some rhythmic modifications and the addition of some grace notes. The harmonies, although similar to the original, have a few different chord inversions (accommodating the new bass line) as well as some changes of harmonic progression incorporating some additional secondary dominant chords. There is also the use of some high piccolo flourishes that have become a trademark of this style of composition. The instrumentation is modeled after that of a marching band – trumpet melody with lower brass accompaniment (although reinforced with string doublings) and the use of typical marching band percussion (snare, grand casa and glockenspiel).

The bridge section of the piece introduces another period style of orchestration, borrowed from might be best described as a vaudeville ensemble – reminiscent of a soft shoe routine - with the use of the banjo, side of the snare drum as the main percussion element all supported by the use of light pizzicato strings.

Here we can see the first example of keeping the melodic element the same, or at least quite similar to the previous example, but changing the textural/harmonic element to give the piece a completely different dramatic context.


P.T. Barnum
:00:00:00 / 8:00:00:00
CLICK = 11-7/8 FREE
("CIRCUS")
MARCH ♩=120
4 FREE
(1M1/8M0)
MAIN TITLE
COMPL ORCH
HUMMIE MANN
(ASCAP)
1
PICC
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
(CON)
BARI
Trombones
TUBA
S.D.
Drums
PIATTI + G.C.
Harp
BANJO
Piano
1
2
3
4
Violins
(COL BARI)
Viola
(COL TBN 2)
Cello
(COL TBN 2)
Bass
(COL TUBA 8VA)
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(1M1/8MD)
2
(b♭)
PICC
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
SD
Drums
PIATTI + G.C.
Harp
BANJO
Piano
Violins
Viola
Cello
Bass
(COL T)
(COL T)
(COL T)
(SYNTH : BELLS
(COL OB)
(COL OB)
(COL BARI)
(COL TBN 1)
(COL TBN 2)
(COL TUBA 8VA)
fp
5
6
7
8
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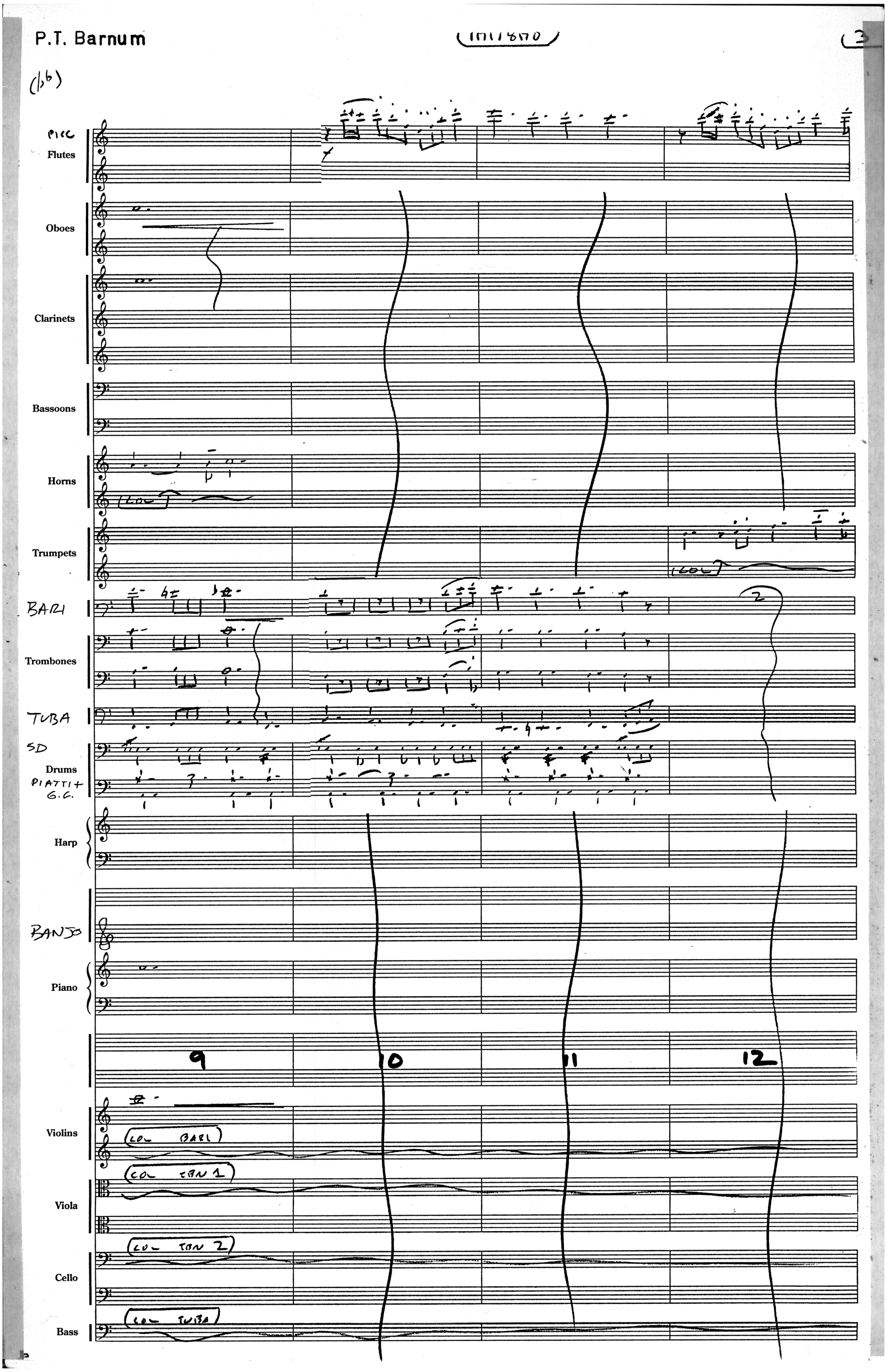
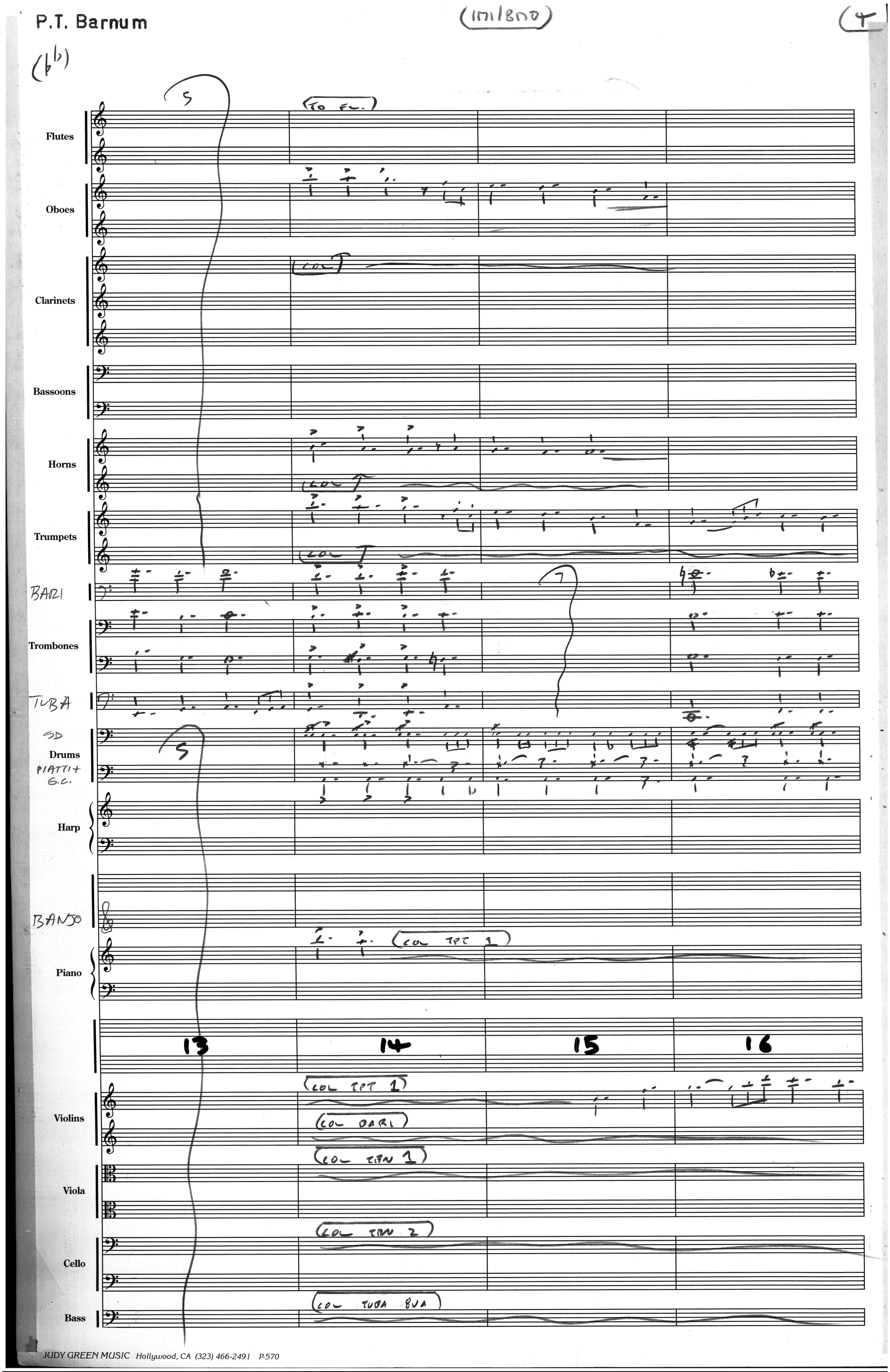
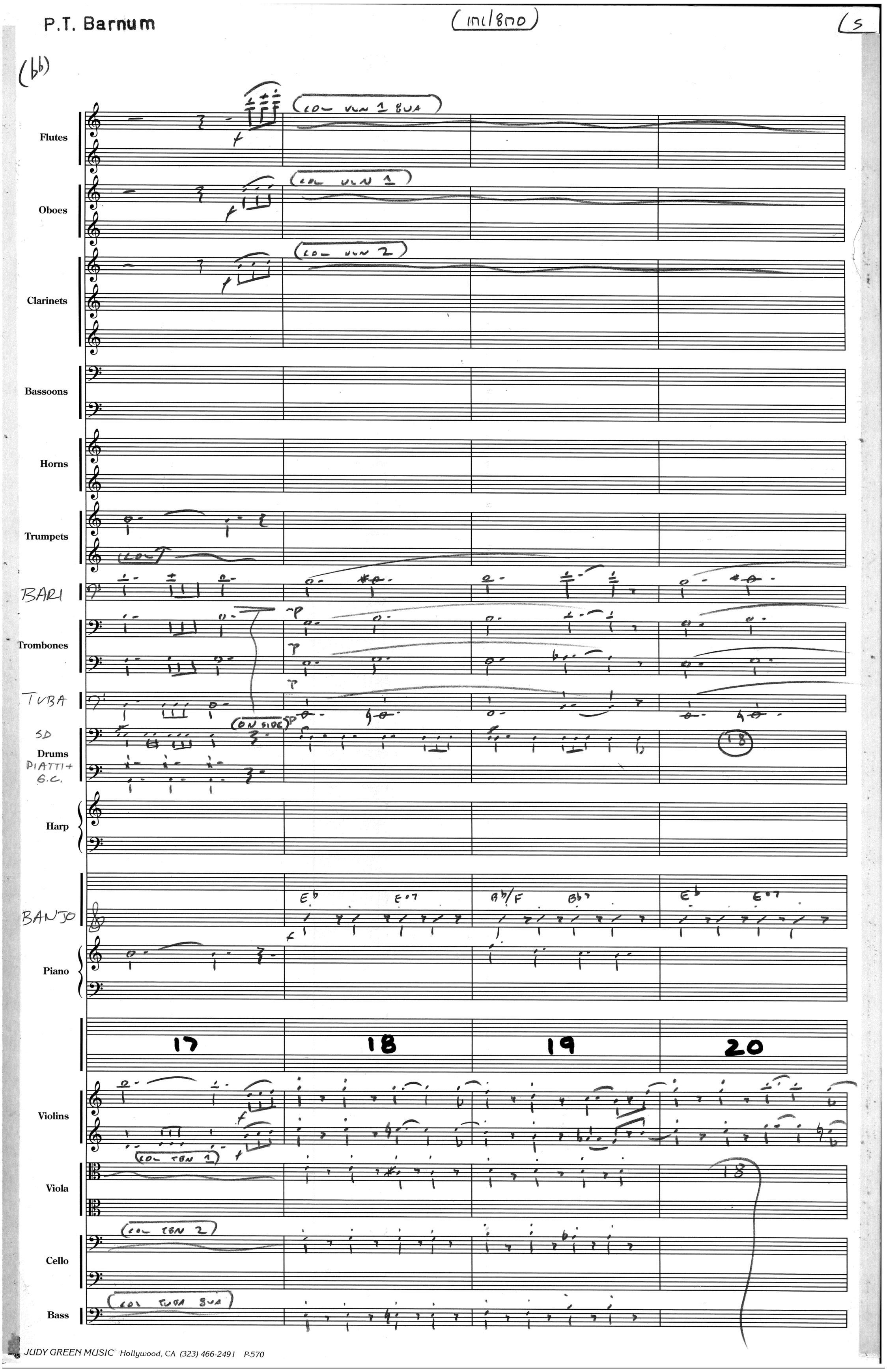
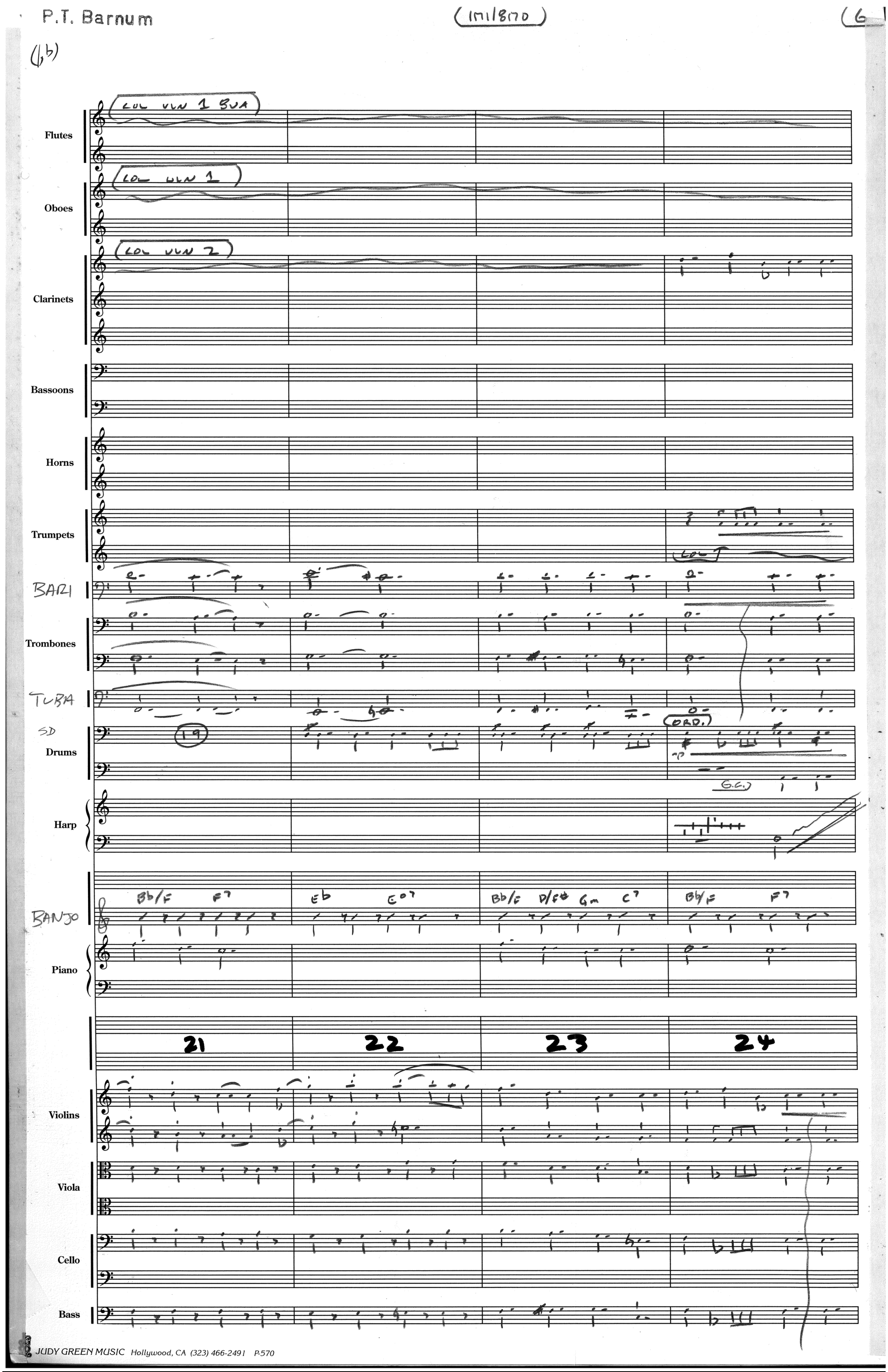
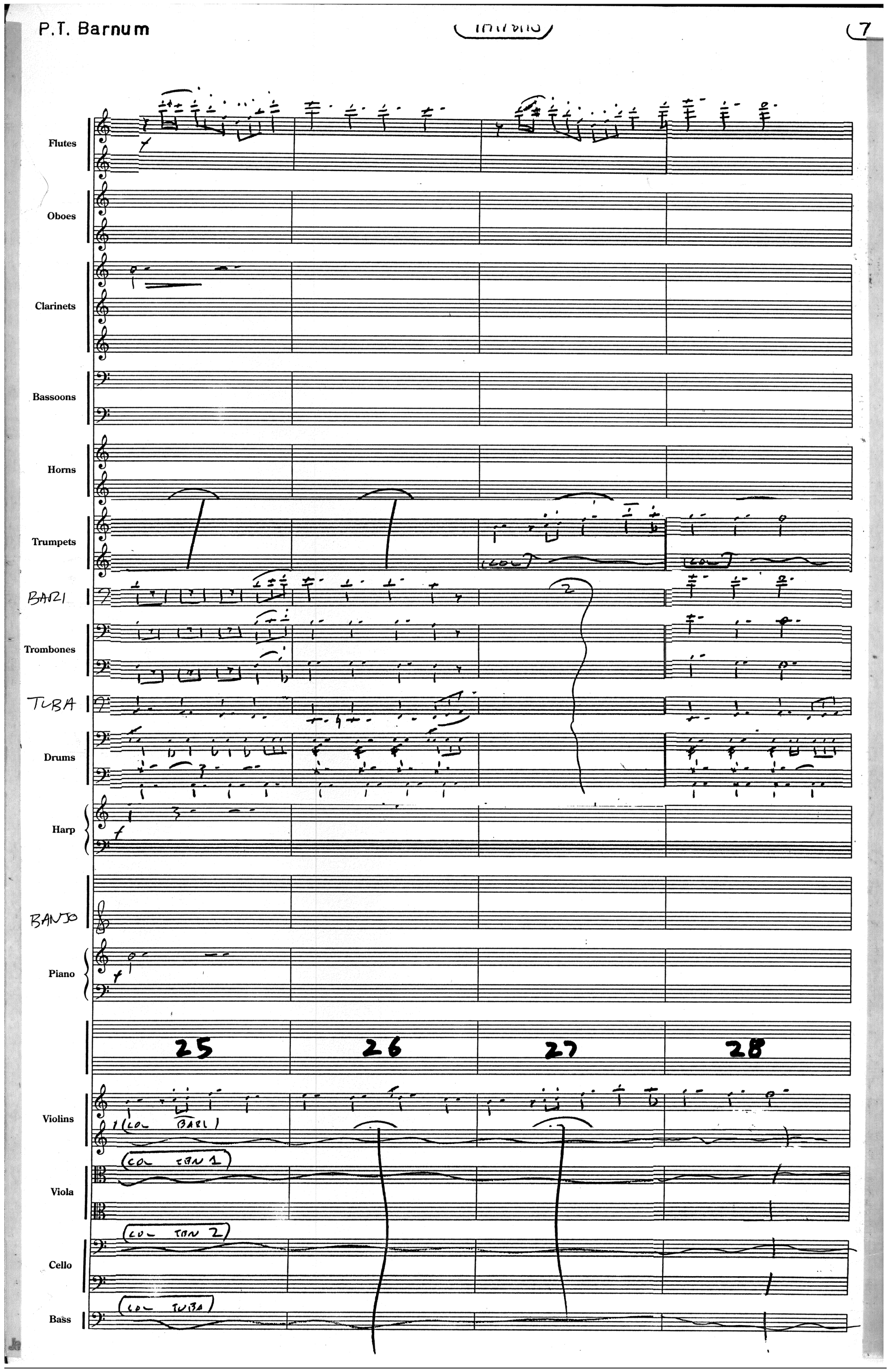
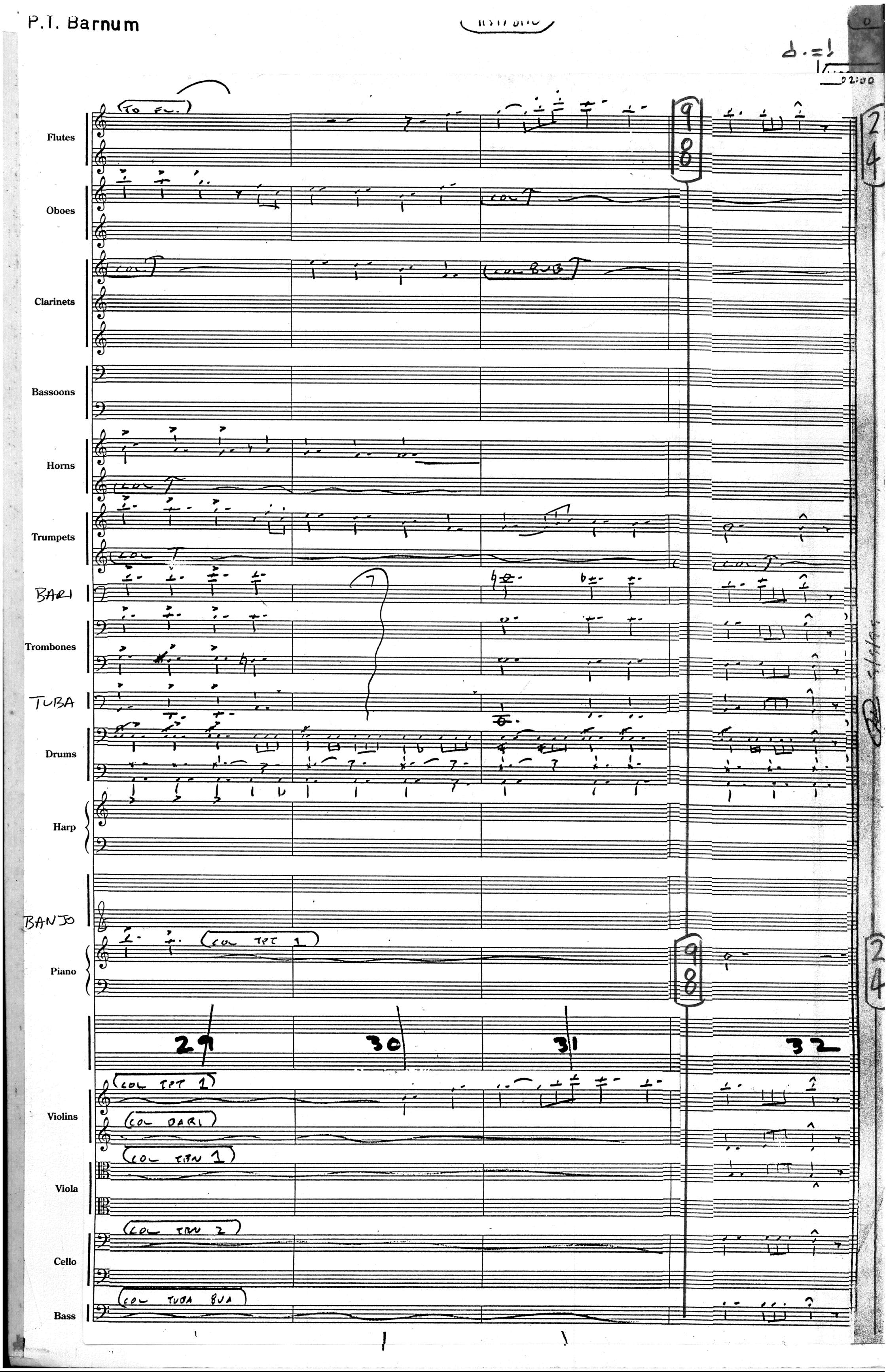

P.T. Barnum
3
(♭♭)
PICC
Flutes
Oboes
Clarinets
Bassoons
Horns
(LOW)
Trumpets
(LOW)
BARI
Trombones
TUBA
SD
Drums
PIATTI + G.C.
Harp
BANJO
Piano
9
10
11
12
2
Violins
(COL BARI)
(COL TBN 1)
Viola
(COL TBN 2)
Cello
(COL TUBA)
Bass


P.T. Barnum
(1M1/8NO)
(4)
(♭♭)
5
Flutes
(TO FL.)
Oboes
Clarinets
(COL
Bassoons
Horns
(COL
Trumpets
(COL
(COL
BARI
7
Trombones
TUBA
SD
Drums
PIATTI + G.C.
5
Harp
BANJO
Piano
(COL TPT 1)
13
14
15
16
Violins
(COL TPT 1)
(COL BARI)
Viola
(COL TRN 1)
Cello
(COL TRN 2)
Bass
(COL TUBA 8VA)
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(m18no)
(5
(bb)
(col vln 1 8va)
(col vln 1)
(col vln 2)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
(col)
BARI
Trombones
TUBA
(on side)
SD
Drums
PIATTI + G.C.
18
Harp
BANJO
E♭ E°7
A♭/F B♭7
E♭ E°7
Piano
17
18
19
20
Violins
(col tbn 1)
Viola
18
(col tbn 2)
Cello
(col tuba 8va)
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(1m1/8m0)
6
COL VLN 1 8VA
Flutes
COL VLN 1
Oboes
COL VLN 2
Clarinets
Bassoons
Horns
Trumpets
COL T
BARI
Trombones
TUBA
SD
Drums
19
ORD.
G.C.
Harp
Bb/F F7
Eb C°7
Bb/F D/F# Gm C7
Bb/F F7
BANJO
Piano
21
22
23
24
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
7
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
25
26
27
28
Violins
(col BARI)
(col TBN 1)
Viola
(col TBN 2)
Cello
(col TUBA)
Bass

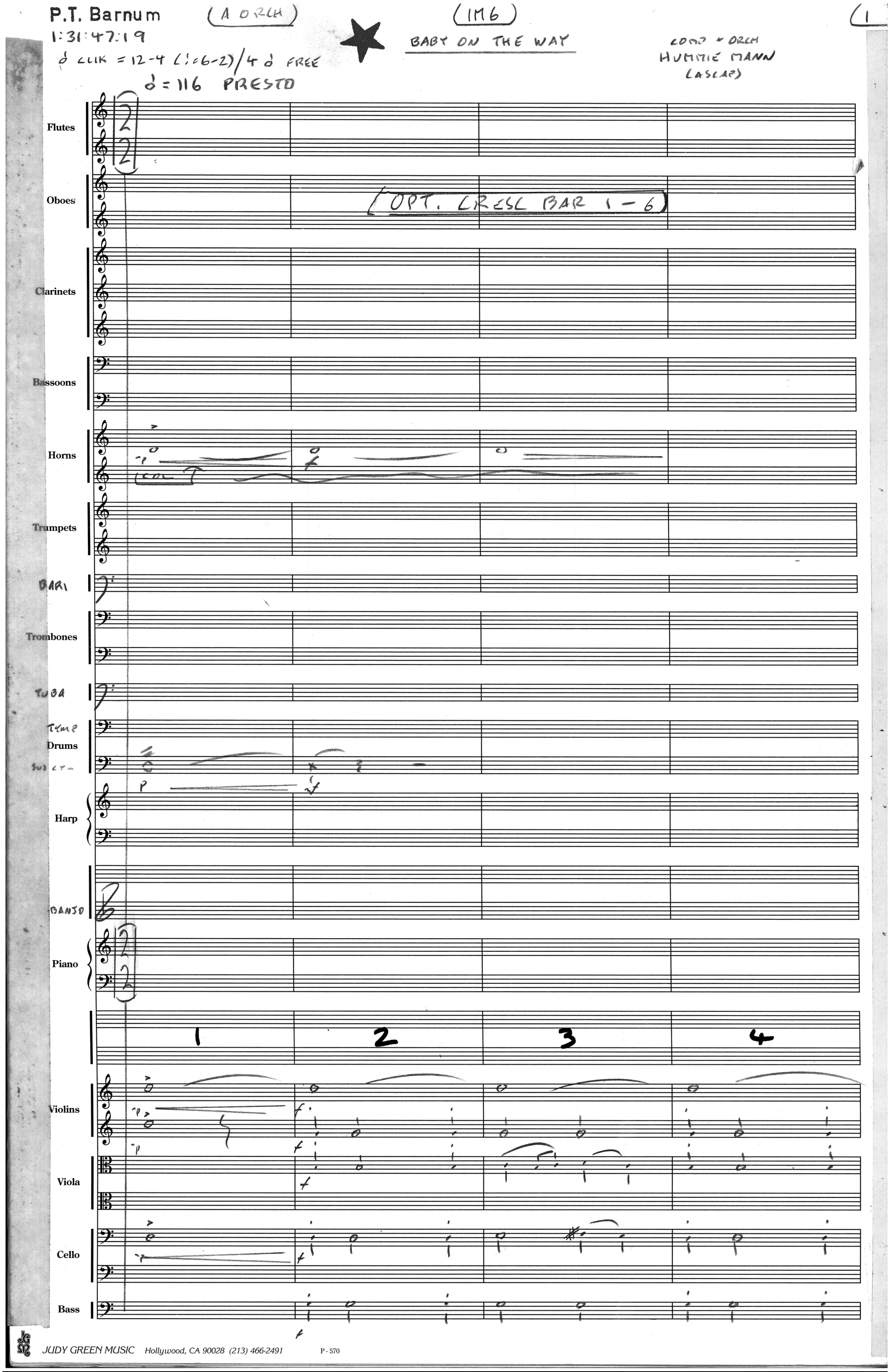

P.T. Barnum
02:00
To FL.
Flutes
Oboes
col T
Clarinets
col 8vb T
Bassoons
Horns
col T
Trumpets
col T
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
col TPT 1
9
8
2
4
29
30
31
32
col TPT 1
Violins
col BARI
col TRN 1
Viola
col TRN 2
Cello
col TUBA 8VA
Bass

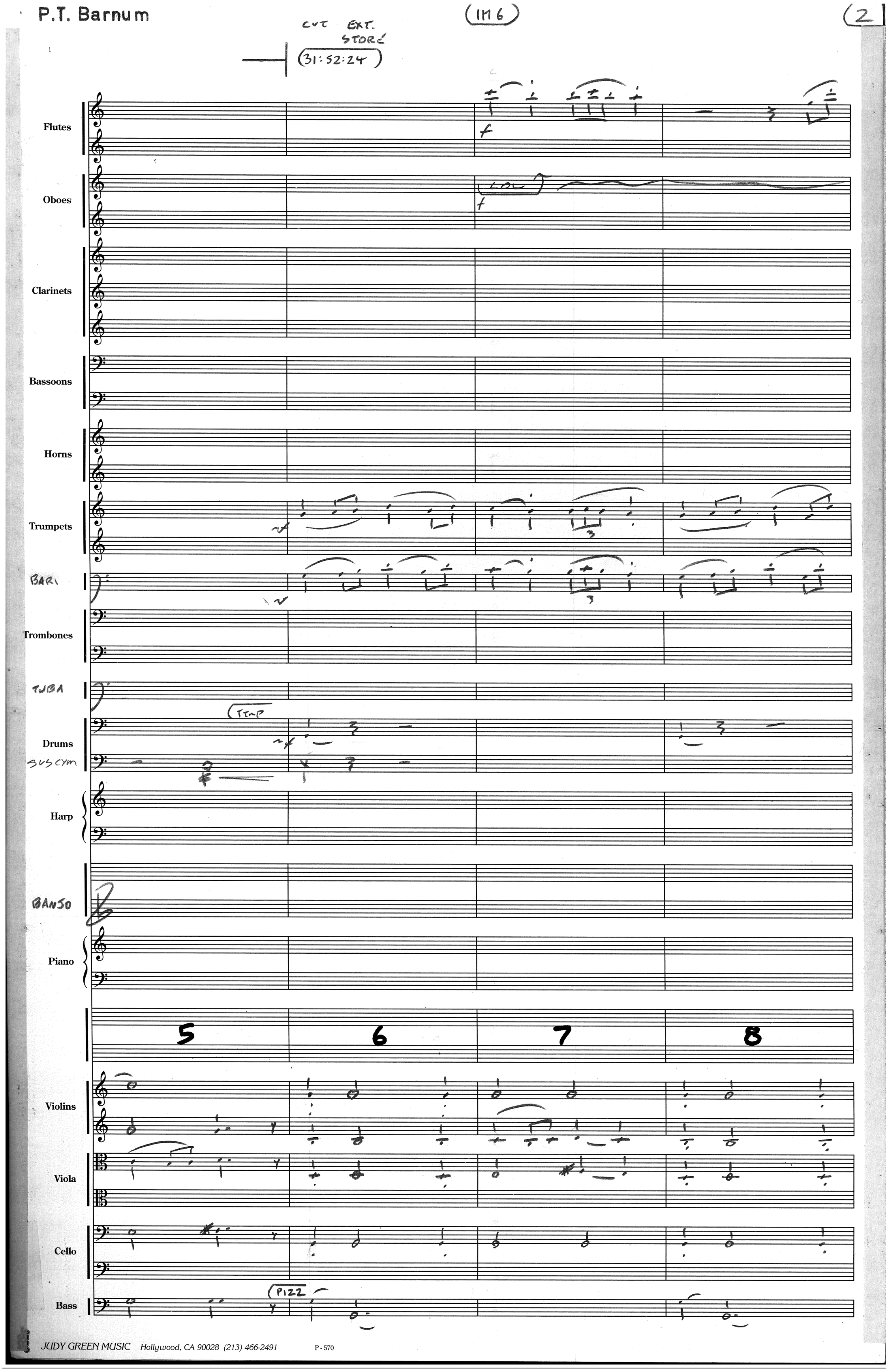
Example PTB 3 – Excited (track 3) [Cue # 1M6 – "Baby On The Way"]

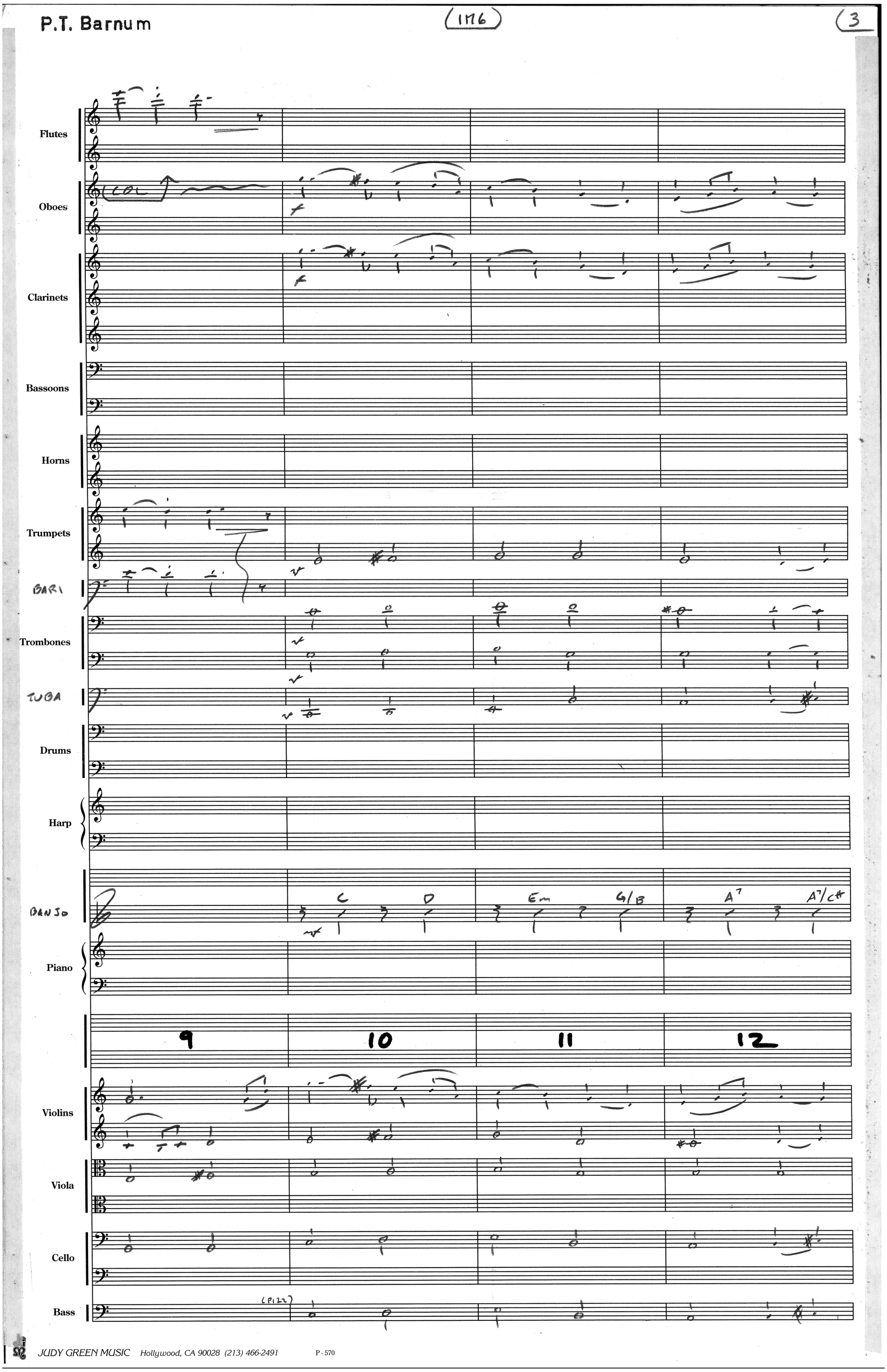
In this section of the film, P.T. has just received the news that his wife has delivered their first child and rushes from the general store he is working at to go and meet the new member of his family.

My goal here was to use some of the techniques mentioned earlier to make the piece feel full of energy and almost a bit frantic. I chose to use cut time in order to accelerate the melodic element and also added some triplet figures into the melody. In the orchestration, some sections of the theme are doubled up an octave in an effort to surprise the listener and also create a brighter air of excitement. The accompaniment texture of the opening phrase has a very propulsive rhythm and a rather large departure from the original harmonies. At the end of the statement of the theme's first phrase, the harmonies change at a more rapid pace to add additional propulsion to the piece. You can also hear at the end of the cue that there are a few measures of a new constant eighth note melodic element that then slows down both in the rhythm of the melody, the rate of the changes of the harmony, ultimately making use of an actual ritard – all of these were used to help the music meet a dramatic climax timing and then relax the dramatic intent.

Of note in this cue is that there is some new melodic material introduced. Most, if not all, film scores are constantly additive in terms of the material used to score the film. New secondary motifs appear throughout the film, often showing up again later in the score or sometimes only getting a single use. Also, there are often moments in a film score where there is no melodic element at all – thematic or otherwise – and where the scene is being scored totally by a textural element. In those cases, the composer may bring in a thematic melody as a way to enhance a particular dramatic moment through simply the addition of a theme.


P.T. Barnum
(A ORCH)
(1M6)
(1
1:31:47:19
𝅗𝅥 CLIK = 12-4 (1=6-2)/4 𝅗𝅥 FREE
𝅗𝅥 = 116 PRESTO
BABY ON THE WAY
COMP + ORCH
HUMMIE MANN
(ASCAP)
Flutes
Oboes
(OPT. CRESC BAR 1-6)
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
TYMP
Drums
SUS CYM
Harp
BANJO
Piano
1
2
3
4
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1M6)
(2
CUT EXT. STORE
(31:52:24)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
SUS CYM
TIMP
Harp
BANJO
Piano
5
6
7
8
Violins
Viola
Cello
Bass
PIZZ
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1M6)
3
Flutes
Oboes
COL
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
C
D
Em
G/B
A7
A7/C#
Piano
9
10
11
12
Violins
Viola
Cello
Bass
(PIZZ)
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
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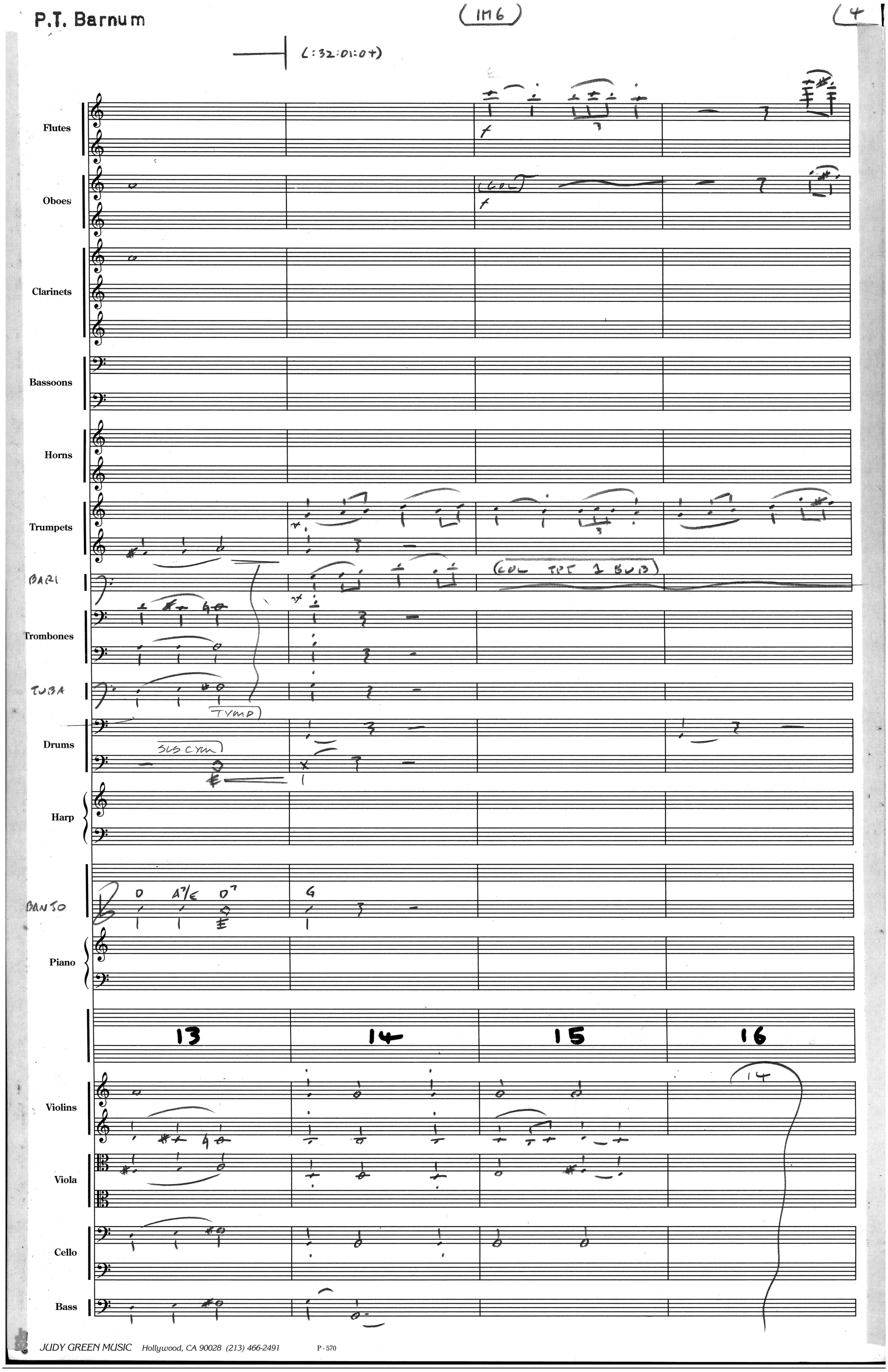
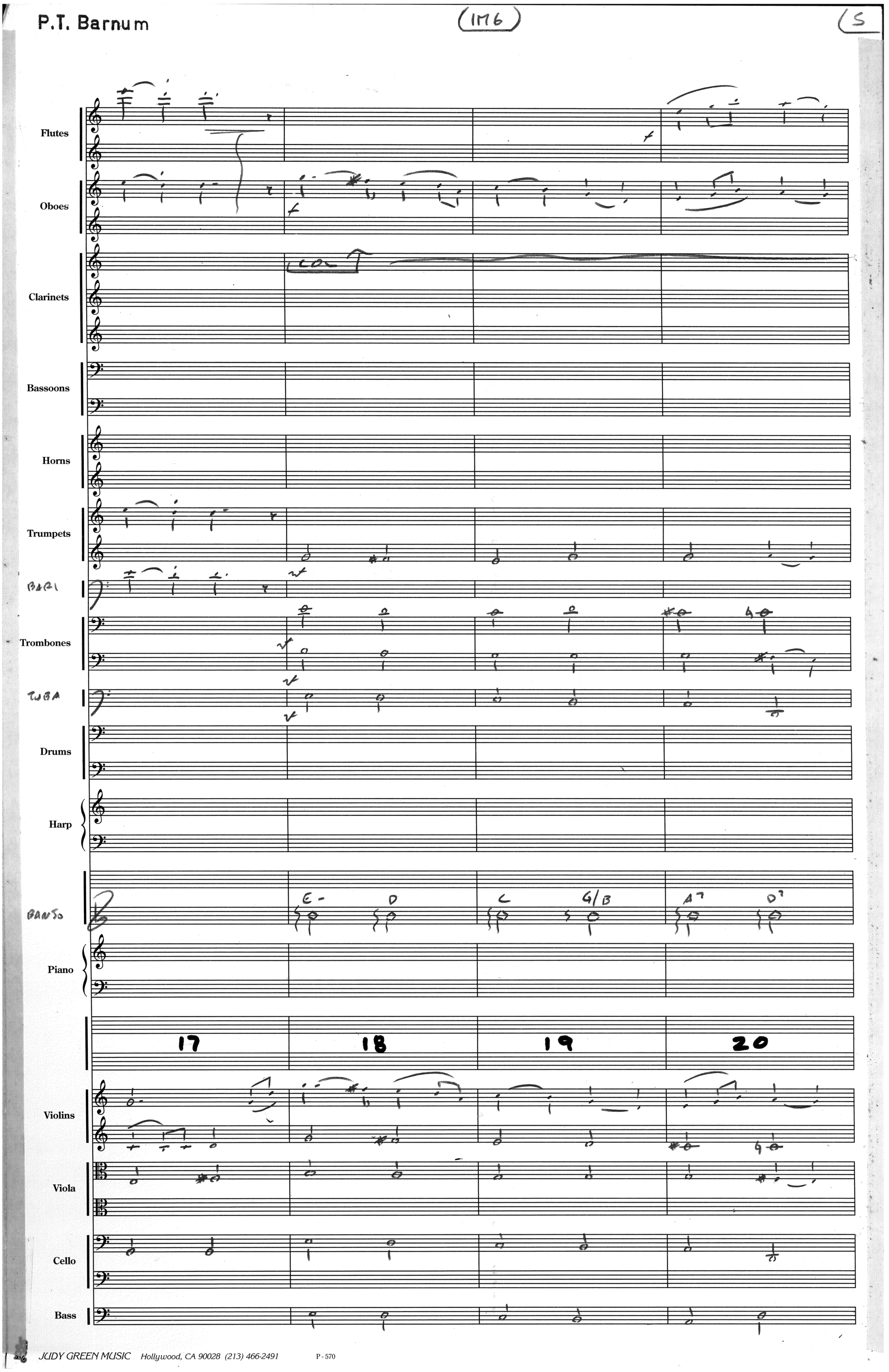
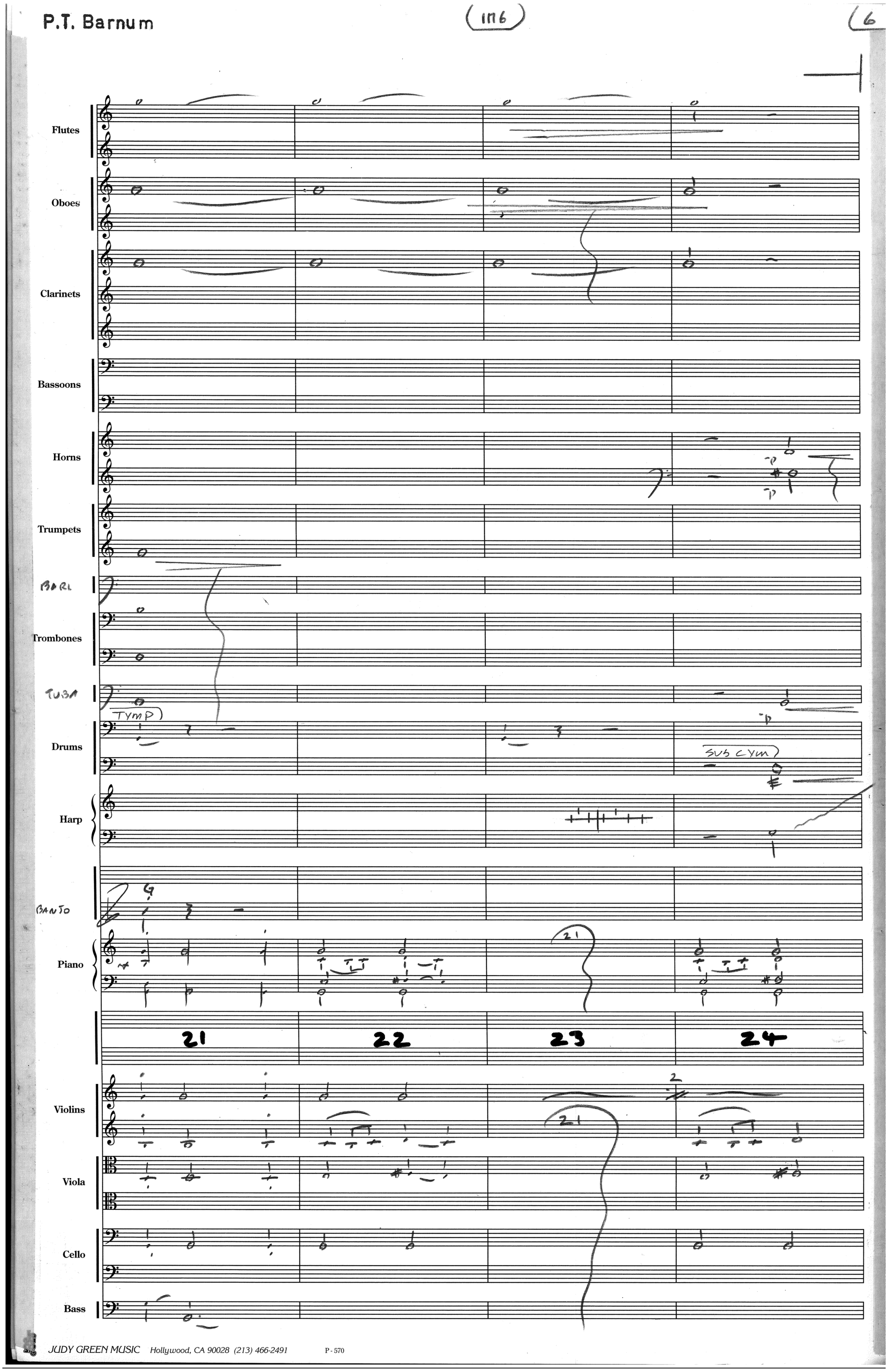
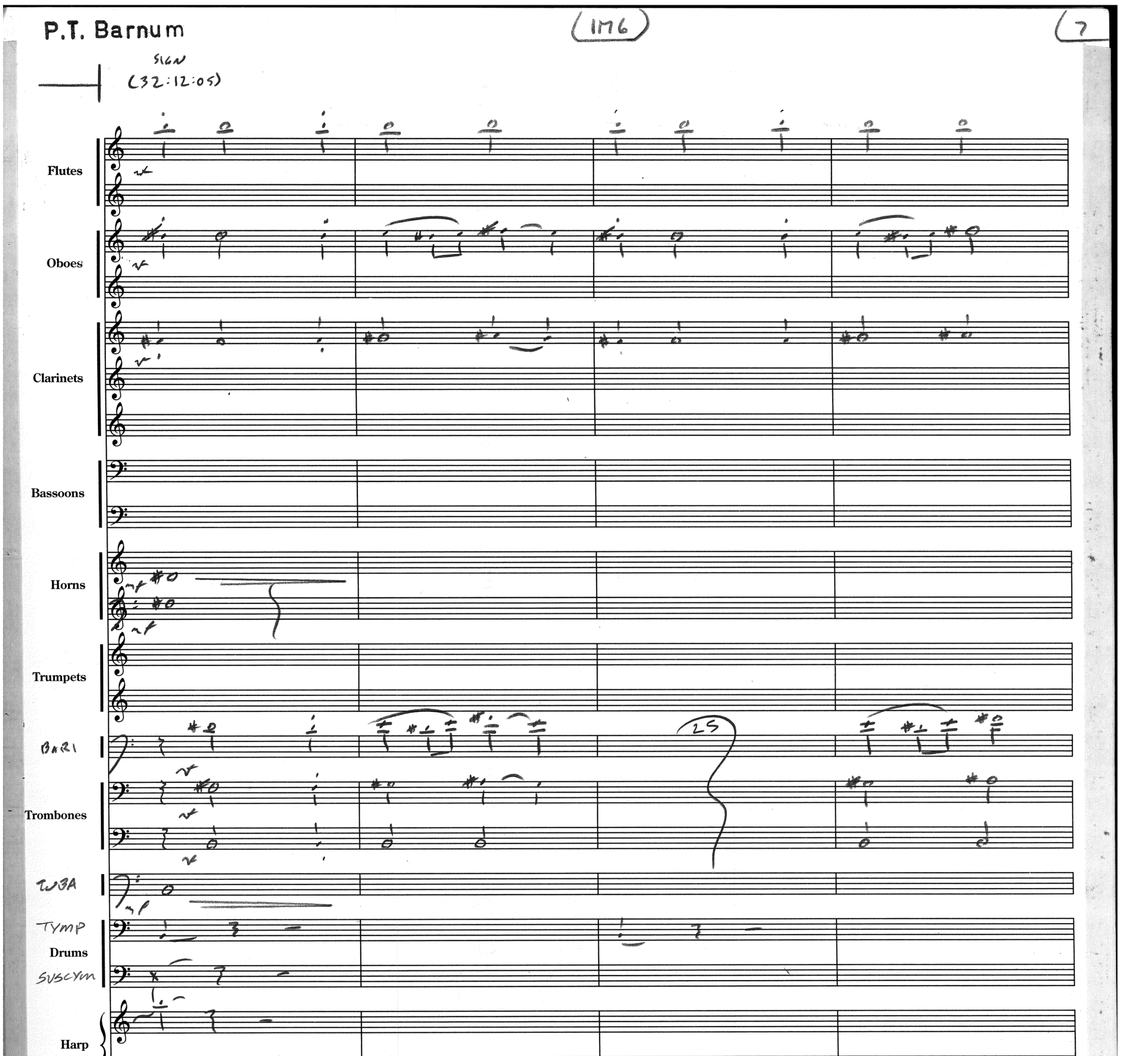
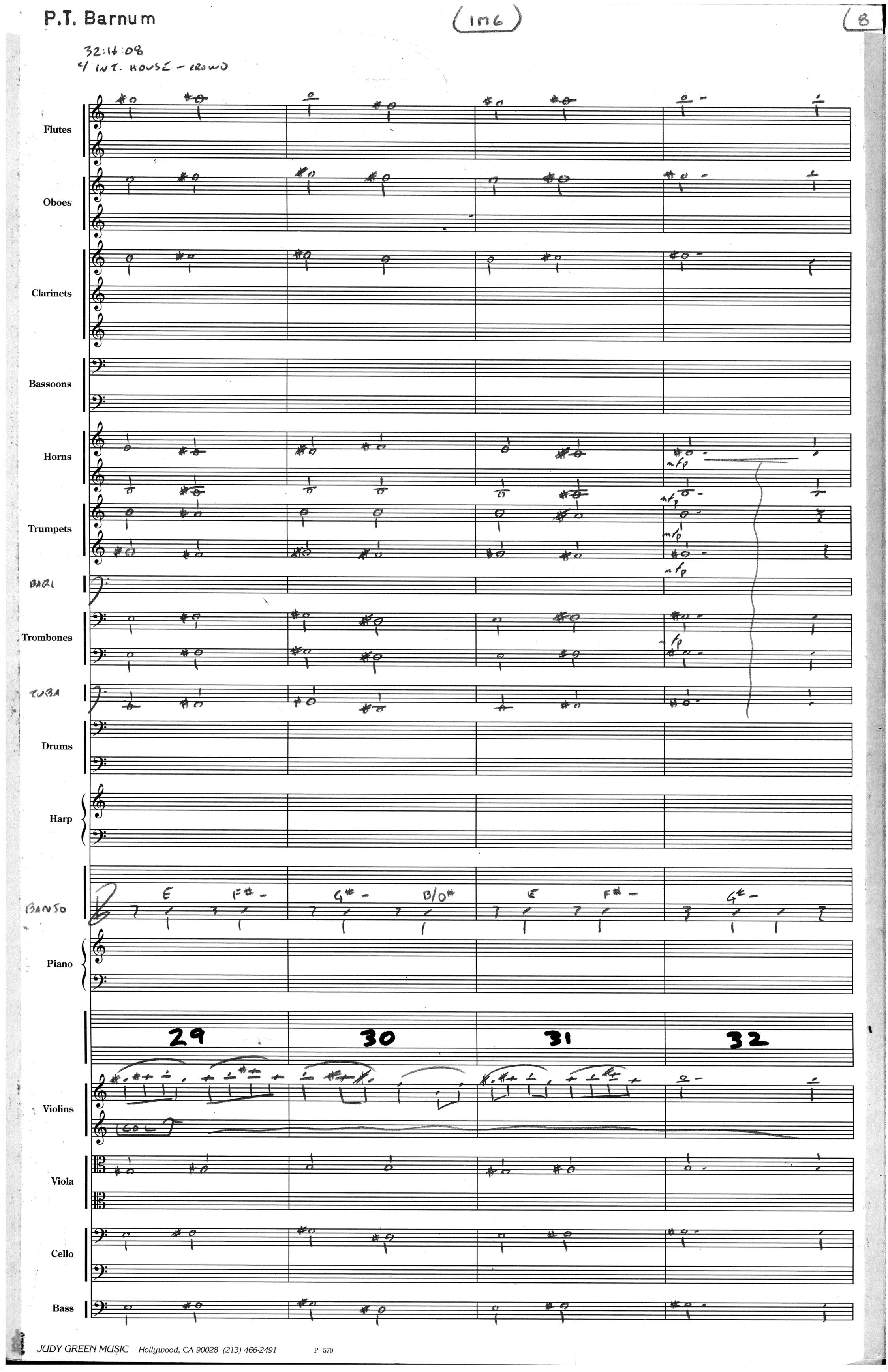
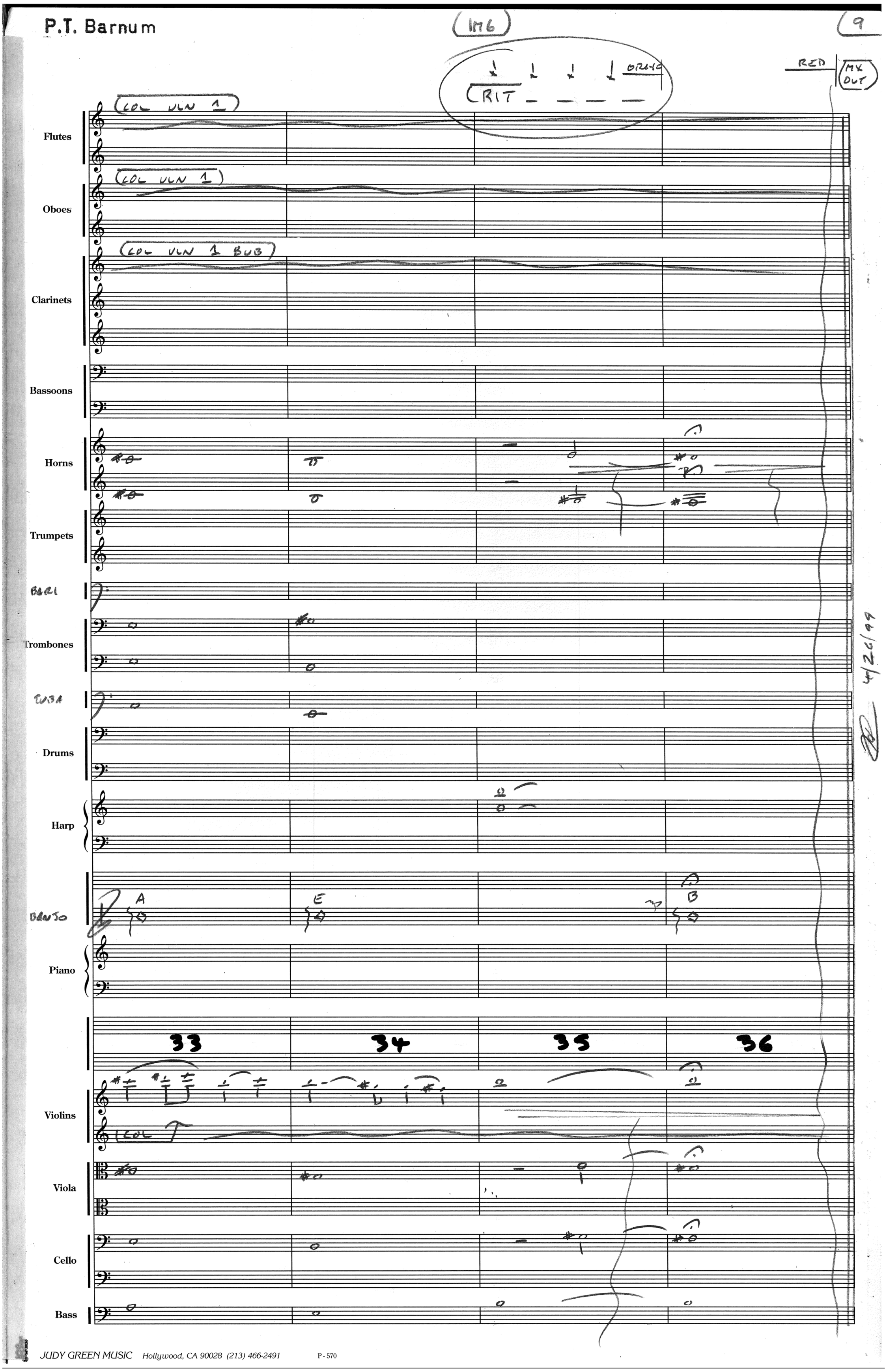

P.T. Barnum
(1M6)
(4
(:32:01:04)
Flutes
f
Oboes
(COL
f
Clarinets
Bassoons
Horns
Trumpets
BARI
(COL TPT 1 8VB)
Trombones
TUBA
TYMP
Drums
SUS CYM
Harp
BANJO
D
A7/E
D7
G
Piano
13
14
15
16
Violins
14
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(IM6)
(S
Flutes
Oboes
Clarinets
COL
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
E-
D
C
G/B
A7
D7
Piano
17
18
19
20
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(116)
6
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
TYMP
Drums
SUS CYM
Harp
BANJO
Piano
21
22
23
24
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1M6)
7
SIGN
(32:12:05)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
TYMP
Drums
SUSCYM
Harp
BANJO
Piano
25
26
27
28
Violins
Viola
Cello
Bass
ARCO
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(1m6)
8
32:16:08
c/ INT. HOUSE - CROWD
Flutes
Oboes
Clarinets
Bassoons
Horns
mfp
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
E
F# -
G# -
B/D#
Piano
29
30
31
32
Violins
COL
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
IM6
9
ORIG
CRIT
RED
MX OUT
COL VLN 1
COL VLN 1
COL VLN 1 8VB
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
A
E
B
Piano
33
34
35
36
Violins
COL I
Viola
Cello
Bass
4/20/99
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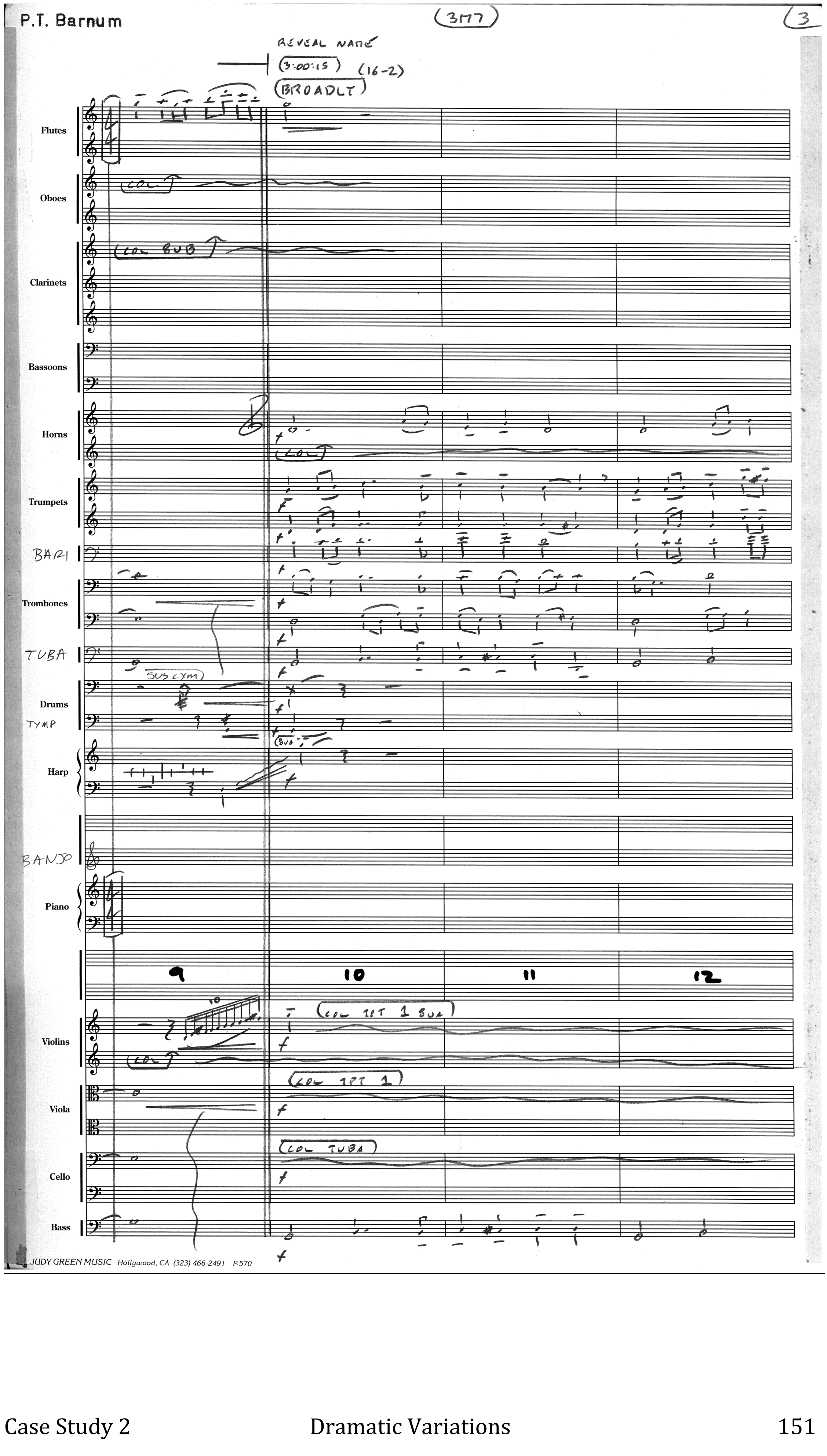
Example PTB 4 – Triumphant (track 4) [Cue # 3M7 – “Barnum’s American Museum”]

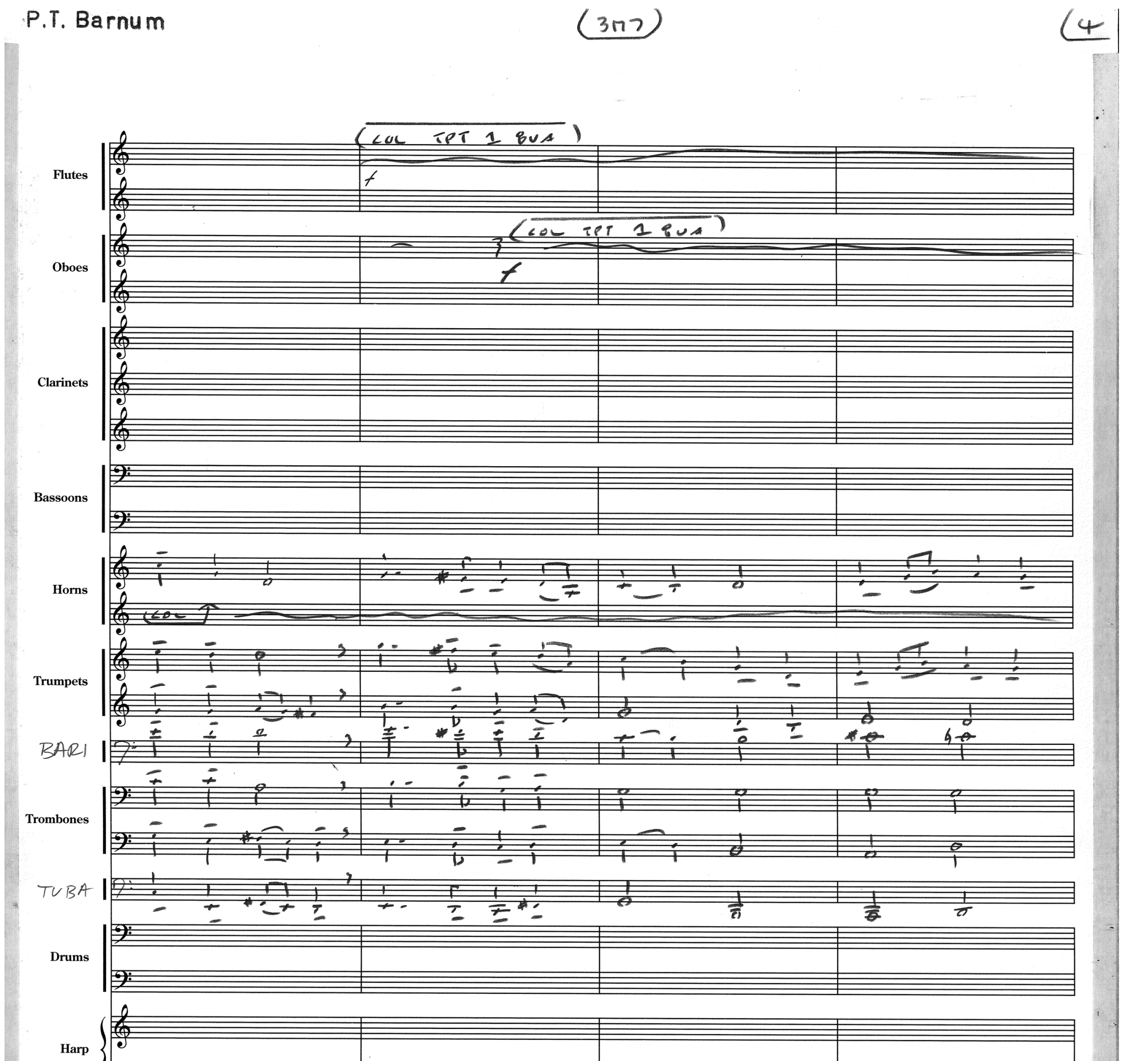
At this moment in the film, we watch at P.T. is viewing the official unveiling of his new museum. A cloth covering the façade of the building and sign is being dropped to reveal the new attraction. This marks a milestone in his early career and he is very proud of having been able to achieve it.

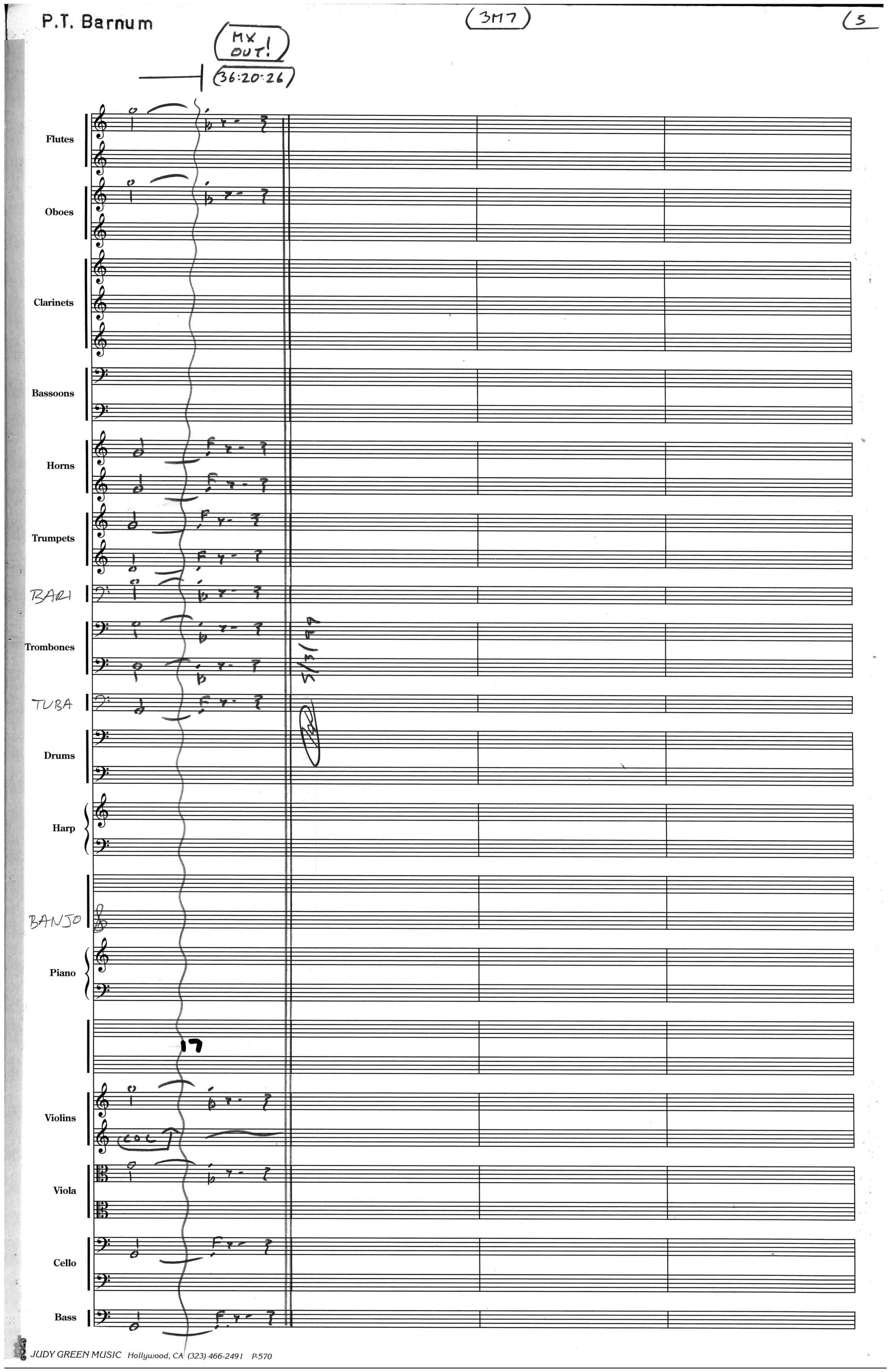
Note: this is the last section of a cue building up to the triumphant unveiling.

Triumph is an important emotion and to support it I used a variety of techniques. The tempo is somewhat slower than some of the other examples we have heard, much the way that people slow down their rate of speaking when they are trying to emphasize an important point. The melody is played in the trumpet doubled in octaves in the violins. Large ‘majestic’ sounding brass chords with inner moving lines support the importance of this moment and finally, there is the use of a French horn counterline. Again we see that the use of counterlines (and counterpoint) adds an air of seriousness or importance to a piece, perhaps because it harkens back to an older and more serious style of composition to the lay listener (the general audience).

It should be pointed out that the truncated last note of the piece, which musically would be better held as a fermata, is due to the need, in television, to allow for ‘going to commercial.’


P.T. Barnum
(3M7)
3
REVEAL NAME
(3:00:15)
(16-2)
(BROADLY)
Flutes
Oboes
(COL)
Clarinets
(COL 8VB)
Bassoons
Horns
(COL)
Trumpets
BARI
Trombones
TUBA
SUS CYM
Drums
TYMP
(8VB)
Harp
BANJO
Piano
9
10
11
12
10
Violins
(COL)
(COL TPT 1 8VA)
Viola
(COL TPT 1)
Cello
(COL TUBA)
Bass
f
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(3m7)
(4
(COL TPT 1 8VA)
f
(COL TPT 1 8VA)
f
Flutes
Oboes
Clarinets
Bassoons
Horns
(COL)
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
13
14
15
16
(COL TPT 1 8VA)
Violins
(COL)
(COL TPT 1)
Viola
(COL TUBA)
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(3M7)
(5
MX OUT!
(36:20:26)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
BANJO
Piano
17
Violins
COL
Viola
Cello
Bass
5/3/09
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Example PTB 5 – Strong Willed/Defensive (track 5)[Cue # 6M1 – Frances Dies"]

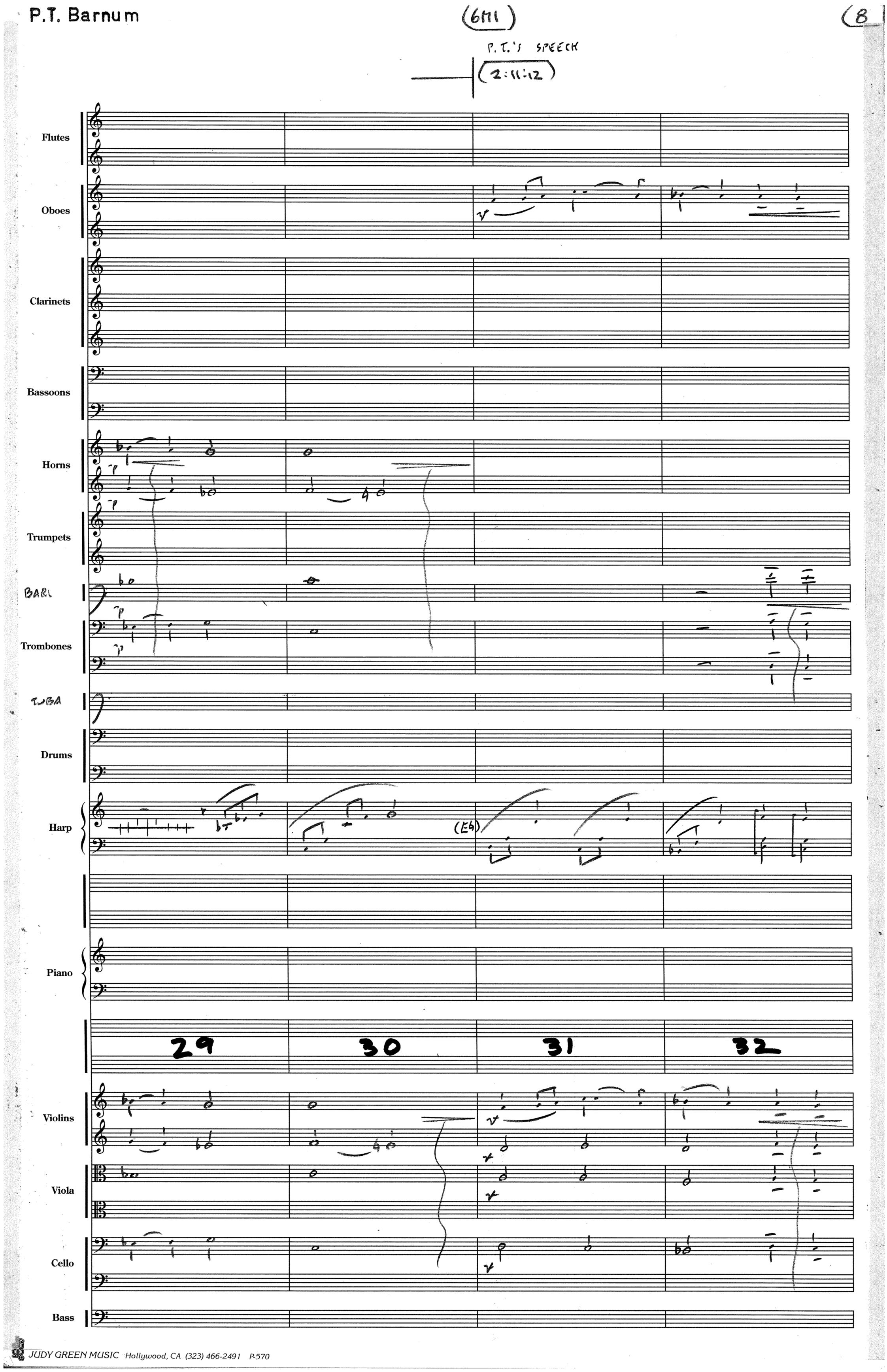
In this scene, P.T. has just returned from England, which in those days would have taken weeks by boat. He was touring Europe when he received the news that his youngest daughter – an infant – had died. Upon his return he finds his grieving wife sitting in the nursery staring at the empty crib. They begin to argue. She blames him for the child's death as a sign from God that he is too preoccupied with the pursuit of fame and fortune instead of being at home with his family. P.T. defends his position that the fame and fortune will ensure that his family will have a place in proper society as well as being able to attract the right kind of husbands for their daughters.

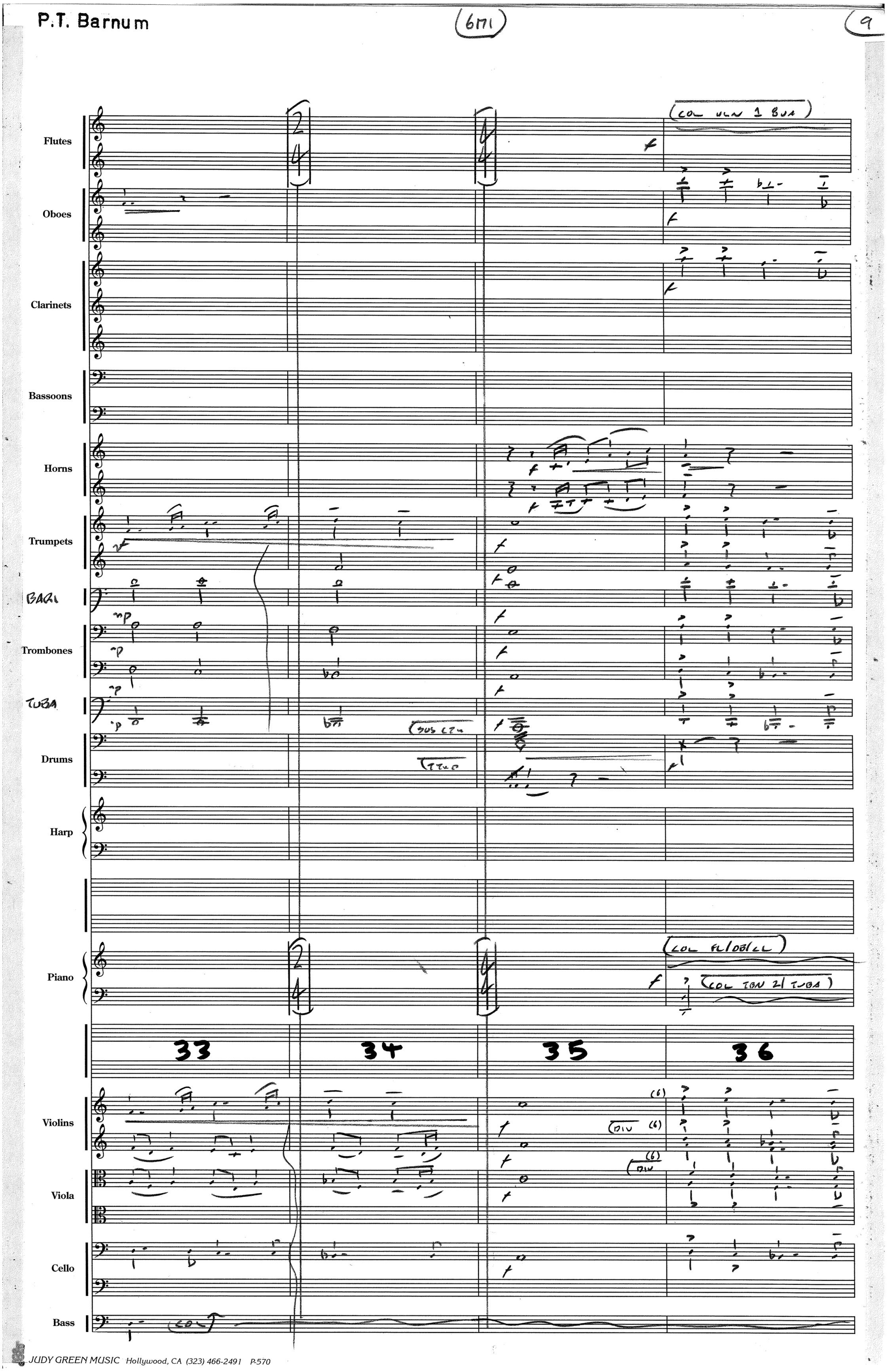
This is the second part of a longer cue, but I am only using the section that makes use of a dramatic variation of P.T.'s theme.

In this cue – starting at measure 31 – P.T.'s theme is reharmonized to sound much darker through the use of minor tonalities as a way of helping to support the sadness/somberness of the situation. There is also very little propulsion in the accompaniment part as there is very little movement in the scene – just two adults staying in one place but arguing with each other. The tempo is much slower that any of the previous versions which also adds an air of seriousness to the piece.

There is a major use of dynamics and orchestration that grow as P.T. becomes more adamant about his belief that his work and the required travel is "his calling." The growing dynamics and orchestration follow the dynamic modulation of his voice – as he gets louder to make his point, so does the dynamic level and weight of the orchestration. At :25 his speaking goes back down to a whisper as he reverently says the name of his recently deceased daughter (measure 38), at that moment the music becomes much softer and then builds again to match his raising his voice to make a point. At :42 as he realizes he is not getting through to his wife, he takes the tact of pleading for her understanding and the music softens again (measure 42). The end of the cue scores his wife looking at him, not believing what she is hearing (measure 45) – she leaves the room and he is left alone crying over the loss. This is scored with a musical motif that was used earlier in the cue when he first received the telegram about his child's death.

Notice that this cue also has some added and dropped beats necessary to meet the technical variation requirements of the cue. That way I was able to start the phrases of the piece in the right dramatic places and also avoid the start of dialogue lines - playing counterpoint against them by starting the musical phrases in the dialogue pauses.


P.T. Barnum
(6M1)
(8
P.T.'s SPEECH
(2:11:12)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
(Eb)
Piano
29
30
31
32
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(6m1)
(9
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
Violins
Viola
Cello
Bass
(COL VLN 1 8VA)
(SUS CYM
(TIMP
(COL FL/OB/CL)
(COL TBN 2/TUBA)
(DIV
(6)
COL
33
34
35
36
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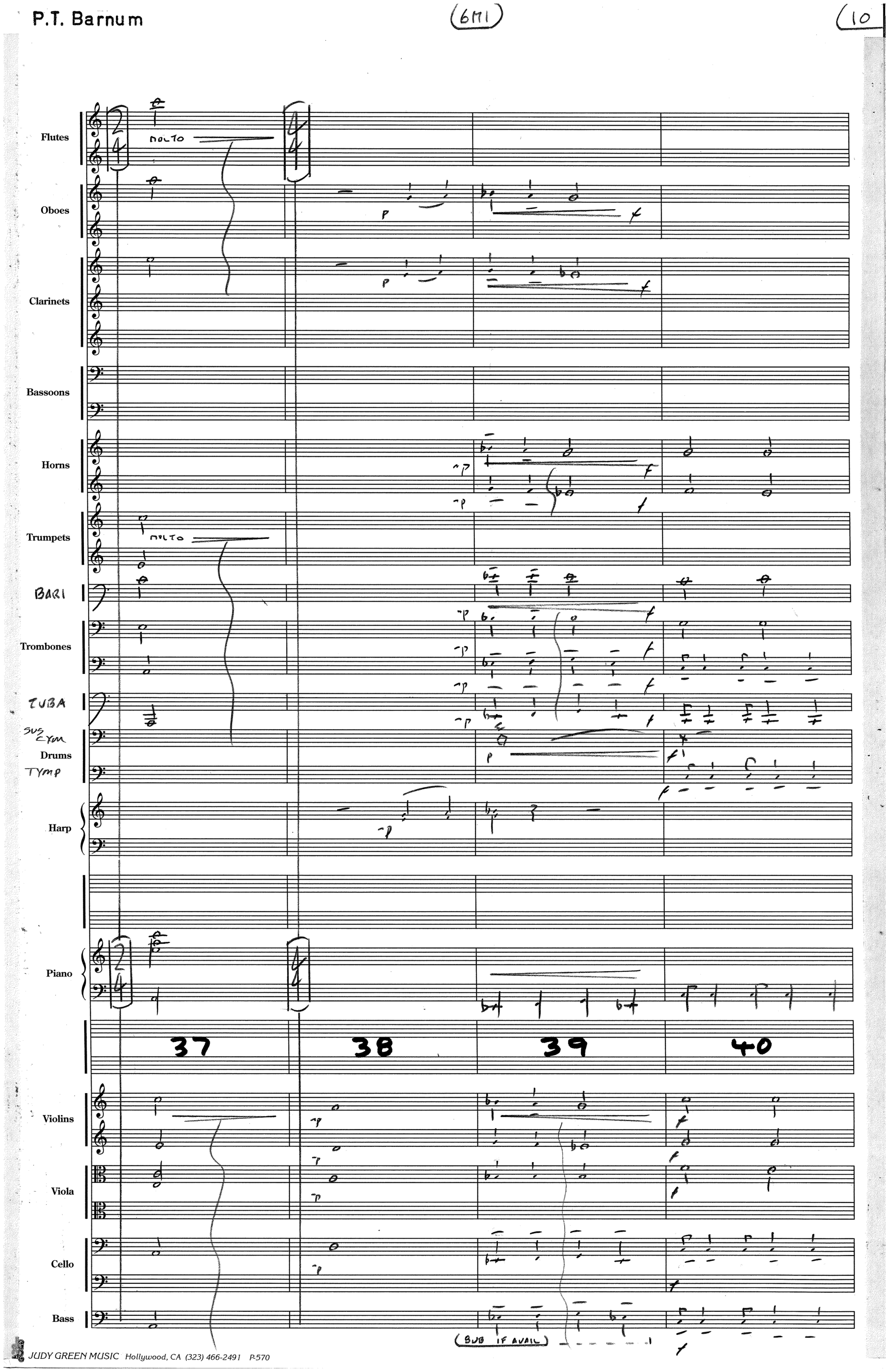
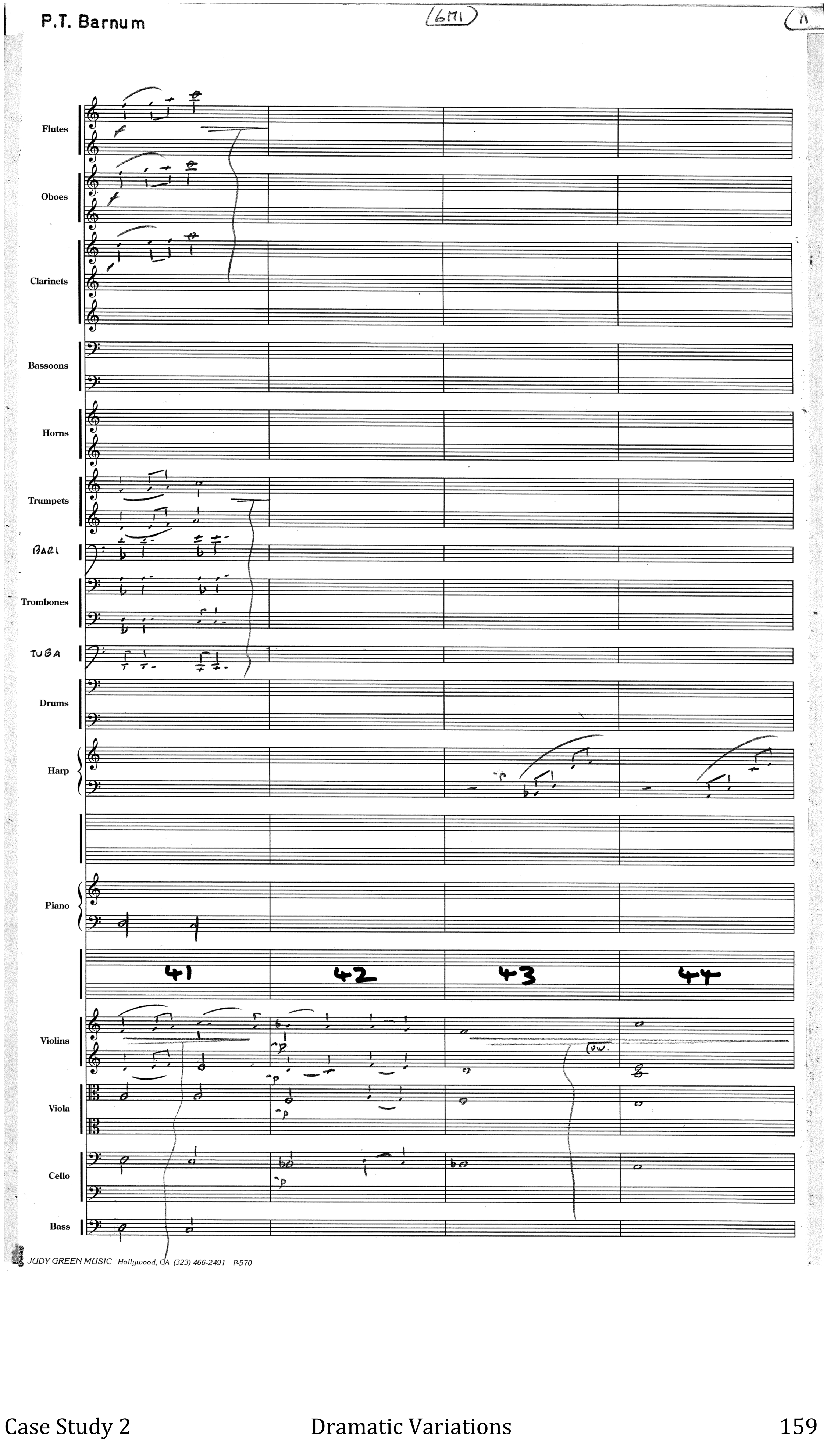
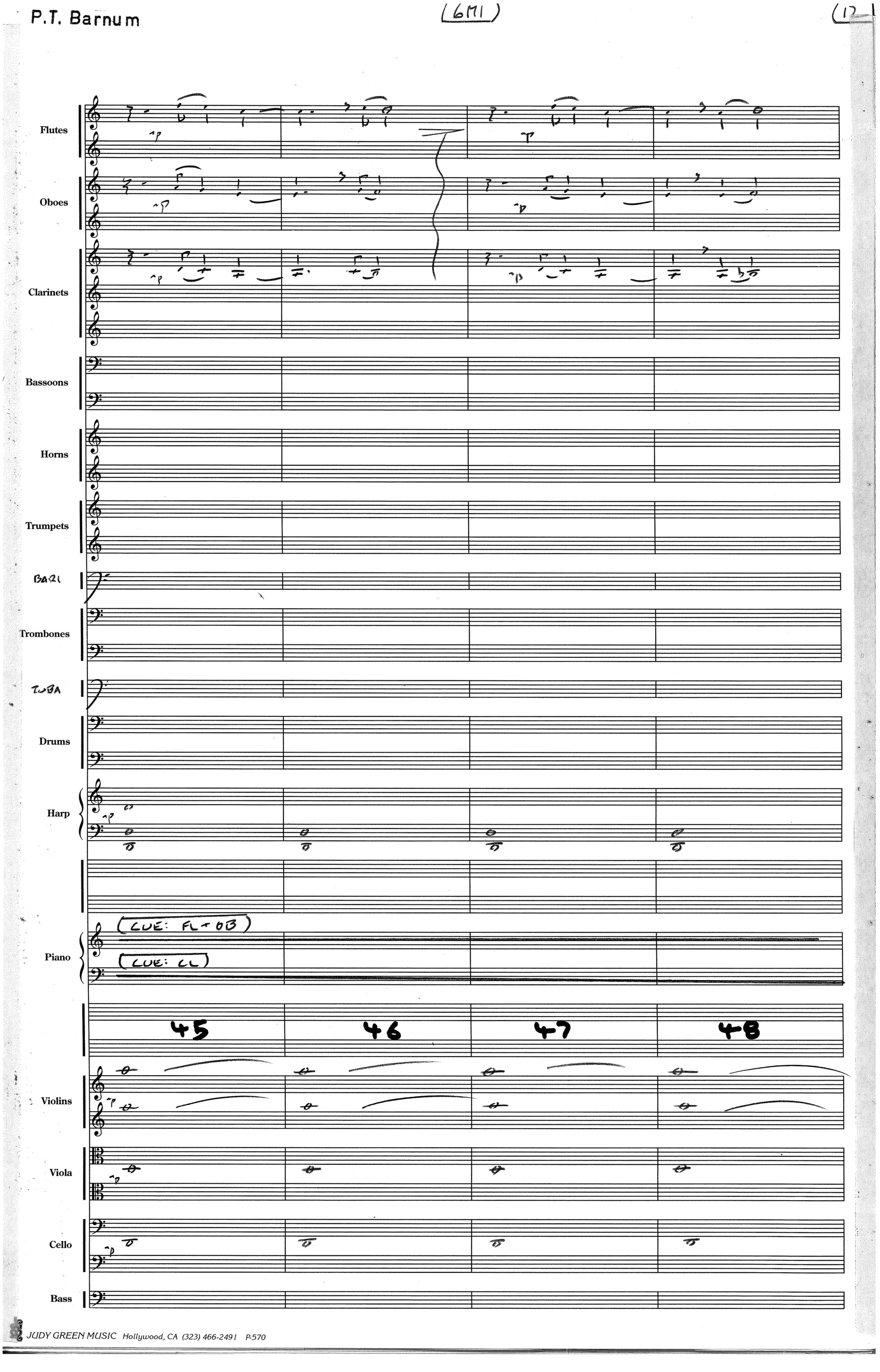
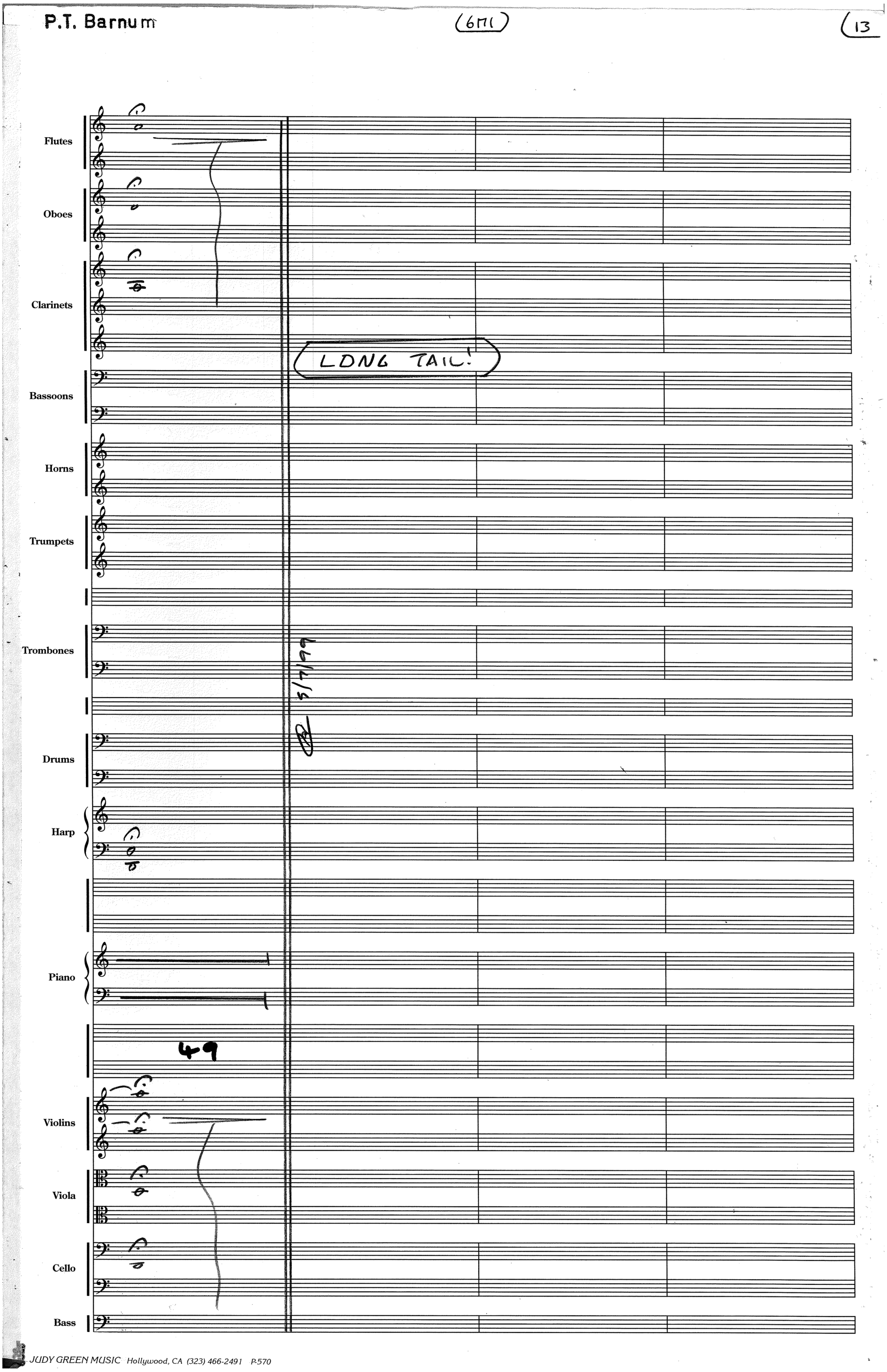

P.T. Barnum
(6M1)
(10
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
SUS CYM
Drums
TYMP
Harp
Piano
Violins
Viola
Cello
Bass
MOLTO
37
38
39
40
p
f
(SUB IF AVAIL)
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(6MI)
11
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
41
42
43
44
Violins
(div.)
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(6M1)
(12
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
(CUE: FL + OB)
(CUE: CL)
45
46
47
48
Violins
Viola
Cello
Bass
p
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(6m1)
(13
Flutes
Oboes
Clarinets
LONG TAIL!
Bassoons
Horns
Trumpets
Trombones
5/7/99
Drums
Harp
Piano
49
Violins
Viola
Cello
Bass
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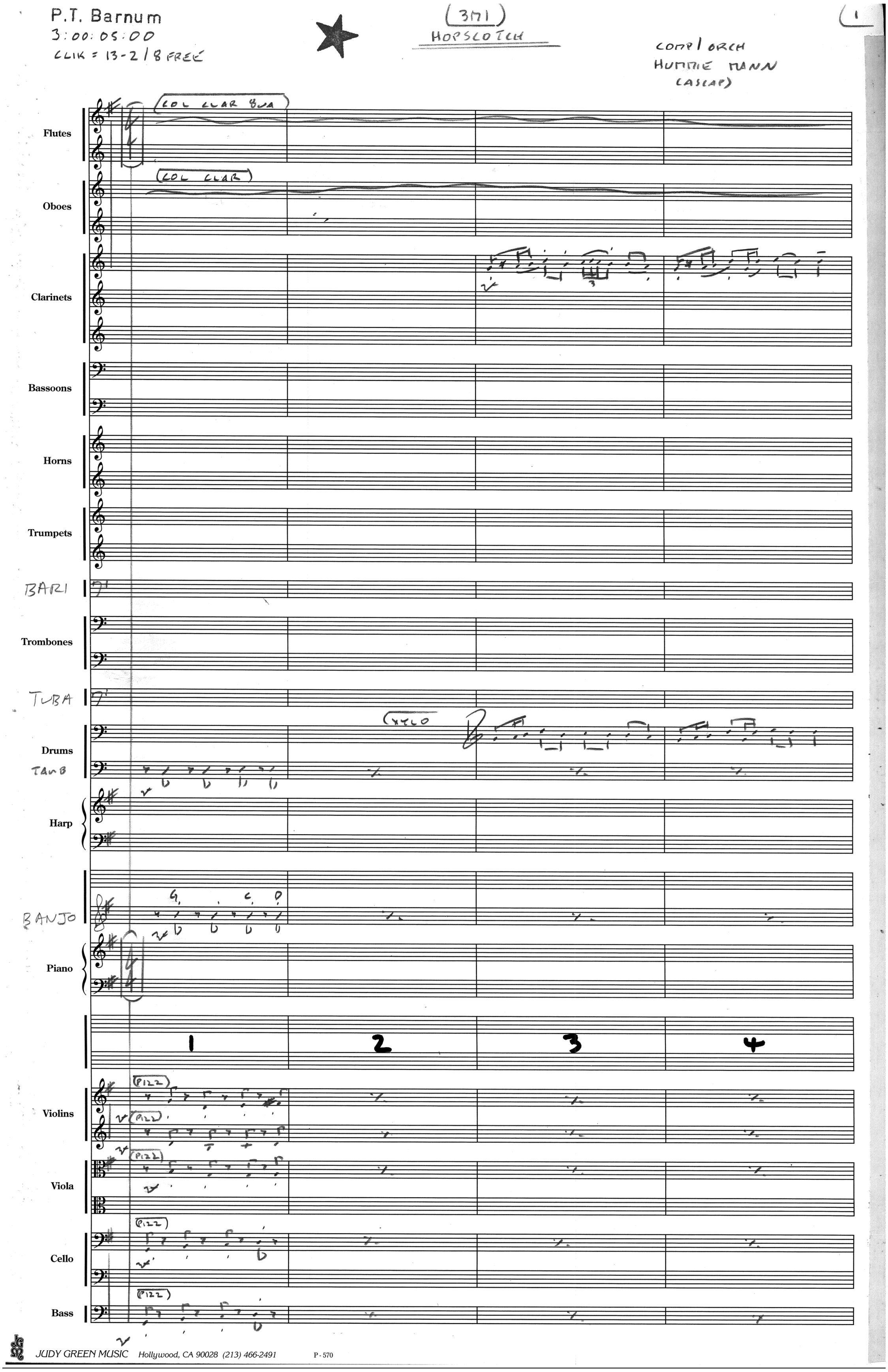
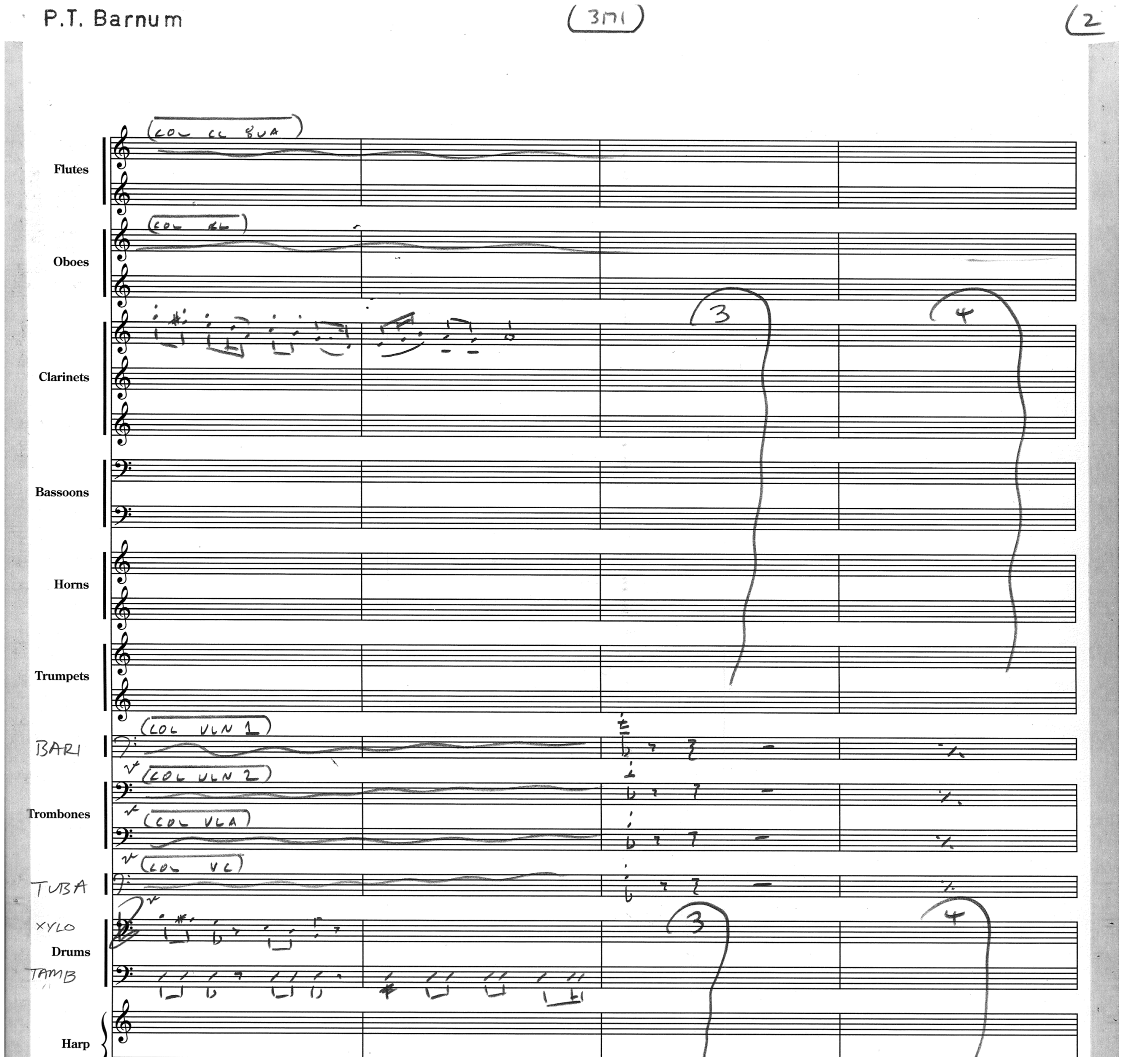
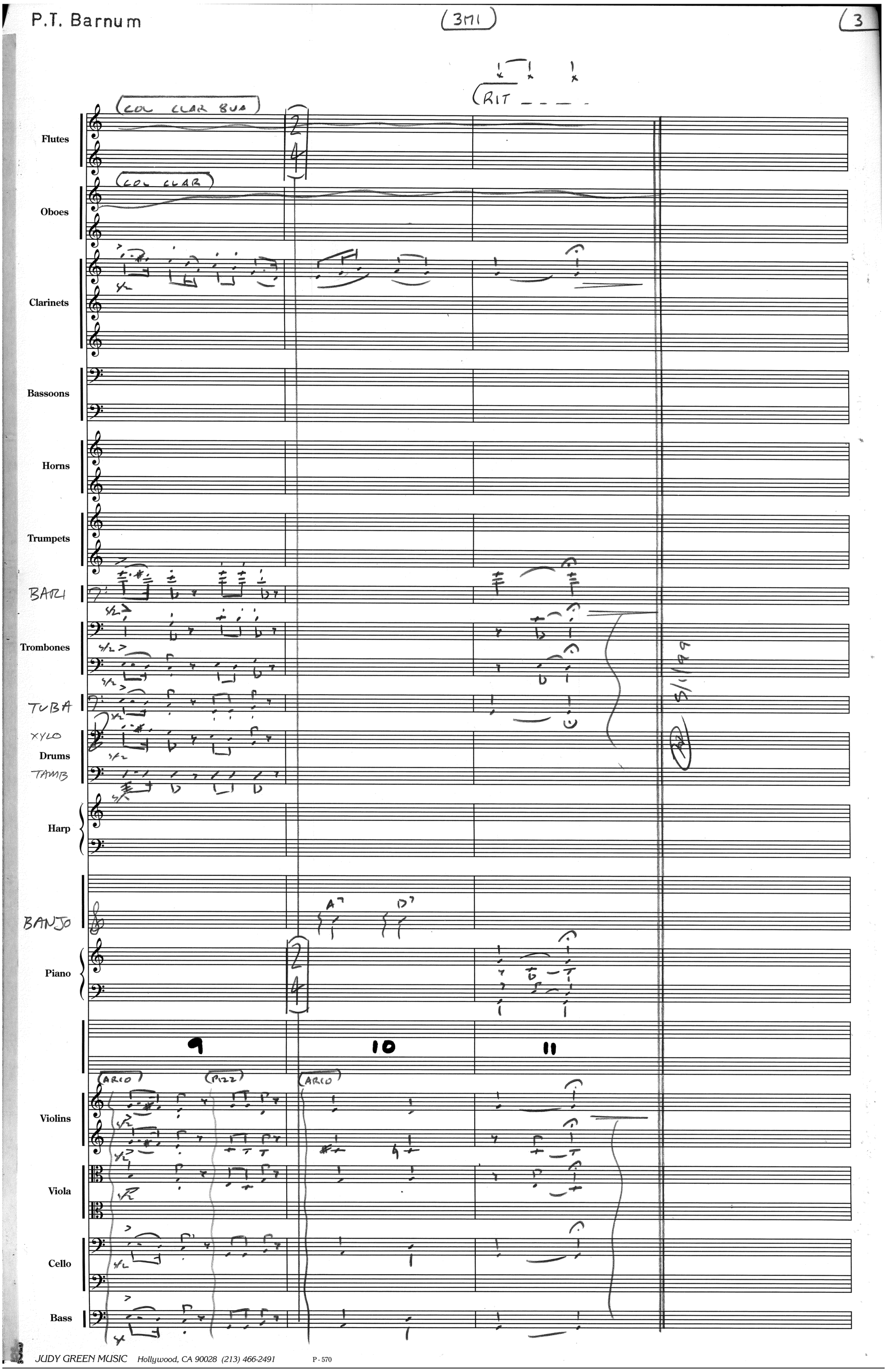
Example PTB 6 – Playful (track 6)[Cue # 3M1 – “Hopscotch”]

Although P.T. spent a lot of time traveling, when he was at home he enjoyed spending time playing with his children. In this short cue, we see him playing hopscotch with one of his other daughters.

To achieve the playful nature of this variation of P.T.’s theme, I used a fairly quick tempo and also what we call a ‘boom-chuck’ accompaniment pattern to express a certain joyful bounciness. This pattern is performed by pizzicato strings as well as making use of banjo and tambourine. The melody has some rhythmic variation along with the addition of some ornamentation in an effort to make it more childlike in nature. The use of the xylophone playing the melody with the woodwinds was chosen to add some lightness to the melodic element. Harmonically the piece is very similar to the original with the addition of some chords at the end of the first phrase used to build up the energy of piece to the start of the second phrase.


P.T. Barnum
3:00:05:00
CLIK = 13-2/8 FREE
(3M1)
HOPSCOTCH
1
COMP/ORCH
HUMMIE MANN
(ASCAP)
COL CLAR 8va
COL CLAR
XYLO
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
TAMB
Harp
BANJO
Piano
1
2
3
4
PIZZ
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(3M1)
2
Flutes
(COL CL 8VA)
Oboes
(COL CL)
Clarinets
Bassoons
Horns
Trumpets
BARI
(COL VLN 1)
Trombones
(COL VLN 2)
(COL VLA)
TUBA
(COL VC)
XYLO
Drums
TAMB
Harp
BANJO
Em D C C/G G A7 D A7 D
Piano
5
6
7
8
(ARCO)
(PIZZ)
Violins
Viola
Cello
Bass
3
4
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


P.T. Barnum
(3M1)
3
(RIT
(COL CLAR 8VA)
(COL CLAR)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
XYLO
Drums
TAMB
Harp
BANJO
A7
D7
Piano
9
10
11
(ARCO)
(PIZZ)
(ARCO)
Violins
Viola
Cello
Bass
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P-570

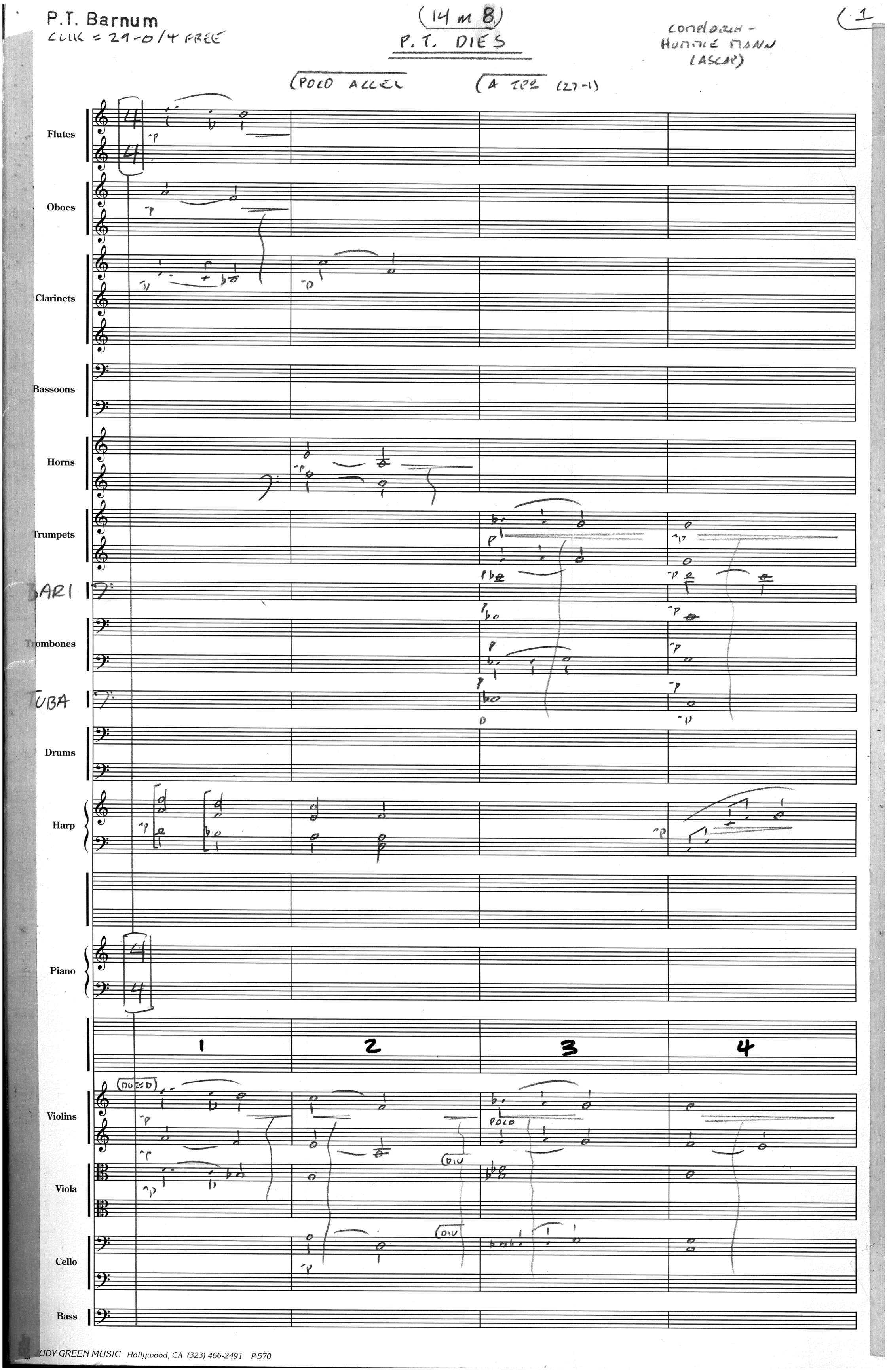
Example PTB 7 – Sad/Somber (track 7)[Cue # 14M8 – "P.T. Dies"]

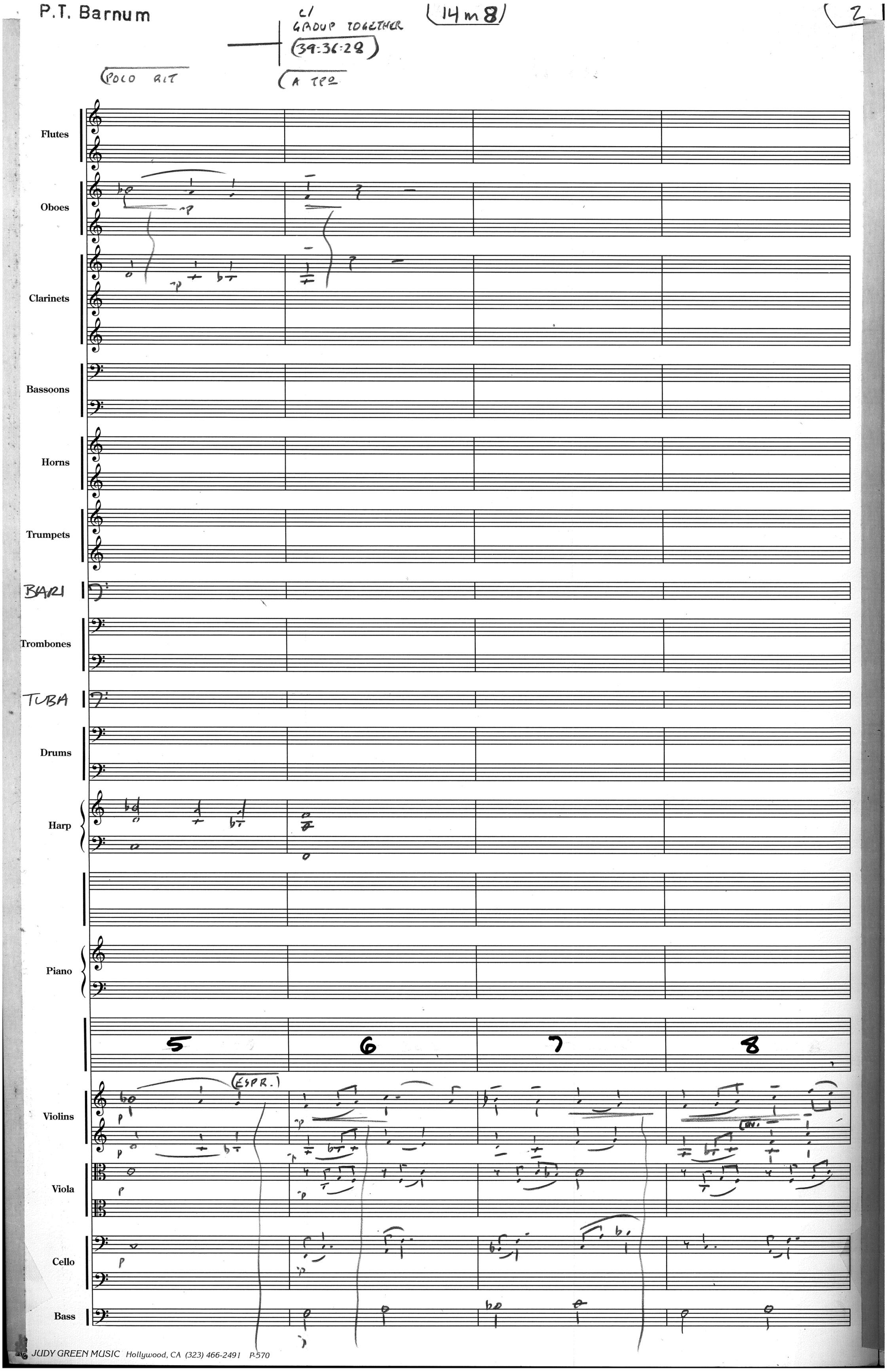
At the end of the two-night mini-series we watch as P.T. passes away. In this final scene, he is surrounded by his wife, daughters and their spouses; business associates and house staff (maids and butlers). He is obviously living the life of a very successful man and the environment suggests that he is, at this point in his life, quite wealthy. He is getting to say his final goodbyes as all around him wait for the inevitable moment when he closes his eyes for the last time. This scene, although sad because of the fact that scoring a death is never anything but somber, had an interesting challenge – his final words were inquiring about the state of the business "How was the box office tonight?" So although he was aware of the fact that he was dying, he left the world as the master entrepreneur he always strove to be.

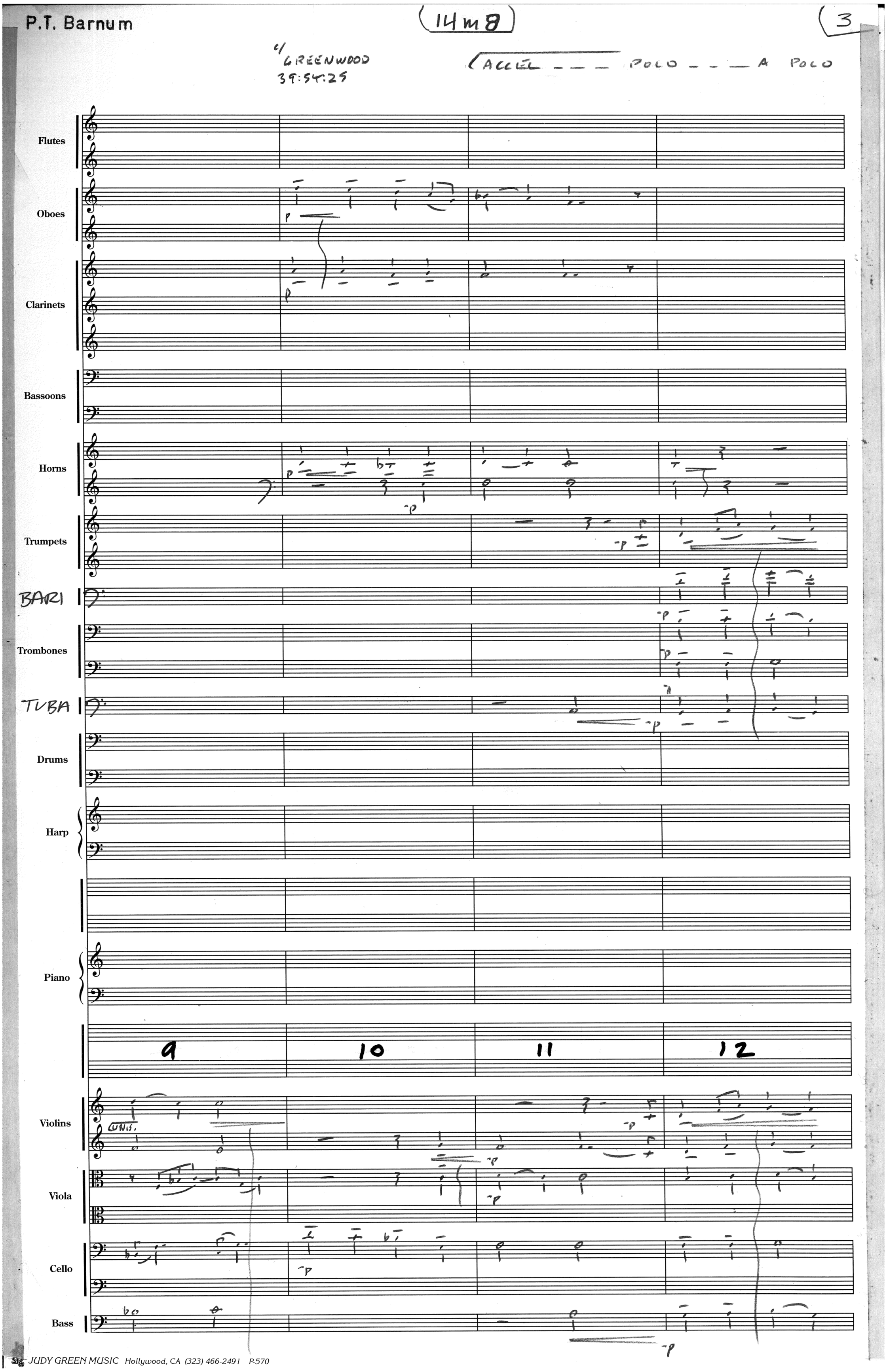
Compositionally there are two useful elements to help support this type of scene – a somewhat slow tempo and also the use of darker harmonies (minor tonalities). Notice the use of the contrapuntal inner moving lines technique in the texture in measure 6 when the main theme first begins – as earlier discussed this helps create an air of importance and/or seriousness. A very simple texture also helps to keep the seriousness of the situation.

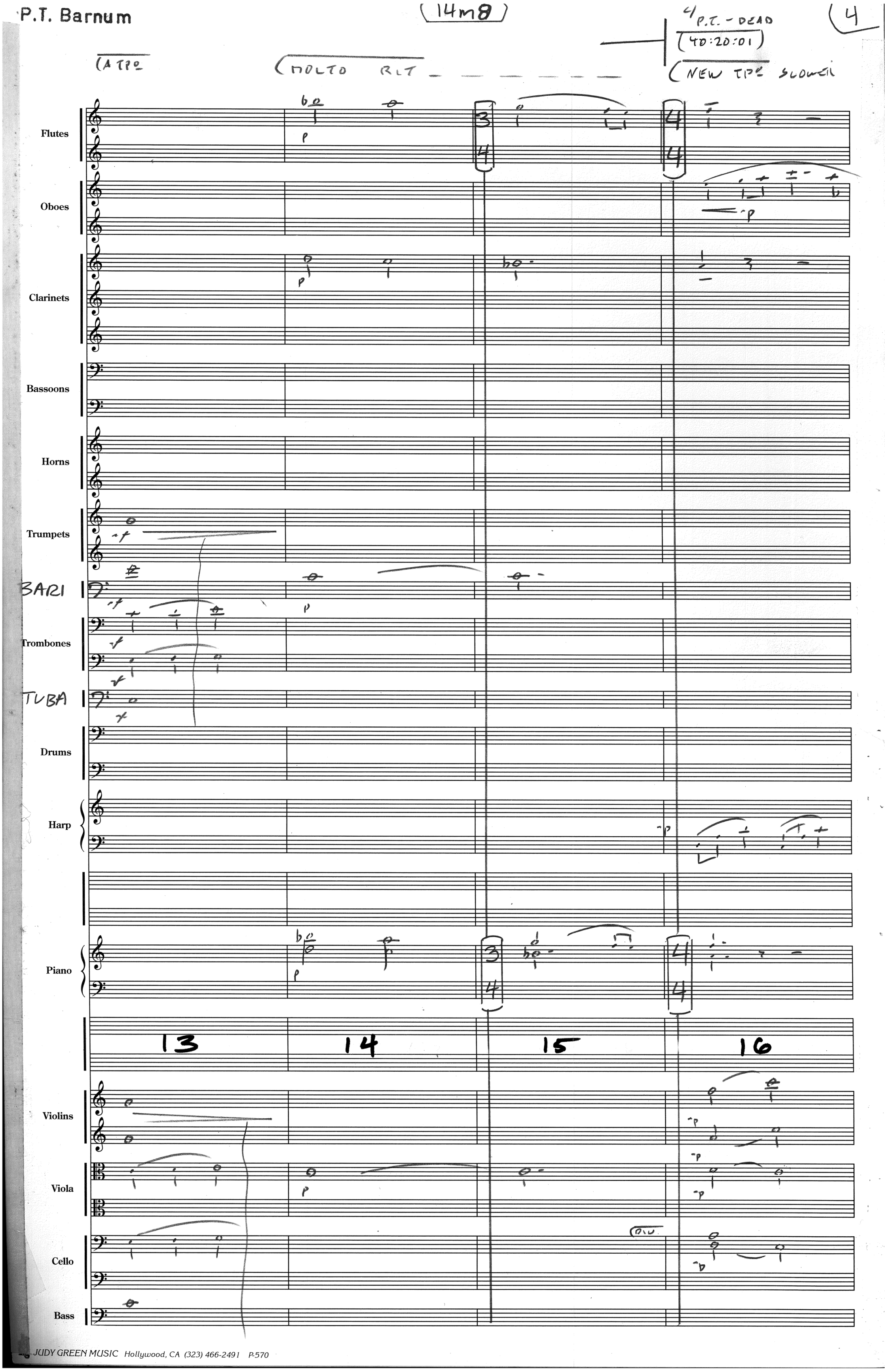
Also notice the use of phrase length adjustments (technical variations) - which allow the melodic elements to play in counterpoint to the dialogue – at measures 14/15, 19/20 and 22. Placing the beginnings of melodic phrases into the pauses between the lines of dialogue allows for strong melodic scoring – rather than taking a non-melodic textural scoring approach. In this way I can accompany the dialogue and not compete with it.

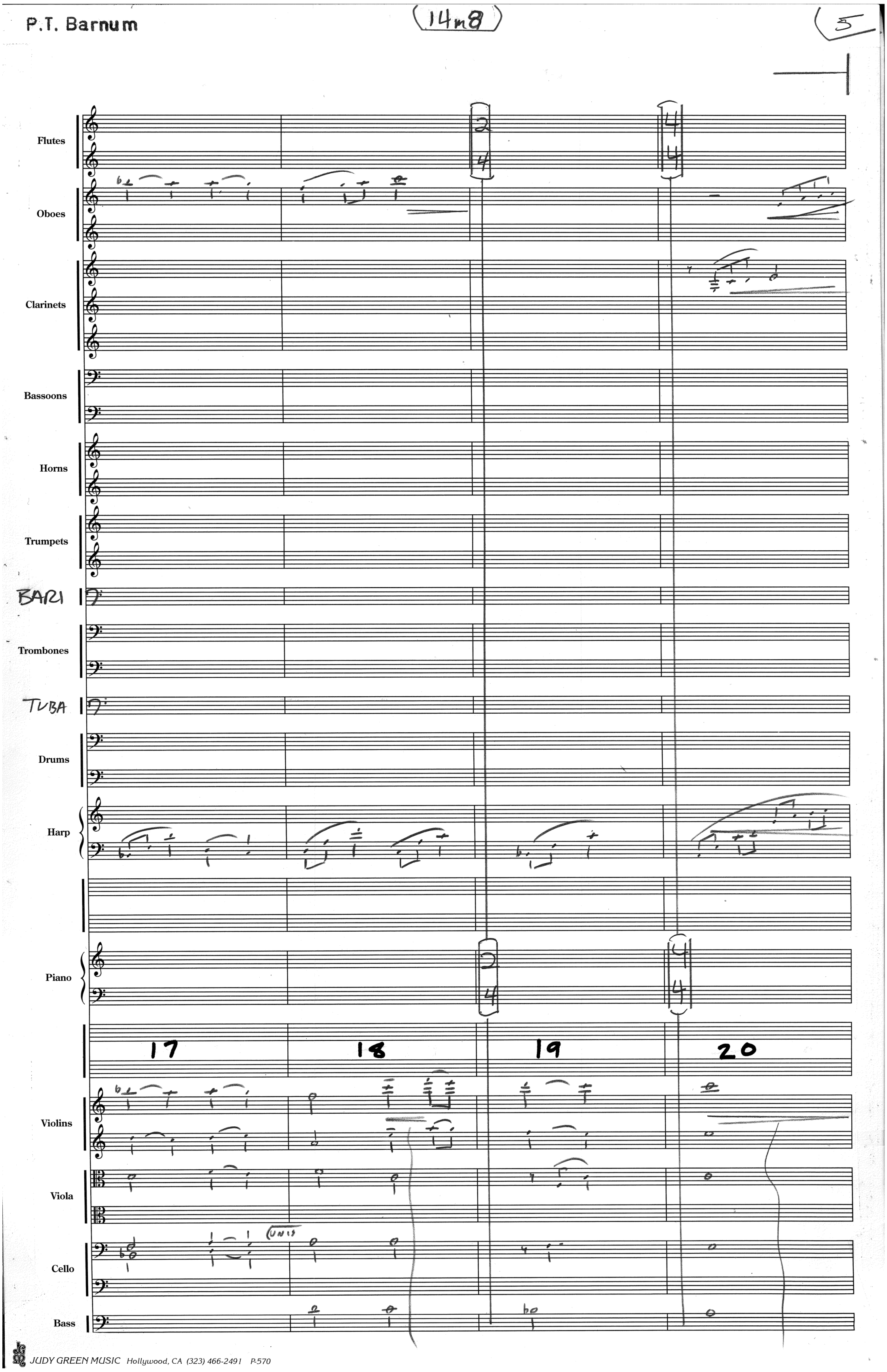
One final point is that the piece does not start right off with the theme, but instead begins with other material from the score. P.T.'s theme until is introduced at measure 6 at a dramatically appropriate point in the scene.

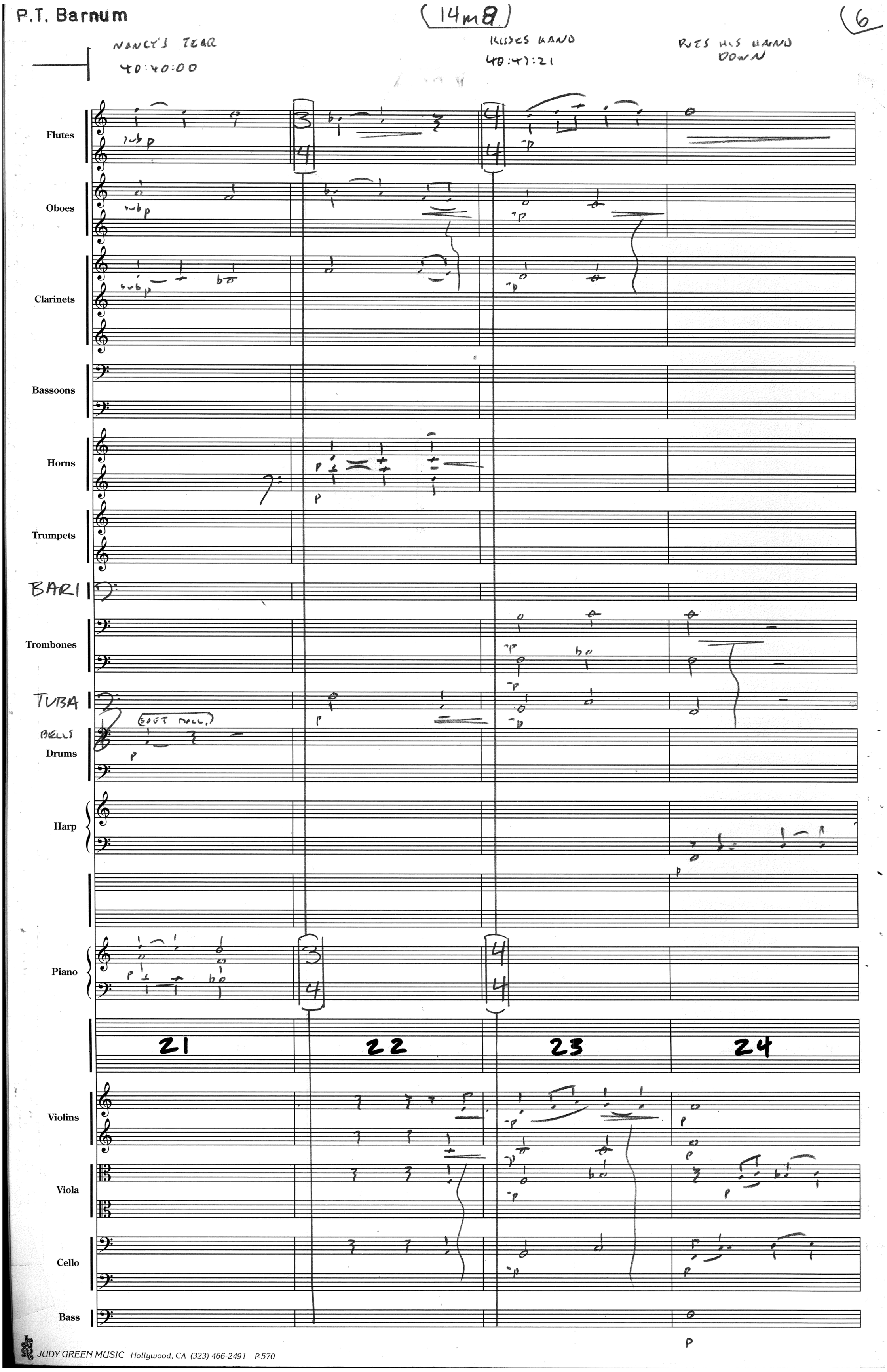

P.T. Barnum
CLIK = 29-0/4 FREE
(14 m 8)
P.T. DIES
CONDUCTOR - HUMMIE MANN (ASCAP)
(1
POCO ACCEL
A TPO (27-1)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
1
2
3
4
MUTED
POCO
DIV
DIV
Violins
Viola
Cello
Bass
IDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570

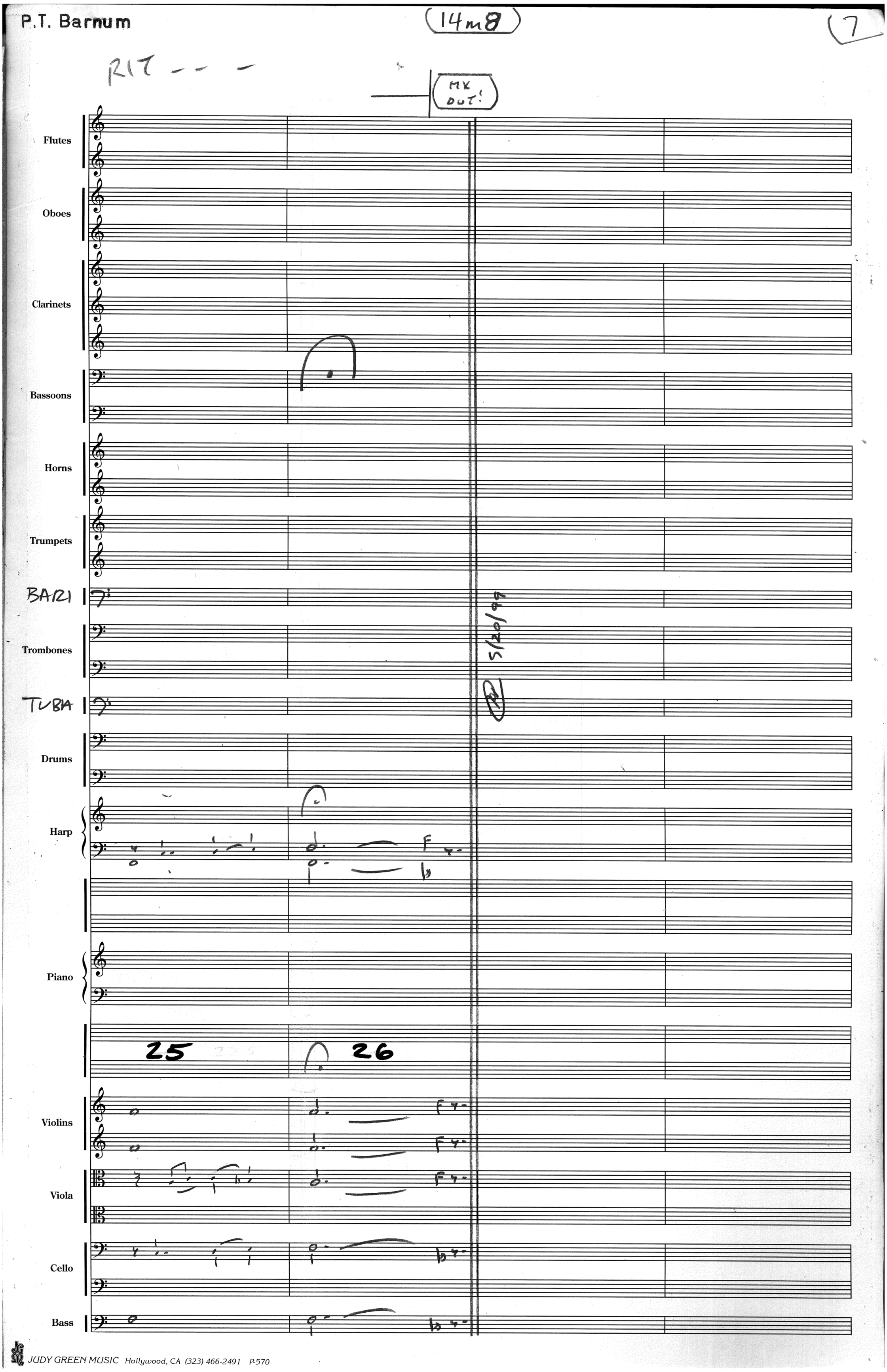

P.T. Barnum
c/
GROUP TOGETHER
(39:36:28)
(14m8)
2
(POCO RIT
(A TPO
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
5
6
7
8
(ESPR.)
Violins
Viola
Cello
Bass
p
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
14m8
3
c/ GREENWOOD
39:54:25
ACCEL --- POCO --- A POCO
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
9
10
11
12
Violins
UNIS.
Viola
Cello
Bass
p
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(14m8)
4/P.T. - DEAD
(40:20:01)
4
(A TPO
(MOLTO RIT
(NEW TPO SLOWER
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
13
14
15
16
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
14m8
5
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
Drums
Harp
Piano
17
18
19
20
Violins
Viola
Cello
UNIS
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(14m8)
(6
NANCY'S TEAR
40:40:00
KISSES HAND
40:47:21
PUTS HIS HAND DOWN
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
BELLS
Drums
(SOFT ROLL)
Harp
Piano
21
22
23
24
Violins
Viola
Cello
Bass
sub p
p
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570

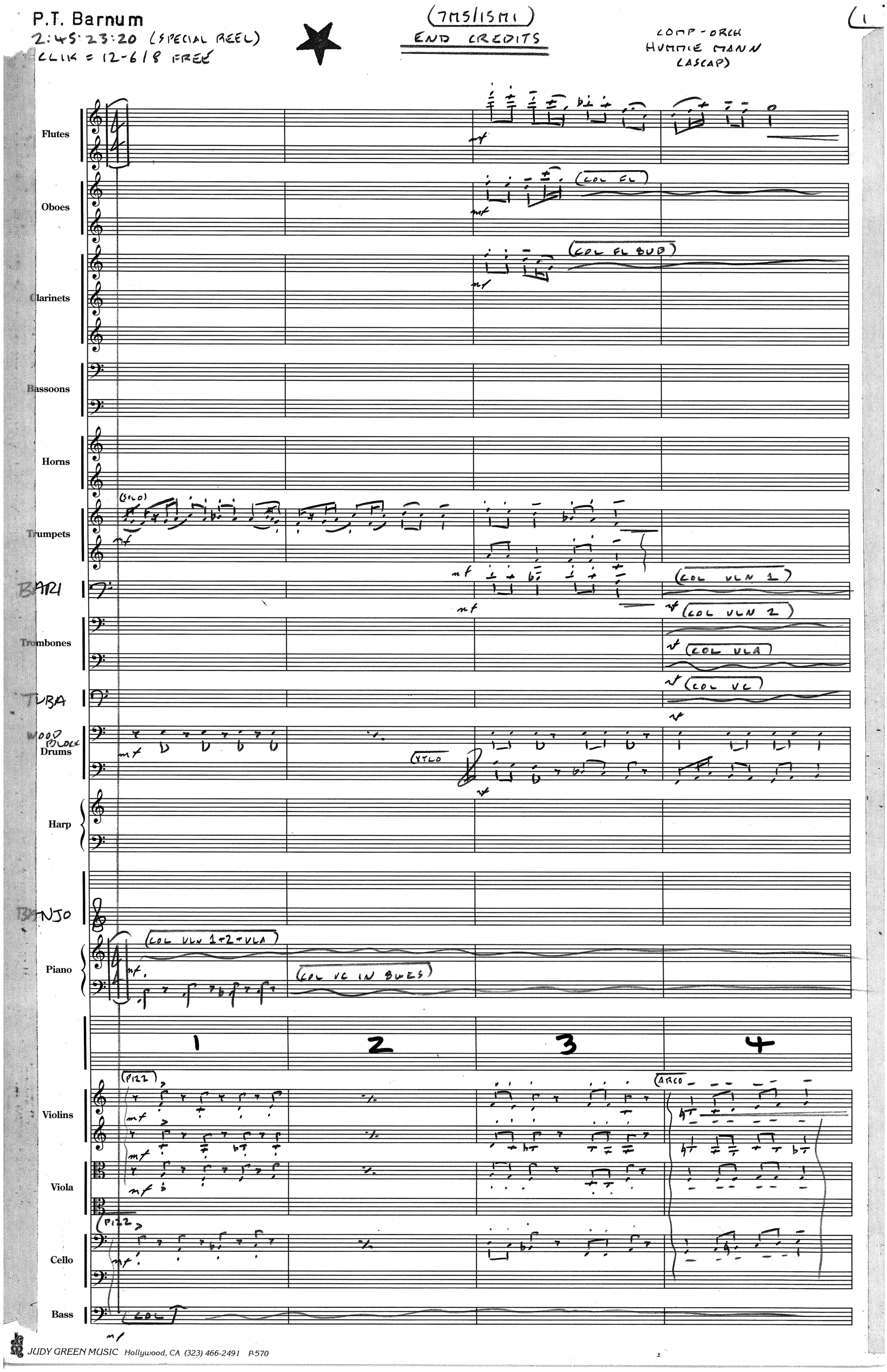

P.T. Barnum
14m8
7
RIT - - -
MX OUT!
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
5/20/99
TUBA
Drums
Harp
Piano
25
26
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570

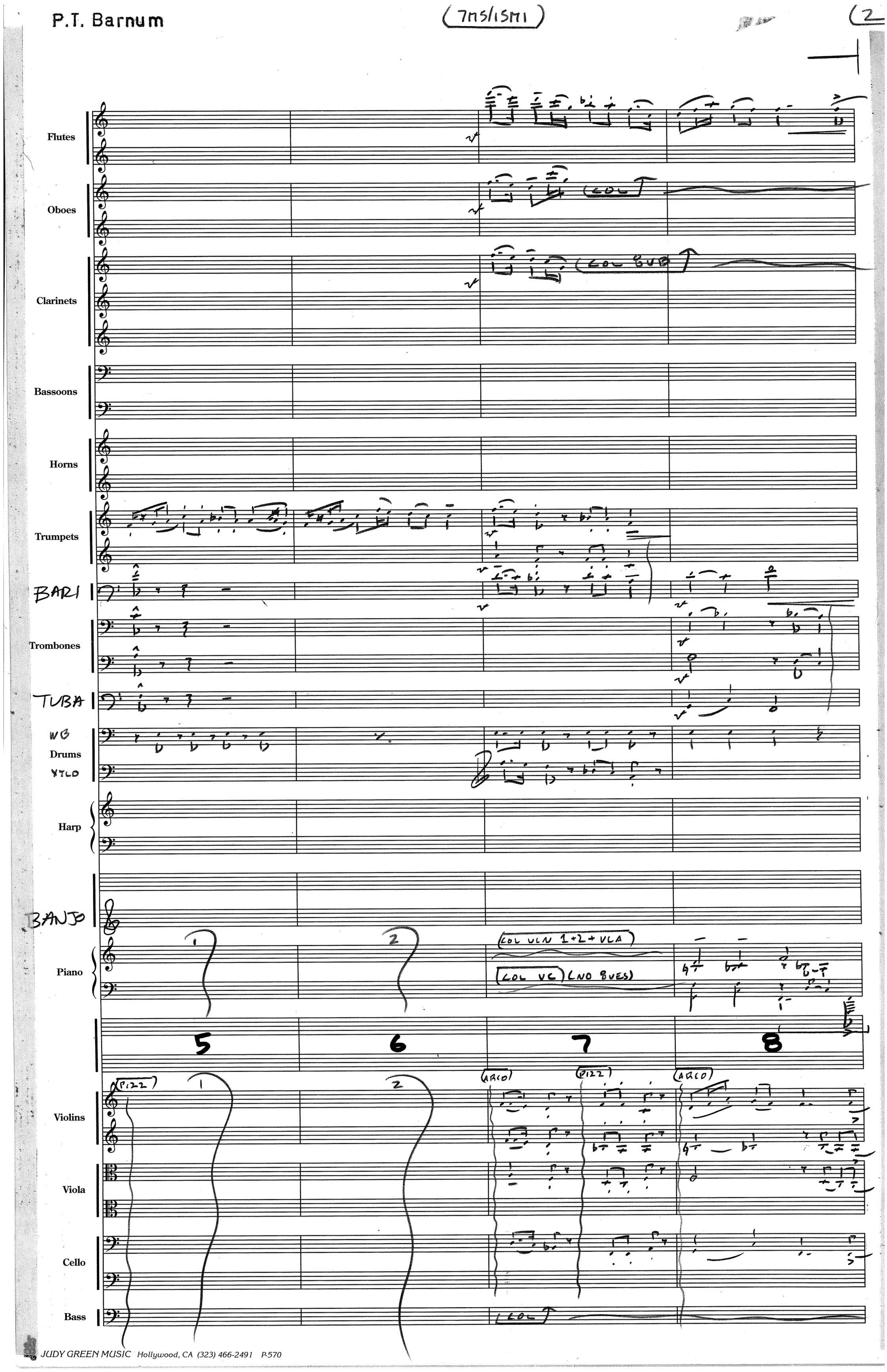
Example PTB 8 – Happy Go Lucky (track 8)[Cue # 7M5/15M1 – "End Credits"]

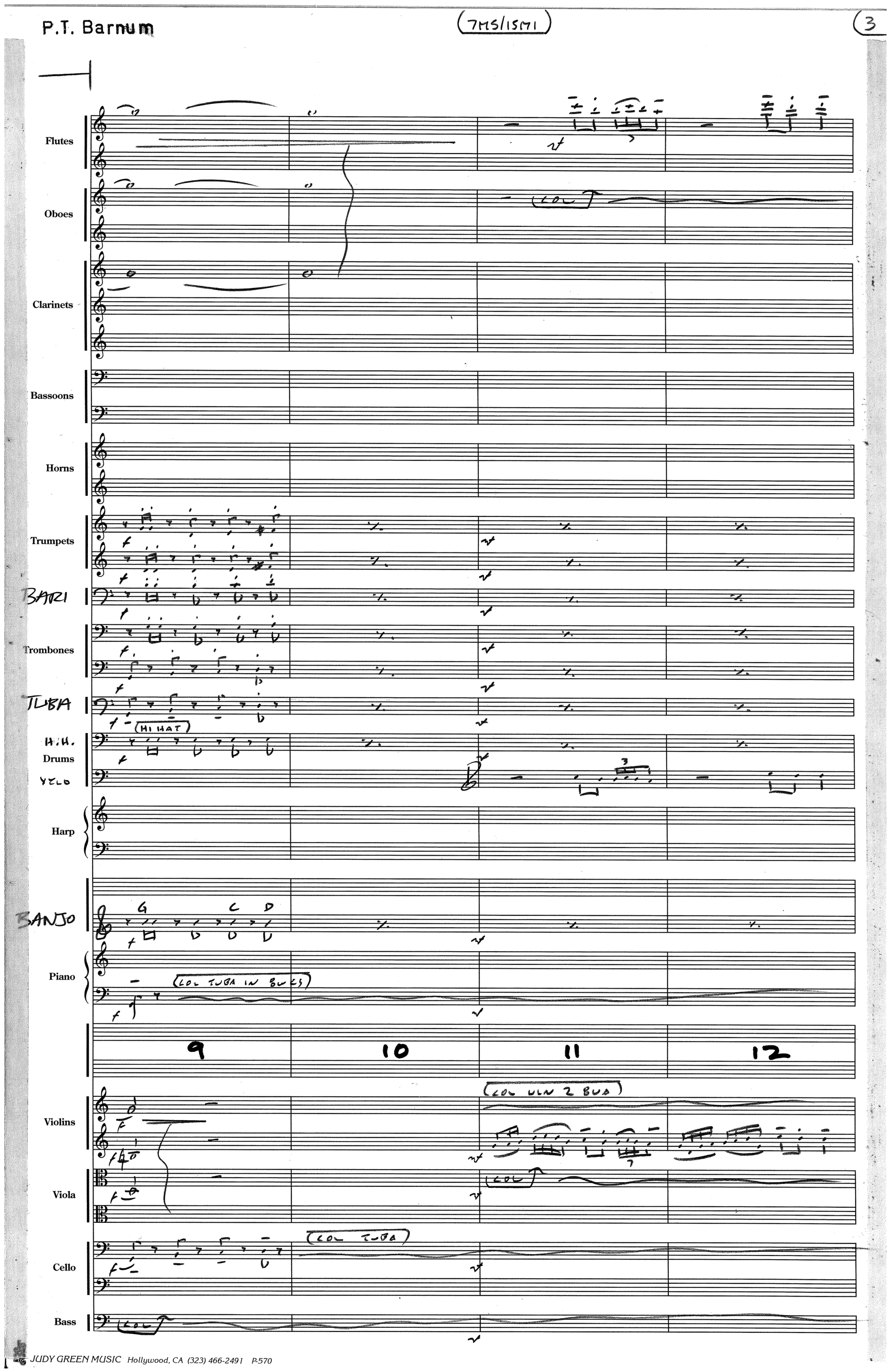
The end credits appear twice in this mini-series, once at the end of each night as the credits roll on screen. There is no dramatic basis for this piece as the story is over and all the audience is seeing is the list of the people who worked on the film. Nonetheless, the music accompanying this should still tie in to the score. In many contemporary films an end title song, usually totally unrelated musically to the film's score but often with some sort of lyrical relation to the film's story, will be used for the end credit roll.

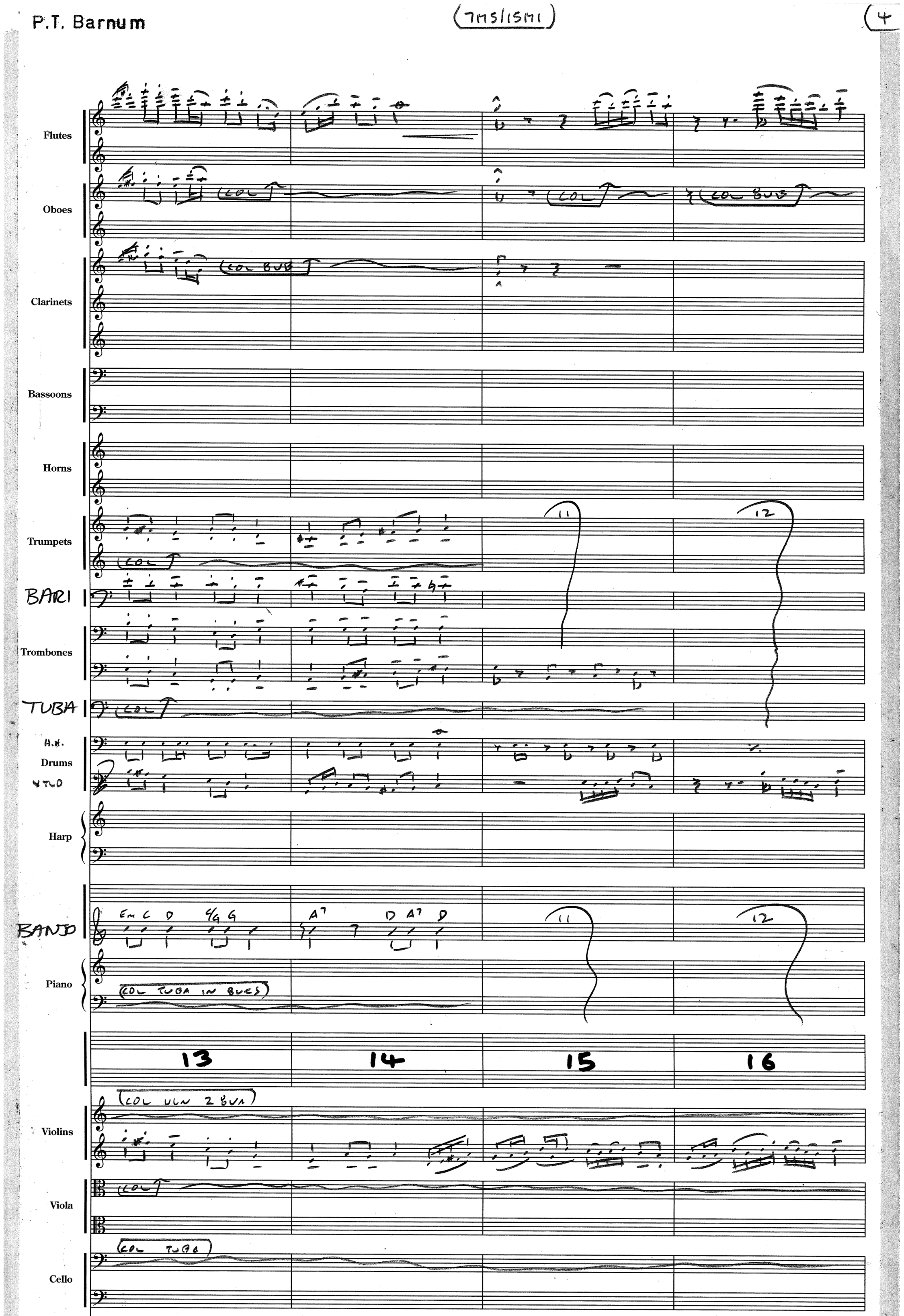
The use of the main P.T. Barnum theme with an Americana feel was decided upon with a somewhat joyful feel as a way of musically celebrating his life.

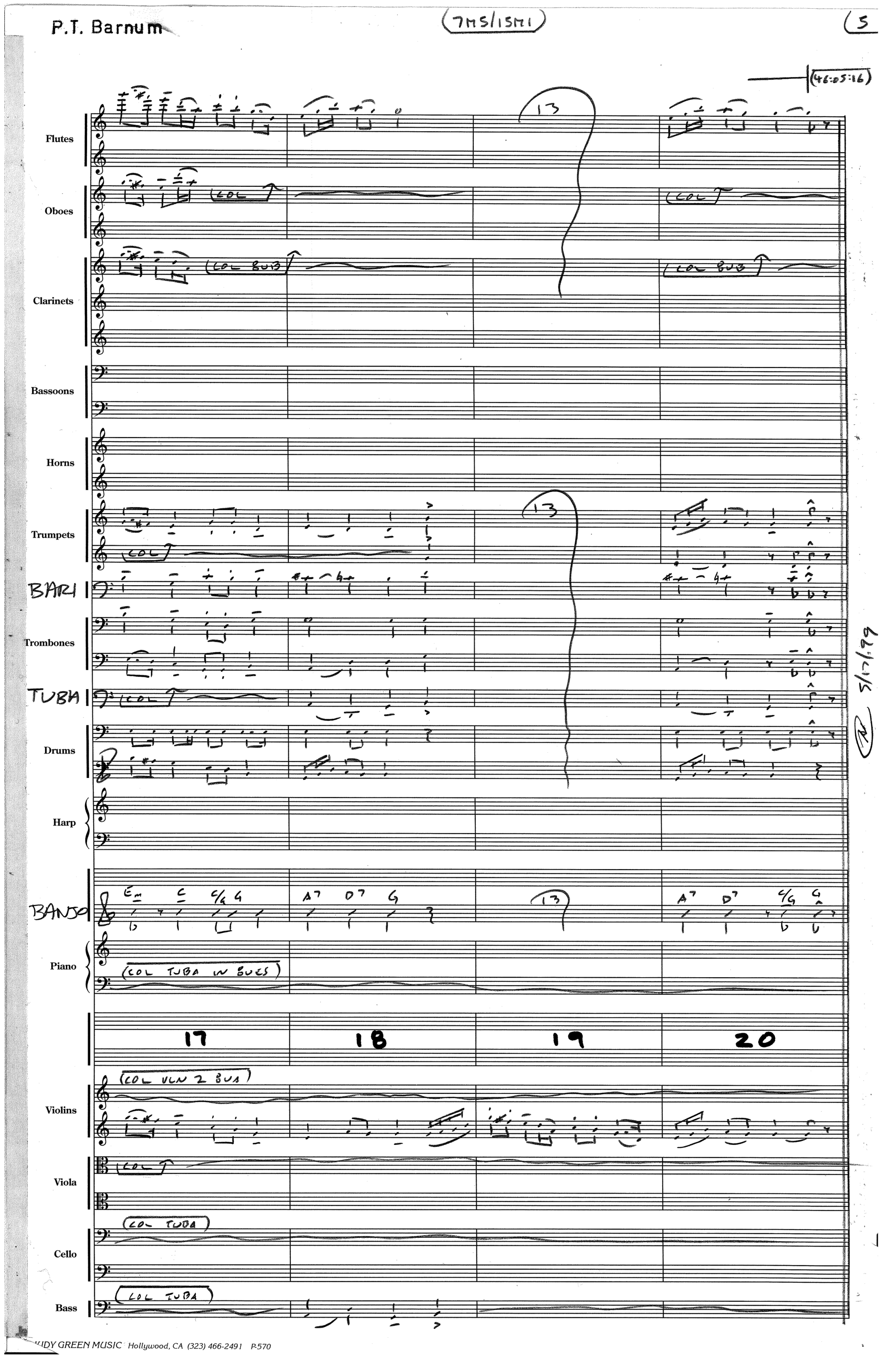
Similar to the Playful variation of the main theme discussed earlier, this piece has a brighter tempo and makes use of the bouncy 'boom-chuck' accompaniment style. In measure 9 there is a modulation up a whole step – commonly perceived as a move to a 'brighter/uplifting' key center. The restatement of the theme in the new key is a more active variation of the main theme, which adds a sense of movement and lightness to the piece.


P.T. Barnum
2:45:23:20 (SPECIAL REEL)
CLIK = 12-6/8 FREE
(7M5/15M1)
END CREDITS
COMP-ORCH
HUMMIE MANN
(ASCAP)
1
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
WOOD BLOCK
Drums
Harp
BANJO
Piano
Violins
Viola
Cello
Bass
(SOLO)
(COL FL)
(COL FL 8VB)
(COL VLN 1)
(COL VLN 2)
(COL VLA)
(COL VC)
(XYLO)
(COL VLN 1+2+VLA)
(COL VC IN 8VES)
(PIZZ)
(ARCO)
(COL)
mf
1
2
3
4
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(7m5/15m1)
(2
Flutes
Oboes
(COL
Clarinets
(COL 8VB
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
WB
Drums
XYLO
Harp
BANJO
Piano
(COL VLN 1+2+VLA)
(COL VC) (NO 8VES)
1
2
5
6
7
8
(PIZZ)
(ARCO)
(PIZZ)
(ARCO)
Violins
Viola
Cello
Bass
(COL
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(7M5/15M1)
3
Flutes
Oboes
(COL)
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
(HI HAT)
H.H.
Drums
XYLO
Harp
BANJO
G C D
Piano
(COL TUBA IN 8VBS)
9
10
11
12
(COL VLN 2 8VA)
Violins
Viola
(COL)
Cello
(COL TUBA)
Bass
(COL)
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(7M5/15M1)
4
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
BARI
Trombones
TUBA
H.H.
Drums
WTLD
Harp
BANJO
Piano
Violins
Viola
Cello
Bass
COL
COL BUS
COL BVB
COL TUBA IN BUCS
Em C D G/G G
A7 D A7 D
11
12
13
14
15
16
COL VLN 2 8VA
COL TUBA
JUDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570


P.T. Barnum
(7M5/15M1)
5
(46:05:16)
Flutes
Oboes
(COL)
Clarinets
(COL 8VB)
Bassoons
Horns
Trumpets
(COL)
13
BARI
Trombones
TUBA
(COL)
Drums
Harp
BANJO
Em C G/A G
A7 D7 G
A7 D7 G/A G
Piano
(COL TUBA IN 8VBS)
17
18
19
20
Violins
(COL VLN 2 8VA)
Viola
(COL)
Cello
(COL TUBA)
Bass
(COL TUBA)
5/17/99
UDY GREEN MUSIC Hollywood, CA (323) 466-2491 P-570

Summation:

As you can see by the examples in this case study, the idea of making use of a particular theme, in this case one based upon a character in the film, and creating different 'dramatic variations' is a common technique in film composition. The variations are primarily done by varying the tempo, instrumentation, harmony, making use of counterlines and changing the textural accompaniment. Again, this is a form of Themes and Variations (using a traditional musical composition term) with the main difference being that the variations must support particular dramatic situations and/or emotions. As was discussed in the literature review of this thesis, there are few texts which delve into techniques to accomplish these dramatic variations. Most discussion of this is anecdotal and referred to, but not explained as a technique. As I have demonstrated, combining various simple concepts or tools, a composer can support a variety of dramatic situations.

8 - Case Study 2

P.T. Barnum

Audio Examples

9 - Case Study 3

Scoring Animation

As a departure from the previous case studies, which examined excerpts from a single film, this one will explore excerpted examples from two films that I have scored during my career. Although scoring animation is a rather broad subject, there are some very unique aspects and challenges presented to the composer. Primarily, the concept that in many instances the music replaces sound effects that would otherwise exist in a live action film, or scores elements that would have no actual sound, such as eye blinks. As can be seen in the edited excerpts from 3 different cartoon shorts in a collection entitled "Rabbit Season, Duck Season Trilogy,"[1] (viewable on Youtube.com) the music mimics many movements and actions. In the first excerpt, the figure that accompanies Daffy Duck entering from the right is in sync with his footsteps ending with 2 notes synching with the final planting of his stance; then as Daffy and Bugs volley their spoken phrases, the music plays a short chord accenting their body language; after Daffy is shot, the music mimics the spinning of his beak with a flute and solo portamento violin. In round two of their verbal volley, the music introduces each of their statements with a short melodic figure as they push the barrel of Elmer Fudd's rifle back and forth. After being shot for a second time, the strings play a short descending portamento as Daffy lowers his eyelids. The score also has a melodic figure that ends in a staccato note in sync with Daffy turning his beak back to its normal position, followed by a pizzicato string note to match Daffy's poking Bugs's chest. The second excerpt (at 1:05) features a flute tremolo as Daffy's eyes dart in and out while staring down Elmer. There are then short ascending and descending orchestral scalar figures as they rapidly move between various short quick poses, ultimately arriving at Elmer holding his rifle and Daffy standing waiting for the shooting to begin. There are many other musical gestures that sync with the movements and, as you will see, this style of composing is a major element in scoring animation. The amount of 'Mickey-

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[1] You Tube. "Rabbit Season, Duck Season Trilogy." Accessed July 20, 2014. https://www.youtube.com/watch?v=17ocaZb-bGg

Mousing' (sound effect and movement synching) used will vary on the policy and style of the score.

As I have done before, the examples of my work chosen to demonstrate the concepts discussed are not the most recent scores that I have composed, but were chosen because they best demonstrate the concepts that I am discussing in detail in this thesis.

Background:

Over the years there have been major changes in the way that animated films are made. From the early days of '2D Animation' - hand drawn frame by frame, 24 frames per second - to current motion capture and computer realized images. Just as there are now many different ways that animation is produced, there are also a variety of scoring approaches or policies. Many contemporary animated films are scored with the same policy that a composer would apply to scoring a live action film. However there is a certain scoring technique, the concept of 'Mickey-Mousing,' that developed to support the earlier style of animation production and that is still used in many circumstances today. The early animation of Mickey Mouse, Donald Duck, Bugs Bunny and Daffy Duck were all done using the hand drawn 2D method and, unlike live action films or motion capture animated films, these animated characters make absolutely no sound. The dialogue is recorded ahead of the drawings and any sound effects – footsteps, doors opening and closing, things crashing, wind and other ambient sounds – is either added during post production by the sound effects team or is, instead, provided by the music. In other words, musical gestures or effects replace many of the sounds.

Carl Stalling and Milt Jackson, who were the main composers of the Looney Toons and Merrie Melodies shorts produced by Warner Brothers, along with Scott Bradley, best known for his work as the composer of the Tom and Jerry cartoons, are regarded as the early masters of animation scoring. During their heyday they established a number of compositional practices and conventions that took advantage of this lack of natural sounds and substituting musical gestures for sound effects. For example, it is common in this style of animation scoring that the tempo of a score is dictated by the footsteps of a character walking, marching or running on screen. If Bugs Bunny was seen sneaking around on his tiptoes, chances are good that his movements were accompanied by pizzicato strings in perfect synchronization with his steps, filling in for the actual sound of footsteps. They even took this concept farther by scoring visual actions that would not have had any natural sound. For example, eye blinks – Stalling has been known to accompany them with a pizzicato violin note that would immediately portamento up, or if there was a sequence of blinks - a xylophone played in consecutive major seconds that leap down a 3rd or 4th.

Another practice that was very common in animation scoring was the use of quoting well-known pieces of music, both classical and popular. There is a very famous piece of animation where Elmer Fudd, in pursuit of Bugs Bunny, is singing "Kill da wabbit, kill da wabbit" to the melody of Wagner's well known "Ride of the Valkyries."[2] In fact, when I first began scoring episodes of "Tiny Toons Adventures," the head of the music department supplied each composer with a list of public domain works that we were allowed, and expected, to use in our scores. It was a comprehensive list of public domain popular songs such as "Alouette," "Twinkle, twinkle little star," and all of Stephen Foster's songs as well as well known classical works such as Mendelssohn's "Wedding March," Chopin's "Funeral March," and the Strauss Waltzes. The advantage to this approach is that the listener's previous association to these well-known works means that the composer already has some musical vocabulary that is shared with the audience.

Compositional Technical Challenge:

In scoring animation, the musical decisions can, and often do, happen on a beat-by-beat level. In contrast to the 1st case study, where I demonstrated how phrase lengths were varied by adding or subtracting a measure, or multiple measures to meet timing requirements; in animation, many, if not all, aspects of the score are micromanaged beat-by-beat by the action on screen. As previously mentioned, the tempo of a cue is often decided by the pace at which an on screen character is walking, many sound effects are replaced with musical gestures, melodies and thematic material might only be introduced at the moment that a particular character enters the frame or the theme's use is triggered by a particular on-screen event. All this is done while at the same time supporting the emotional context of the scene. In animation the 'emotional depth level' of the score can be extreme – a frightened or sad character will be scored with very little subtlety as animated characters do not emote as well as humans, and so the score can often be 'over the top' emotionally.

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[2] You Tube. "Kill The Wabbit." Accessed July 20, 2014. https://www.youtube.com/watch?v=wGhQ2BDt4VE

So the challenge of this type of scoring is not only the mathematical calculations required, which does take some skill and experience, but also how to create as cohesive a piece of music as possible given all the twists and turns that the action on screen is dictating. In some composer's minds, animation is the most challenging style of film scoring because of all these technical/compositional requirements. In my professional experience I have found that when scoring live action films, I can compose 3 minutes of music in a day. When scoring animation, I usually can compose only 1 to 1½ minutes per day due to the increased technical issues and compositional challenges.

One can also see the value of using quotes of well-known works which are easily identifiable, as then the composer does not have to worry about establishing themes that the audience has to 'learn.' The viewer is coming to the experience with a catalog of music that the composer can take advantage of. For example, in an animated film a composer might quote "(How much) Is that doggie in the window?"[3] whenever a group of dogs is onscreen.

I have been very fortunate in my career to score a variety of animated projects. I scored multiple episodes of "Tiny Toon Adventures" (Warner Brothers, 1991) and also the theatrical short "Box Office Bunny" (Warner Brothers, 1990) – the first Bugs Bunny short made after a 25 year hiatus of the studio producing animated shorts for theatrical release. When the WB television network was launched in 1995, I scored the animated launch sequence as well as all the animated promotional materials that featured Michigan J. Frog - the “Hello My Baby” singing frog.[4] All of those projects were scored in more of a classic Carl Stalling style. In 2000 I scored an IMAX film entitled “Cyberworld 3D” that had some elements of the classic scoring style, but also incorporated some contemporary scoring practices as well. Most recently I scored a short sequence of a Tom and Jerry cartoon reviving the style of scoring that Scott Bradley established. I will walk through the process of creating two of these scores below.

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[3] A novelty song composed by Bob Merrill in 1952, recorded by Patti Page on Mercury Records (source Wikipedia)

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[4] You Tube. “Michigan J. Frog – “Hello My Baby”.” Accessed Juy 20, 2014 https://www.youtube.com/watch?v=YkfU1JqmkHM

Tom and Jerry "Chase Sequence" (2012, Renegade Animation)**:**
When I composed the music for this clip, I was asked that the score should be influenced by Scott Bradley's style of composing. Although I was familiar with animation scoring, I did some additional research by watching a number of old Tom and Jerry shorts. As opposed to Stalling, Bradley made a lot more use of jazz than classical styles in his choices of harmonies, progressions and instrumentation. Unfortunately, with current budgetary constraints, the score had to be electronically realized, which made reproducing the sound of that era rather challenging.

As I do in all my scoring, I initially come up with the vocabulary and policy of the score. In this example the music makes a lot of use of dominant seventh chords as well as augmented voicings (whole tone scale) and melodic movement. Because of the earlier style of scoring requested, the music was expected to 'mickey-mouse' a lot of the on screen action. For example, when Tom (the cat) walks into the room and first sees Jerry (the mouse) approaching his food bowl, he has a comedic explosive reaction that required a musical sting. Tom, in starting his pursuit, rises off the ground with his legs spinning (a common animation visual device) before he zips off-screen – this required another musical gesture. Jerry's reaction, when he realizes that Tom has spotted him and it is time for him to make his escape, has similar movements – rising off the ground, spinning his legs and then zipping off-screen – requiring a similar musical gesture for a similar action. Next a chase ensues with Jerry escaping into a mouse hole in the wall and Tom, who makes a flying lunge trying to snatch him, slams into the wall since he cannot fit through the opening. Tom's legs then drop down to the ground (with what might have been a thud) before he yanks his misshapen snout out the mouse hole. Then he sits for a moment stunned, as he recovers from the whack and blinks slowly. In the scene I just described that lasts a mere 17 seconds there are already 16 musical sync points!!

The reader may want to watch the work print on the attached disc (track 1) and follow along with the list of 'hit points' below which are in the form of a music timing sheet[5].

Time code	Description
02:00:02:09	Music starts as we see Jerry looking out of mouse hole at bowl of food
02:00:05:01	Tom reacts to the sight of Jerry
02:00:06:00	Tom jumps up as his legs spin
02:00:06:14	Tom zips off-screen
02:00:07:06	Jerry jumps up
02:00:07:20	Jerry's legs spin
02:00:08:12	Jerry zips off-screen
02:00:08:23	Cut to chase in progress
02:00:12:15	Cut to another angle of chase as Jerry runs into his mouse hole
02:00:14:01	Tom slams into wall
02:00:14:18	His legs drop to the floor
02:00:15:16	He starts to struggle to free himself
02:00:17:00	His snout pops out of the hole
02:00:17:16	He lands in a sitting position
02:00:18:20	He closes his eyes
02:00:19:01	He opens his eyes
02:00:19:19	Mid wipe, the chase has resumed
02:00:22:01	Cut to exterior as Jerry runs outside
02:00:24:14	Jerry loops the tire tube over the banister
02:00:25:00	Tom runs into tube stretching it
02:00:26:13	Tom realizes what he has done and knows what is coming
02:00:27:04	The tube snaps back taking Tom with it
02:00:28:22	Tom slams through the mailbox and is left there in defeat

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[5] Music timing sheet or cue breakdown has a detailed description of the on screen action, dialogue and cuts/edits along with the time code of when they occur. Usually created by the music editor of a film, they are used by the composer for music to film synchronization.

Explanation of the Technique:

Since the flavor of this cartoon is that of a slapstick comedy, it is appropriate to musically 'hit' all of the sync points mentioned above. To do so, there are some general conventions in this style of animation scoring, whereby the composer creates musical gestures to interpret and imitate certain movements or actions and synchronize the score to match. So, for instance, if an animated character is seen walking up a set of stairs, a typical scoring device would be a scale of some sort ascending in pitch and then if the character walked down the stairs, a descending scale might be is used. The pitches would be rhythmically synchronized to the footsteps and the type of scale might reflect the dramatic context – a minor or diminished scale might be used to infer tension or fear whereas a major or Lydian scale might be used to infer a neutral or happy attitude. In the Warner Brothers cartoon "The Windblown Hare"[6] (1949) Carl Stalling uses a musical gesture based on this concept as the Wolf is going up and down a set of stairs (at 5:24 – viewable on Youtube.com). There are parallel chord structures descending as he descends, and ascending as he ascends in sync with his footsteps. Generally speaking, in an animated film of this style, upwards movement of almost any kind is likely to be accompanied with an ascending melody or set of chords, and downwards movement accompanied by a descending musical phrase or gesture.

The reader may want to now watch the final version of the film with the music (track 2) to see how these concepts were employed. Below is the list of hits (from the list above) along with a description of the musical gesture that was composed to score each hit.

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[6] Uloz.to. "Bugs Bunny – The Windblown Hare (1949).avi" Accessed July 21, 2014 http://ulozto.net/live/xEofbEK/bugs-bunny-the-windblown-hare-1949-avi

	Scene description	Musical Description
A	Music starts - Jerry looking at bowl	Short melodic motif (leading into)
B	Tom reacts	Whole tone brass sting
C	Tom's legs spin	WW/Strings/Marimba trill
D	Tom zips offscreen	16th note chromatic upwards movement leading into short eighth note
E	Jerry jumps up	Whole tone brass sting (similar to above)
F	Jerry's legs spin	WW/Stgs/Marimba trill (similar to above)
G	Jerry zips offscreen	16th note chromatic upwards movement into short eighth note (similar to above)
H	Cut to chase in progress	Chase propulsive figure with whole tone melody that sequences upward chromatically
I	Cut to another angle of chase	Downbeat of propulsion adding WW
J	Tom slams into wall	Whole tone brass sting (forte)
K	His legs drop to the floor	Lower voicing in strings only (mezzoforte)
L	He starts to struggle to free himself	High staccato WW figure
M	His snout pops out of the hole	Last note of WW figure
N	He lands in a sitting position	Major 2nd in strings and vibes
O	He closes his eyes	1st note of staccato piano figure (major 2nd)
P	He opens his eyes	2nd note of staccato piano figure (major 2nd)
Q	Mid wipe, the chase has resumed	More active chase propulsive figure with WT melody and voicings

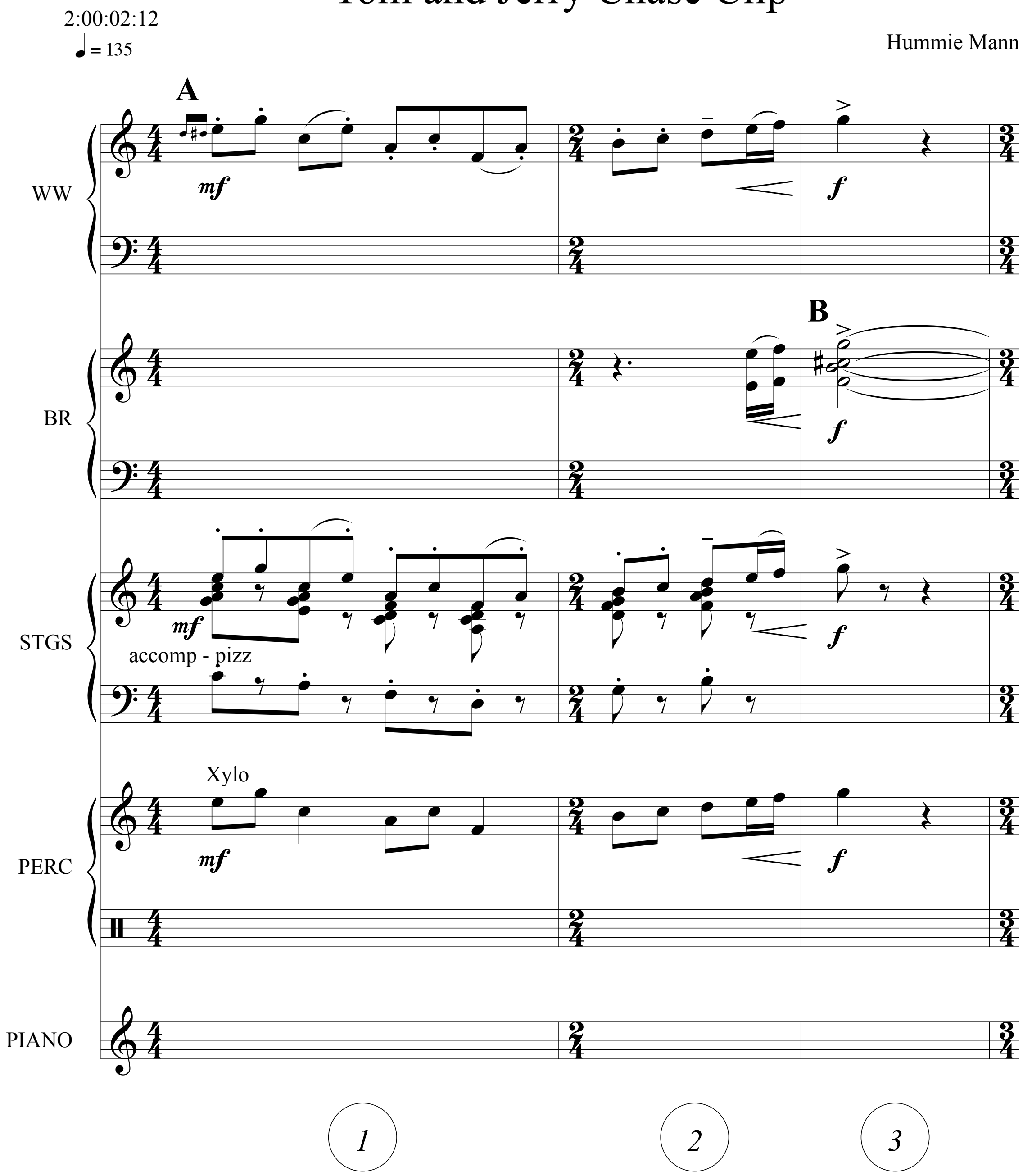
R	Cut to exterior as Jerry runs outside	Propulsion continues adding WW
S	Jerry loops tire tube over banister	Propulsion ends
T	Tom runs into tube stretching it	Mid register WW/Stgs - chromatically moving WT chord structure
U	Tom realizes what he has done	Accented WW/Stgs (tremolo) sting
V	The tube snaps back taking Tom with it	Triplet descending chromatic augmented triads in WW with rising augmented lower brass accented by snare
W	Tom slams through the mail box	Movement stops, slow solo bassoon line

After watching the final version of the clip and following along with the musical descriptions above, the reader may now follow along with the marked up sketch of the cue on the next pages. All the sync points have been lettered to match the list above.

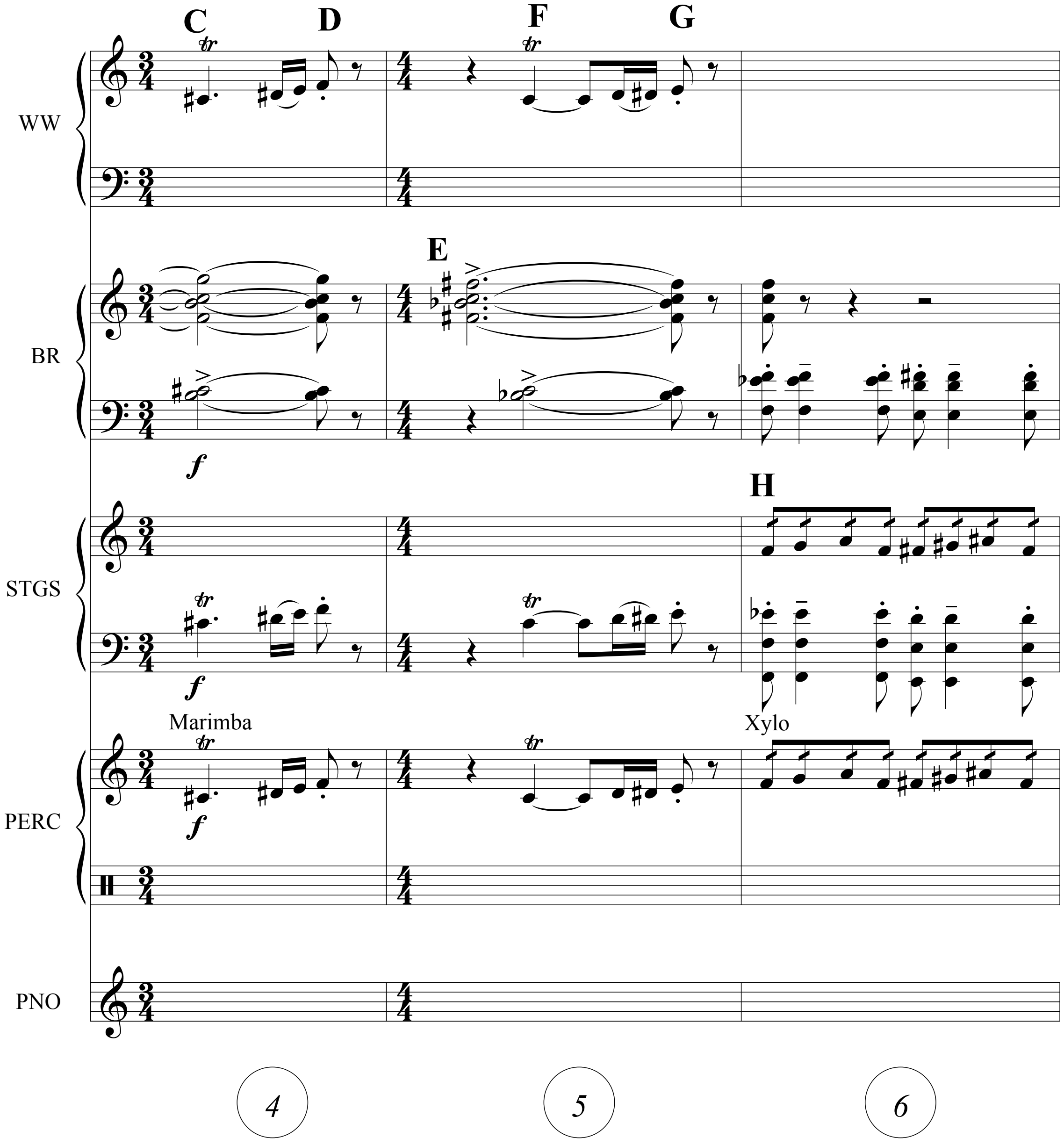
Notice the constant changing meters and the use of melodic pick-ups (short notes leading to long notes, and ending of a phrase on downbeats) that help establish the Strong beats/downbeats of the measures. Also, the harmonic movement always changes on a downbeat and often, if it was moving before, sustains. These devices to manipulate form were discussed in the 1st case study.

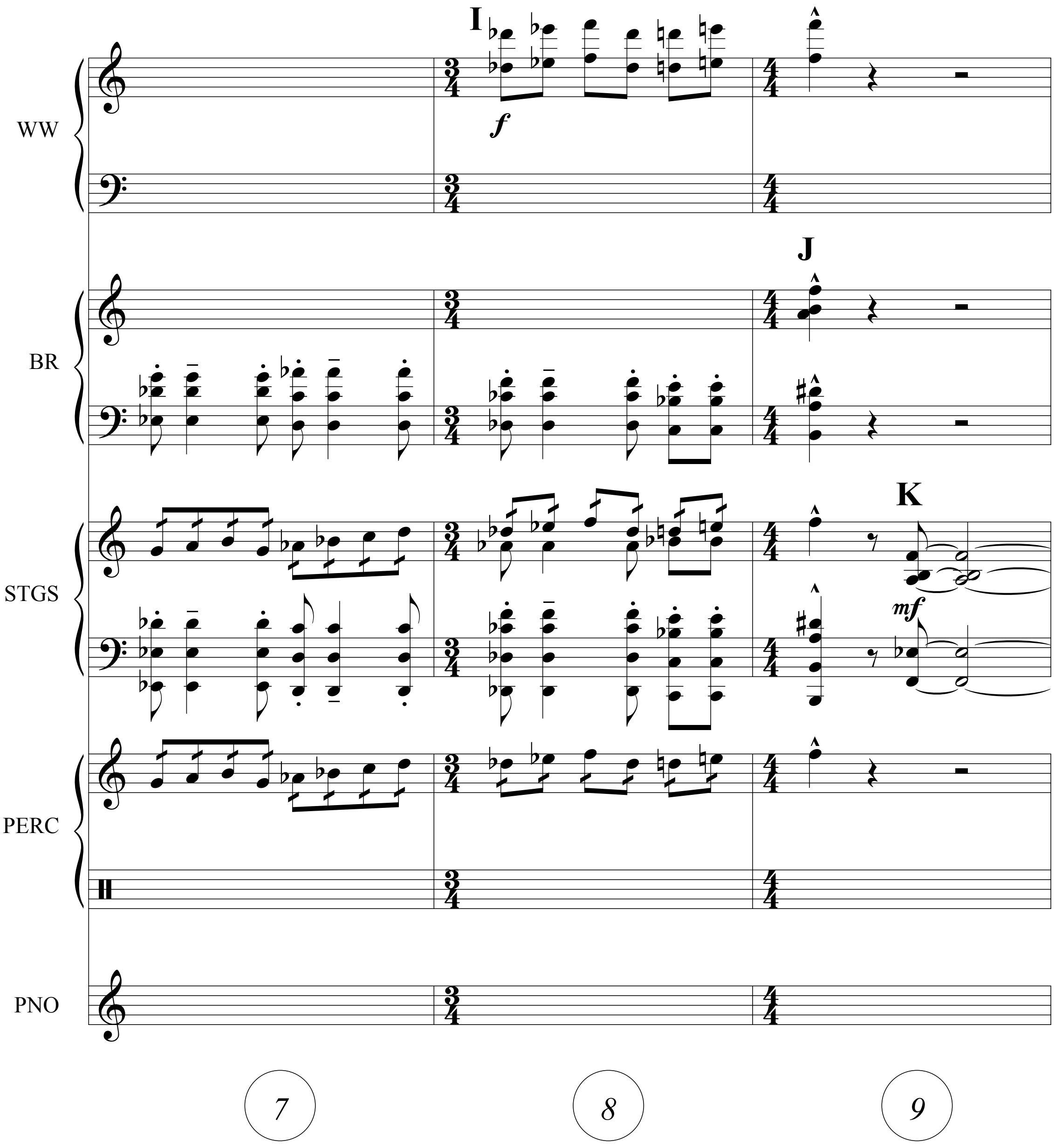
Tom and Jerry Chase Clip

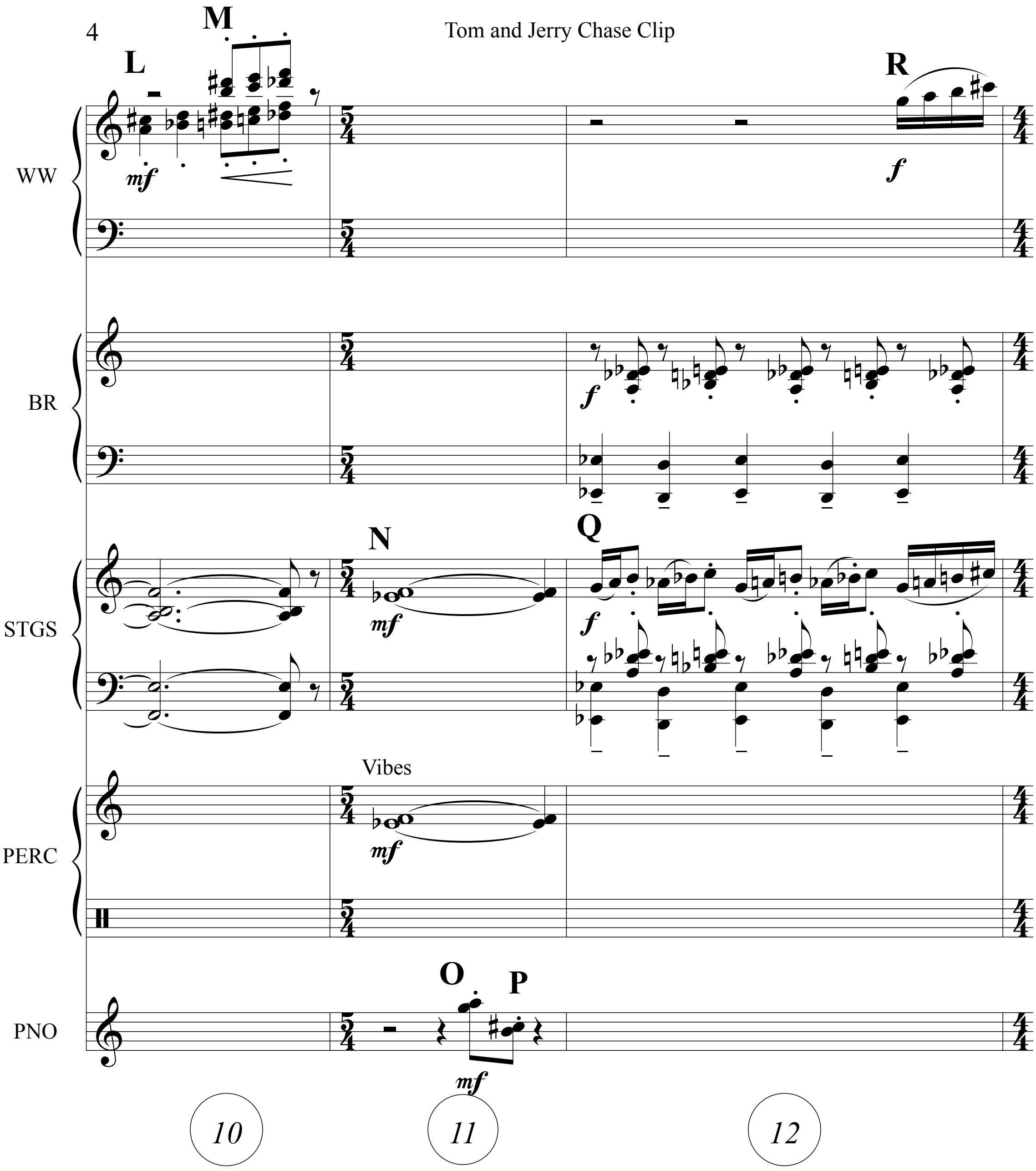
Hummie Mann

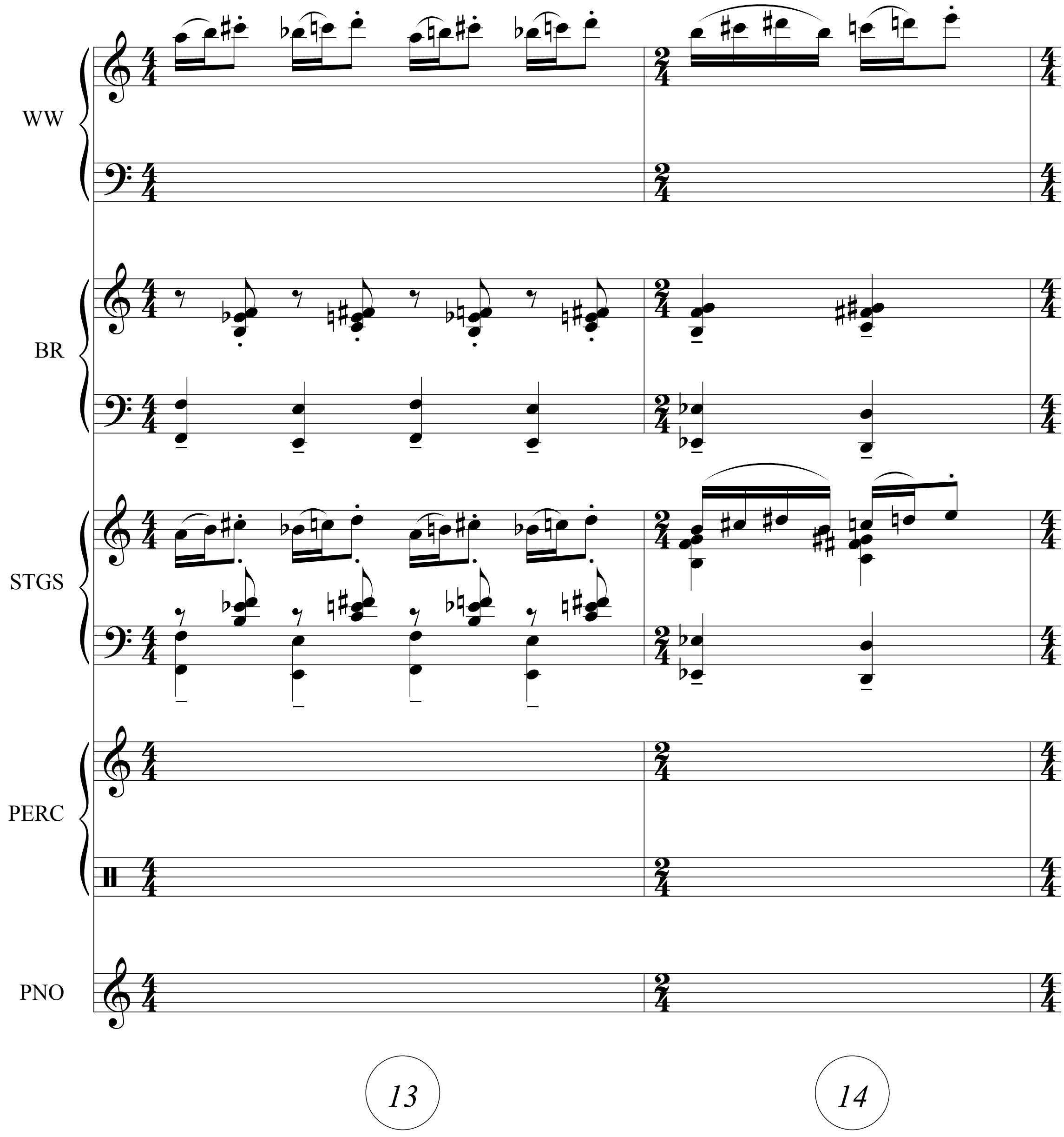

2:00:02:12
♩ = 135
A
B
WW
BR
STGS
PERC
PIANO
mf
f
accomp - pizz
Xylo
1
2
3

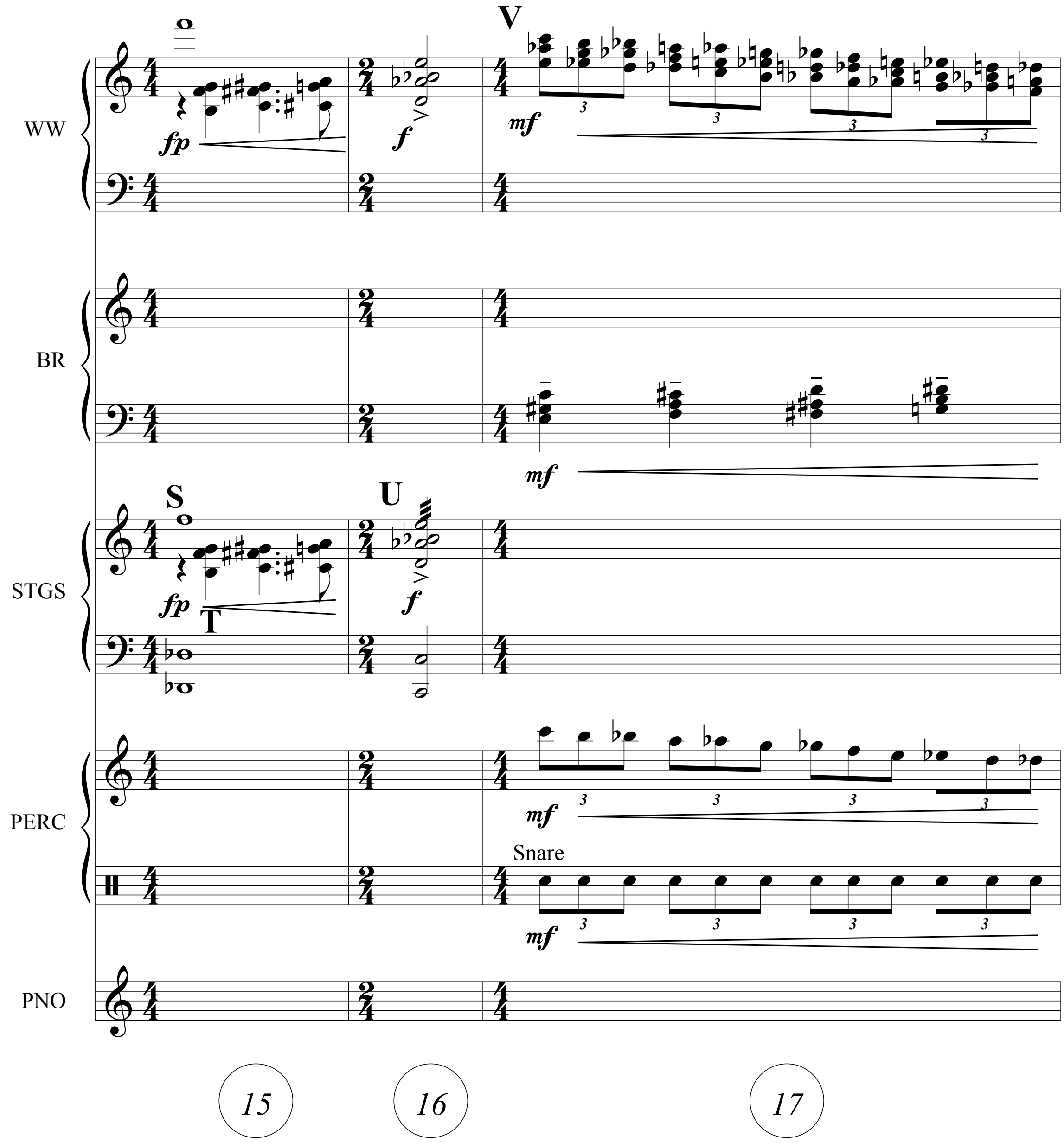
© 2013

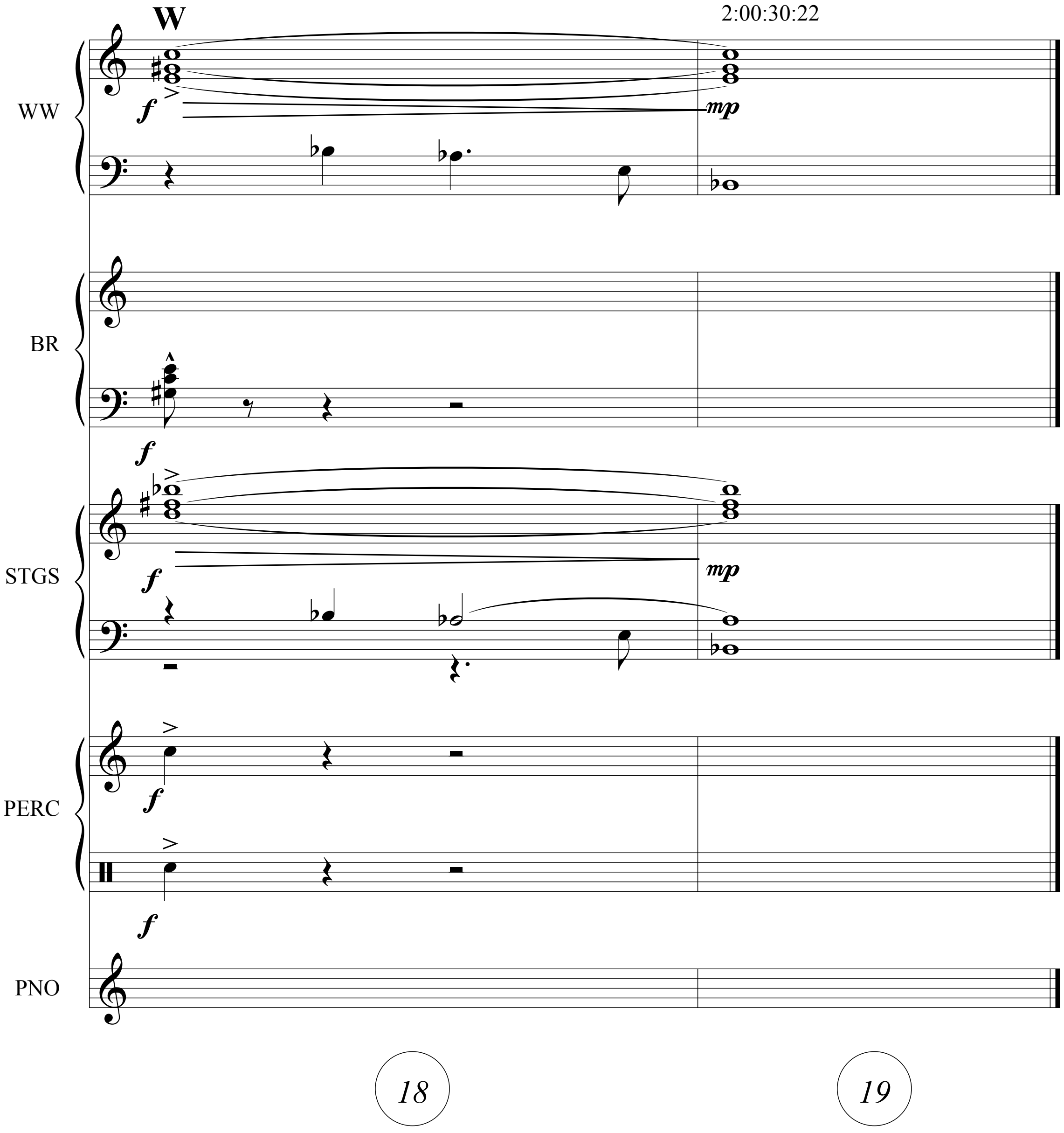

C
D
F
G
E
H
WW
BR
STGS
PERC
PNO
Marimba
Xylo
tr
f
4
5
6


I
J
K
WW
BR
STGS
PERC
PNO
f
mf
7
8
9


M
L
R
mf
f
WW
BR
N
Q
STGS
Vibes
PERC
O
P
PNO
10
11
12


WW
BR
STGS
PERC
PNO
13
14

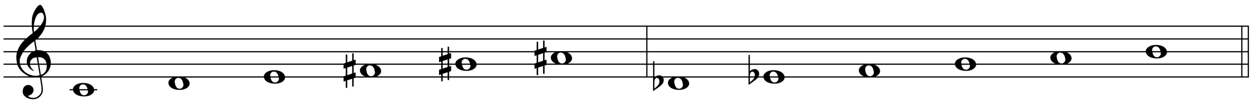

V
WW
fp
f
mf
3
BR
mf
S
U
STGS
fp
T
f
PERC
mf
Snare
mf
PNO
15
16
17


W
2:00:30:22
WW
BR
STGS
PERC
PNO
f
mp
18
19

Additional Techniques:

In the example above, the use of whole tone scales and harmonic voicings based upon whole tone scales is prevalent. I have observed that the extensive use of whole tone scales is fairly common in animation. How this practice became popular in animation scoring and who did it first is difficult, if not impossible to say. However I want to demonstrate why it seems to be a technique that is so useful, and might possibly explain its common usage in animation scoring.

There are only 2 possible whole tone scales with different pitch sets:



Therefore there are only 2 choices for triadic harmonic movement – chord progressions moving within one scale: for example Caug – Daug – Eaug – F♯aug, etc. are all moving within the same whole tone scale; or chord progressions moving between the 2 scales: Caug – D♭aug – Daug – E♭aug, etc.

Since these 2 movements within either scale always produce a somewhat similar sounding sonority, the main issue about the harmonic voicings becomes size and density, as the type of chord will always be some sort of Augmented triad or 7th chord. I would like to mention here that when creating progressions in film music, in order to allow for the most color opportunities in the harmonic language, I instruct my students in what is usually thought of as Jazz harmony, where the progression from one chord to another can actually thought of as a movement from scale to scale. Then the character of each chord can be adjusted by the style of the voicing created from each scale. As a quick illustration, in Star Wars, after the opening brass fanfare, the main theme's melody starts on a C triad and the second chord is a G-$^{7(11)}$ chord. Obviously this is not a derivation from classical harmonic practice, but rather a more commonly derived chord from contemporary Jazz theory.

In the case of whole tone voicings we can pile the notes in a variety of ways and, in fact, could create a voicing that uses all the notes from the scale, to create a rich, dense six-note voicing. However the interesting aspect for animation scoring is that no matter what voicing we start with, as long as we begin with notes diatonic to either one of the two possible whole tone scales, when we move each individual voice in either direction – up or down – by the same interval (either by half step or whole step), the resulting voicing will be another whole tone scale voicing. If each note in a voicing moves by whole step up or down (or in this situation repeats/sustains), then we are staying within the same scale. If each voice moves by half step either up or down, then we move from one of the whole tone scales to the other.

In the Tom and Jerry example above, you can see the use of this concept in measures 6 through 8 where the bass is moving down by semi-tone therefore moving from one WT scale to the other. The melody moves up by semi-tone and the brass voicing has some voices moving down and some moving up – all by the same interval. In measure 12 the bass is moving up and down by semi-tone with the voicings moving in contrary motion by semi-tone as well. There is then a whole step movement from measure 12 to 13 with both the bass and the voicing moving up by whole step. In bar 13 the contrary semi-tone motion continues until the movement into measure 14 where some notes in the voicing go up and some go down – both by semi-tone – until we arrive at the final chord in measure 15.

In measure 17 there are ascending quarter note augmented triads in the lower brass voicings and descending eighth note triplet augmented triads in the woodwinds. This works because when each lower chord sounds, the first and third notes of the triplets are ‘in scale’ and the middle note, although from the other scale, is heard as a chromatic passing tone. In measure 18 the resulting chord between the low woodwinds and the high strings uses all 6 notes from the whole tone scale. I have also included just an audio version of this cue (track 3) on the attached CD.

"Krakkens and Jabberwockys" from Cyberworld 3D (2000, IMAX Films)**:**
This 3D digitally animated film was an interesting challenge as the structure of the piece was numerous short stories/films told inside a 'shell' story/film. The shell story is that the audience is visiting a cyber-museum that only exists inside of a computer program. As the visitor/viewer is being taken on a tour of this museum, the exhibits - which are individual digitally animated short films from various animation studios - start having technical problems and begin to malfunction and/or disintegrate. We learn that the shell story is actually about how our guide, Phig, who has been giving us a tour of the museum, discovers the problem and realizes that there is a bug in the computer program that allows the museum to exist. However the animators realized a play on words and created a trio of actual bugs/insects that are living in the computer and who are eating the computer code, therefore causing the weird behavior of the program which ultimately crashes and requires re-booting.

From a compositional point of view, there needed to be one score that supported the shell story of the cyber museum: the discovery of the bugs, Phig hunting them down and finally the system's crash and re-boot. Additionally, I had to score each individual exhibits/short films, which required unique vocabularies and polices to match the character and needs of each one. The cue I will discuss here actually scores both the short film - Krakkens and Jaberwockys - and at the end switches back to the story of Phig in the exhibit hall as she falls off a platform that she was standing on.

I would suggest that the reader watch the work print version (without music) of this segment of the film (track 4) before proceeding to the discussion below.

Explanation of the Technique:
When scoring this short film, I approached it as an underwater adventure. Thematically there is only one recurring melodic theme, which is for the Krakkens (the large creatures that we meet near the beginning of the short) that is used in a variety of dramatic variations. I also created a short melodic element for the opening of the film as a kind of 'underwater playground' motif, although

this theme is never revisited. In order to establish the 'bad guys' (Jabberwockys), I used some of the dramatic orchestration techniques I have already discussed and made use of low registers, melodic dissonance and dissonant chord voicings; I also composed a chase/danger musical gesture.

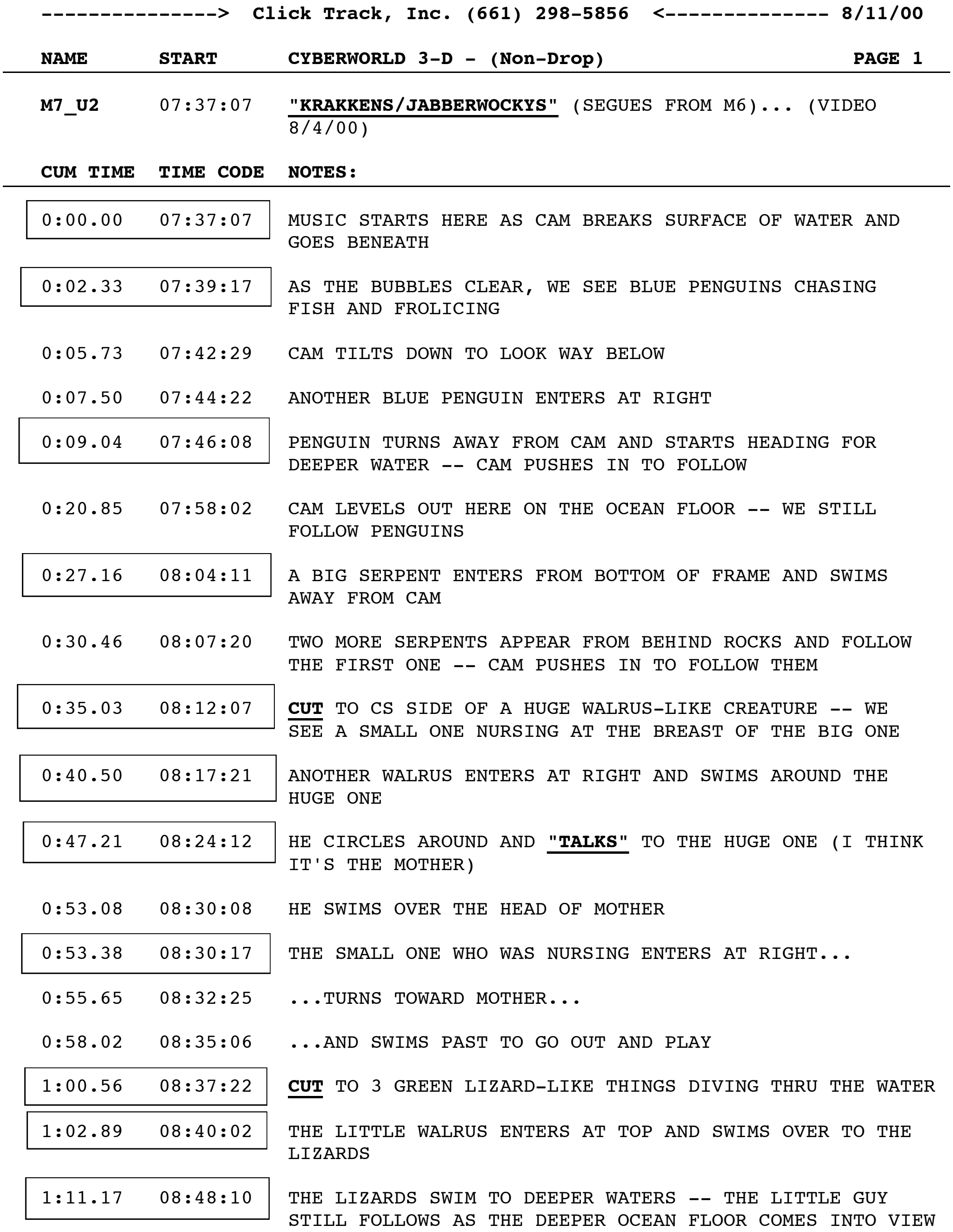
Besides the things that I mentioned that I would enhance with the scoring, the director made a few requests where he wanted the music to reinforce certain story elements that he felt the film did not make as clear as he had wanted. Firstly, after the baby Krakken meets his little green friend and they swim off together, the director asked for the music to help inform the audience that the bottom of the ocean was them venturing to the 'wrong side of the tracks.' Additionally, I was asked to help express fear when baby Krakken is swimming around inside the cave where he escaped from the Jabberwockys after the first chase sequence. I will point these areas out and explain how I achieved these requests.

On this film I worked with my music editor – Chris Ledesma – who attended the spotting session with me, taking notes as to where the music starts and stops throughout the film. The next step for a music editor is to create a full set of timing notes of each individual cue in the film. These are notes that break down the action in the film and list the timings of where the actions occur. Figure 3 below is the timing notes that Chris initially created for this cue. Notice that there are two columns on the left hand side. One is the actual time code timing of where the action occurs, and that matches the time code printed on the film. The other column labeled 'cum time' is the cumulative timing from the start of the cue. Depending on the synchronization technique used to score the sequence, I may need just the time code numbers, or the cumulative numbers, or both. In this instance, I used a click track as there are so many hit points in the film, so the time code numbers were all I needed. However, since the music editor does not know which technique I might use, the cumulative timings are always included.

Having a list of these timings is useful in aiding me in my job of synchronizing the music to the picture. I simply view the film and choose the timings that I believe to be important to the composing process – my hit points. This is a huge time saver rather than having to stop the video and record a timecode number myself. In a few instances, I chose additional hit points that Chris did not delineate in the timing notes, and for those, I did have to record the timecode numbers myself. Using Chris's notes and watching the film, I circle the timings that I want my music to synchronize to and then work out the tempo and number of beats and bars I need to compose from sync point to sync point. I have placed boxes around the sync points that I composed my score to for this scene. As was mentioned in the previous example, there are many more sync points in animation than in live action and so you will notice how many of the timings are actually circled (boxed for purposes of neatness).

Also, not every sync point will become a downbeat of a measure or phrase. I decide which hits will work best as musical phrase starting points on downbeats as opposed to musical gestures or figures that will occur elsewhere. For instance the introduction of the Krakkens is a new musical phrase as is the introduction of the green creatures and the beginning of the chase sequence.

Figure 3



---------------> Click Track, Inc. (661) 298-5856 <--------------- 8/11/00

NAME	START	CYBERWORLD 3-D - (Non-Drop)	PAGE 1
M7_U2	07:37:07	**"KRAKKENS/JABBERWOCKYS"** (SEGUES FROM M6)... (VIDEO 8/4/00)	

CUM TIME	TIME CODE	NOTES:
0:00.00	07:37:07	MUSIC STARTS HERE AS CAM BREAKS SURFACE OF WATER AND GOES BENEATH
0:02.33	07:39:17	AS THE BUBBLES CLEAR, WE SEE BLUE PENGUINS CHASING FISH AND FROLICING
0:05.73	07:42:29	CAM TILTS DOWN TO LOOK WAY BELOW
0:07.50	07:44:22	ANOTHER BLUE PENGUIN ENTERS AT RIGHT
0:09.04	07:46:08	PENGUIN TURNS AWAY FROM CAM AND STARTS HEADING FOR DEEPER WATER -- CAM PUSHES IN TO FOLLOW
0:20.85	07:58:02	CAM LEVELS OUT HERE ON THE OCEAN FLOOR -- WE STILL FOLLOW PENGUINS
0:27.16	08:04:11	A BIG SERPENT ENTERS FROM BOTTOM OF FRAME AND SWIMS AWAY FROM CAM
0:30.46	08:07:20	TWO MORE SERPENTS APPEAR FROM BEHIND ROCKS AND FOLLOW THE FIRST ONE -- CAM PUSHES IN TO FOLLOW THEM
0:35.03	08:12:07	**CUT** TO CS SIDE OF A HUGE WALRUS-LIKE CREATURE -- WE SEE A SMALL ONE NURSING AT THE BREAST OF THE BIG ONE
0:40.50	08:17:21	ANOTHER WALRUS ENTERS AT RIGHT AND SWIMS AROUND THE HUGE ONE
0:47.21	08:24:12	HE CIRCLES AROUND AND **"TALKS"** TO THE HUGE ONE (I THINK IT'S THE MOTHER)
0:53.08	08:30:08	HE SWIMS OVER THE HEAD OF MOTHER
0:53.38	08:30:17	THE SMALL ONE WHO WAS NURSING ENTERS AT RIGHT...
0:55.65	08:32:25	...TURNS TOWARD MOTHER...
0:58.02	08:35:06	...AND SWIMS PAST TO GO OUT AND PLAY
1:00.56	08:37:22	**CUT** TO 3 GREEN LIZARD-LIKE THINGS DIVING THRU THE WATER
1:02.89	08:40:02	THE LITTLE WALRUS ENTERS AT TOP AND SWIMS OVER TO THE LIZARDS
1:11.17	08:48:10	THE LIZARDS SWIM TO DEEPER WATERS -- THE LITTLE GUY STILL FOLLOWS AS THE DEEPER OCEAN FLOOR COMES INTO VIEW

Cue: M7_U2 **Project: CYBERWORLD 3-D** **Page 2**

1:19.71	08:56:26	AS THE LITTLE GUY SWIMS DEEPER, WE FOLLOW HIM AND SEE HIM SWIM TOWARD WHAT LOOKS LIKE A BED OF JELLYFISH
1:21.98	08:59:04	WE FOLLOW THE LITTLE GUY THRU THE JELLYFISH -- HE CONTS TO FOLLOW THE LIZARDS (LONG TRACKING SHOT THRU THE JELLYFISH WITH LOTS OF ELEGANT SWIMMING)
1:52.31	09:29:13	THE 3 SERPENTS SUDDENLY APPEAR FROM BEHIND ROCKS AND CLOSE IN ON THE LITTLE GUY
1:53.31	09:30:13	ONE TRIES TO BITE HIM AND MISSES
1:54.81	09:31:28	THE SECOND ONE TRIES AND MISSES
1:55.54	09:32:20	THE LITTLE GUY SWIMS FOR HIS LIFE OUT OF FRAME AT TOP
1:55.84	09:32:29	**CUT** TO ANGLE FROM ABOVE LOOKING DOWN AT LITTLE GUY AS HE AND A LIZARD SWIM STRAIGHT UP TOWARD CAM, SERPENTS CHASING
1:58.68	09:35:24	**CUT** TO REVERSE ANGLE LOOKING STRAIGHT UP AT THE CHASE
2:04.15	09:41:08	**CUT** TO INSIDE A HOLE IN SOME ROCKS AS THE LIZARD ENTERS FOLLOWED BY THE LITTLE GUY...
2:05.65	09:42:23	...FOLLOWED BY THE GAPING JAW OF THE SERPENT
2:06.12	09:43:07	THE HOLE IS TOO SMALL ... THE SERPENT CAN'T GET INSIDE AND HE SNAPS HIS JAWS AND TEETH
2:08.62	09:45:22	AN ANGELFISH ENTERS AT RIGHT -- CAM PANS LEFT TO FOLLOW ANGELFISH
2:11.19	09:48:09	CAM PICKS UP LITTLE GUY AND FOLLOWS HIM NOW AS HE WEAVES THRU THE MAZE OF ROCKS, FOLLOWING HIS LIZARD BUDDY
2:14.73	09:51:25	THEY PAUSE HERE IN A SLIGHTLY MORE OPEN AREA -- THEY LOOK AROUND
2:22.77	09:59:26	THEY RESUME SWIMMING AND HEAD TOWARD ANOTHER HOLE IN THE ROCKS
2:28.68	10:05:23	THEY SWIM OUT THRU THE HOLE...
2:29.04	10:06:04	...AND THE SERPENTS ARE WAITING! ONE BITES AND MISSES...
2:29.54	10:06:19	...ANOTHER BITES AND MISSES
2:31.11	10:08:06	THE CHASE IS ON AGAIN!
2:32.68	10:09:23	**CUT** TO SIDE VIEW OF THE CHASE AS THE LITTLE GUY HEADS FOR THE SURFACE -- CHASE MOVES R-TO-L, CAM PANNING LEFT TO FOLLOW

Cue: M7_U2 **Project: CYBERWORLD 3-D** **Page 3**

2:33.82	10:10:27	ANOTHER MISSED BITE
2:39.72	10:16:24	DAD WALRUS ENTERS AT LEFT AND STARTS CHASING THE SERPENTS
2:43.06	10:20:04	NOW BIG MOM WALRUS ENTERS AT TOP AND CHASES THE SERPENTS
2:45.66	10:22:22	MOM GIVE A BIG SWIPE WITH HER FLUKE
2:46.86	10:23:28	SHE SWIPES UP WITH THE FLUKE AND HITS A SERPENT
2:48.50	10:25:17	**CUT** TO FS FIG ON HER HOVERING PLATFORM -- THE FORCE OF THE O.S. FIGHT CAUSES THE PLATFORM TO SHAKE -- FIG YELLS
2:50.23	10:27:09	FIG LOSES HER BALANCE AND FALLS, SCREAMING ALL THE WAY DOWN -- CAM PUSHES IN TO FOLLOW HER FALL
2:54.37	10:31:13	SHE GRABS ON TO A FLOATING PIECE AND STOPS FALLING FOR A MOMENT
2:54.87	10:31:28	SHE SLIPS OFF AND RESUMES FALLING
2:55.44	10:32:15	SHE GRABS ANOTHER FLOATING PIECE AND STOPS FALLING FOR ANOTHER MOMENT
2:55.87	10:32:28	SHE FALLS OFF THIS PIECE AND RESUMES FALLING
2:56.14	10:33:06	**CUT** TO UP ANGLE SHOT OF THESES VARIOUS PIECES FLOATING IN CIRCULAR PATTERNS
2:58.84	10:35:27	THEY SUDDENLY ALL COME TOGETHER, LIKE A JIGSAW PUZZLE
2:59.04	10:36:03	SPOTTING NOTES SAY FIG LANDS ON THE PIECES HERE AND MUSIC IS OUT (FIG ANIMATION NOT IN MY COPY)

Below is a list of the sync points and a description of what musical effect or gesture I composed to support the onscreen action. Obviously there is very little natural sound underwater, so I took some creative license in adding musical elements to some actions. At this point the reader should follow along and watch the Scored version of the cue (track 5).

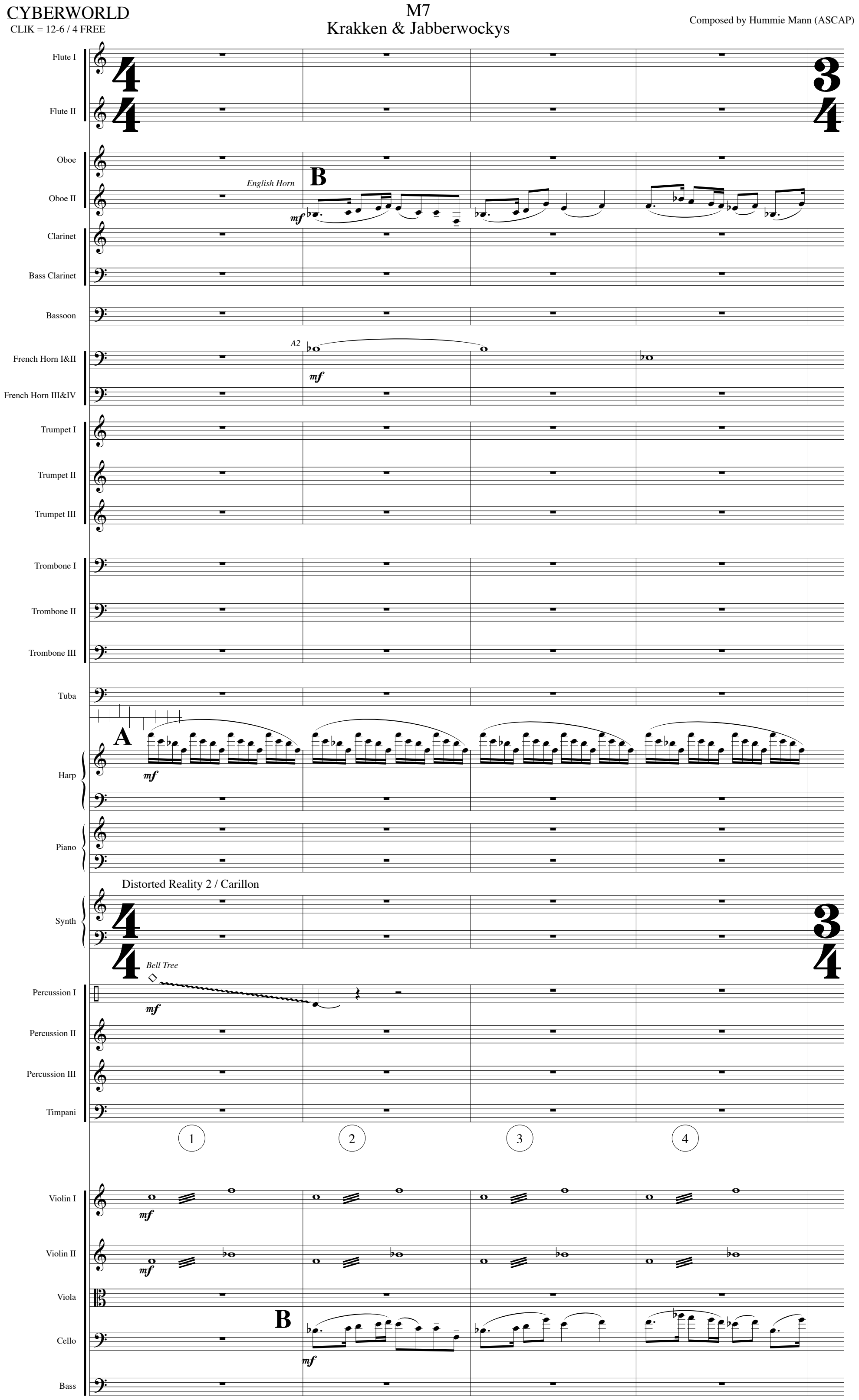
	Scene description	Musical Description
A	Cam Breaks Surface	Harp 16th note figure with fingered tremolo strings (My musical interpretation of bubbles)
B	We see fish swimming	Introduction of 'underwater playground' theme
C	Penguin 1 in center screen flaps wings and creates bubbles	Synth and Flute 16th note arpeggiation figure
D	Penguin 1 continues to swim	Continuation of 'underwater playground' theme (sustaining the final note as penguin glides off)
E	Penguin 2 entering from right chasing a school of smaller fish	Similar figure to **C** above with winds and percussion
F	Jabberwockys enters from bottom	Low, ominous, dissonant melody in low brass, woodwinds, strings and stopped horns
G	Cut to mother Krakken nursing her baby	Introduction of Krakken theme in strings and flute
H	Daddy Krakken enters frame	Melodic counterline in horns
I	Daddy Krakken is off screen	Continuation of Krakken theme
J	Daddy Krakken seems to be talking to mother	Another counterline in horns inferring a conversation response from Daddy Krakken
K	Baby Krakken swims on to screen from right	Playful/youthful version of Krakken theme

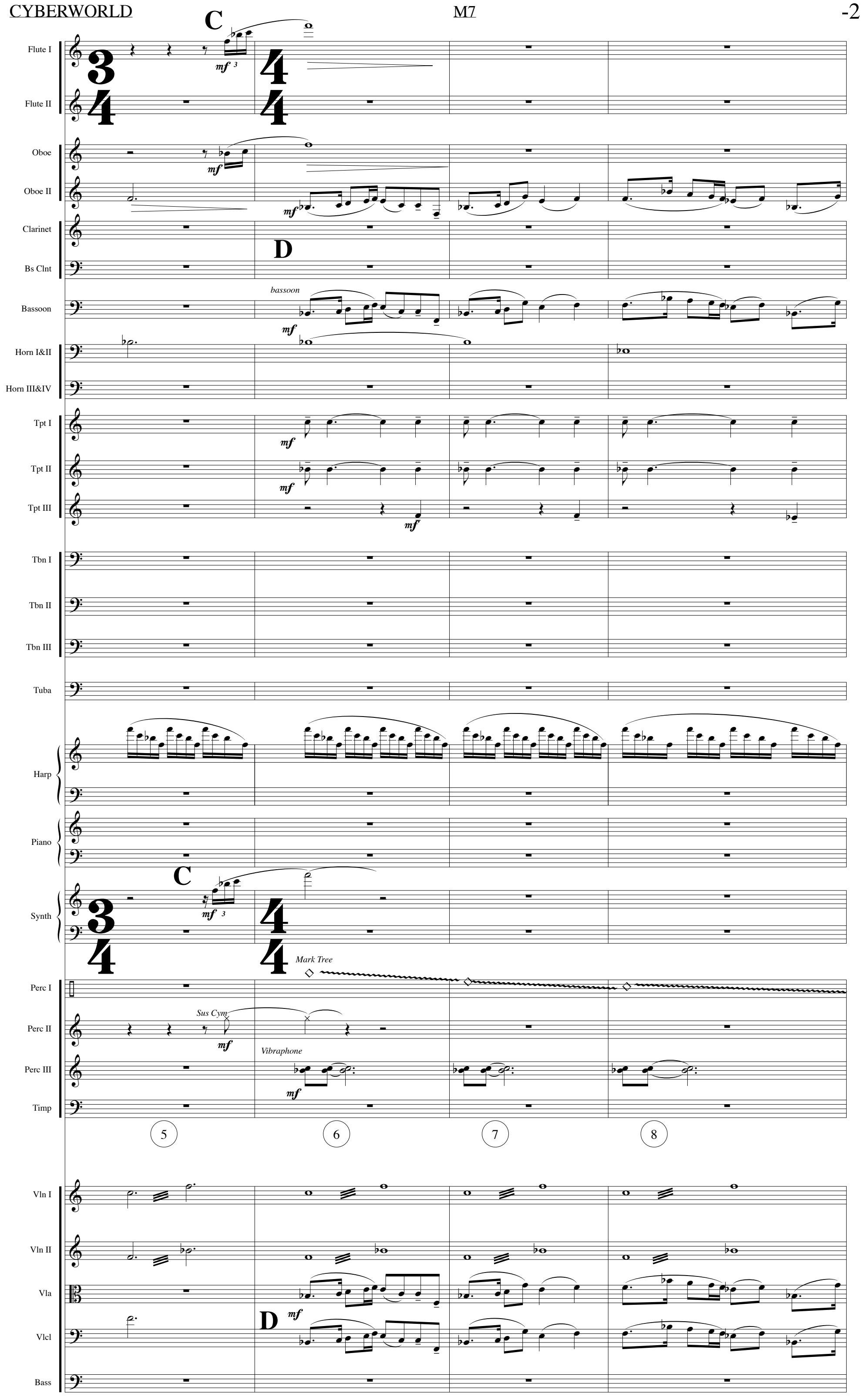
L	Cut to green creatures	A new accompaniment figure for these creatures
M	Baby Krakken joins one of the green creatures and they swim off	Playful version of Krakken theme plays over the green creature accompaniment figure
N	They descend deeper going to the “wrong side of the tracks”	This is the moment where the director asked me to establish the dangerous neighborhood. I introduced a harmonically unusual & slightly dissonant sound on the 3rd and 4th beats of Bars 36 through 40 by adding a bass note of E♭ which results in an unusual E♭aug(major^7) chord
O	They descend farther (more dangerous)	The figure from **N** becomes darker through a change in register and a slower – less playful treatment (melodic augmentation)
P/Q	They are exploring the bottom of the ocean	A variation of the Krakken theme with darker harmonies
R	Reinforcing “should not be here”	Chromatic movement with the stopped horns
S/T/U	Bubbles bursting	Ascending melodic figure in flutes and bell tree
V	They pause for a moment	Most of the movement in the orchestra stops
W	They resume swimming	Playful version of the Krakken theme as they are oblivious to the danger in their surroundings
X	The Jabberwockys emerge	Low dissonant ascending melodic figure in low brass
Y	First Jabberwocky lunge	Dissonant chord voicing and woodwind figure

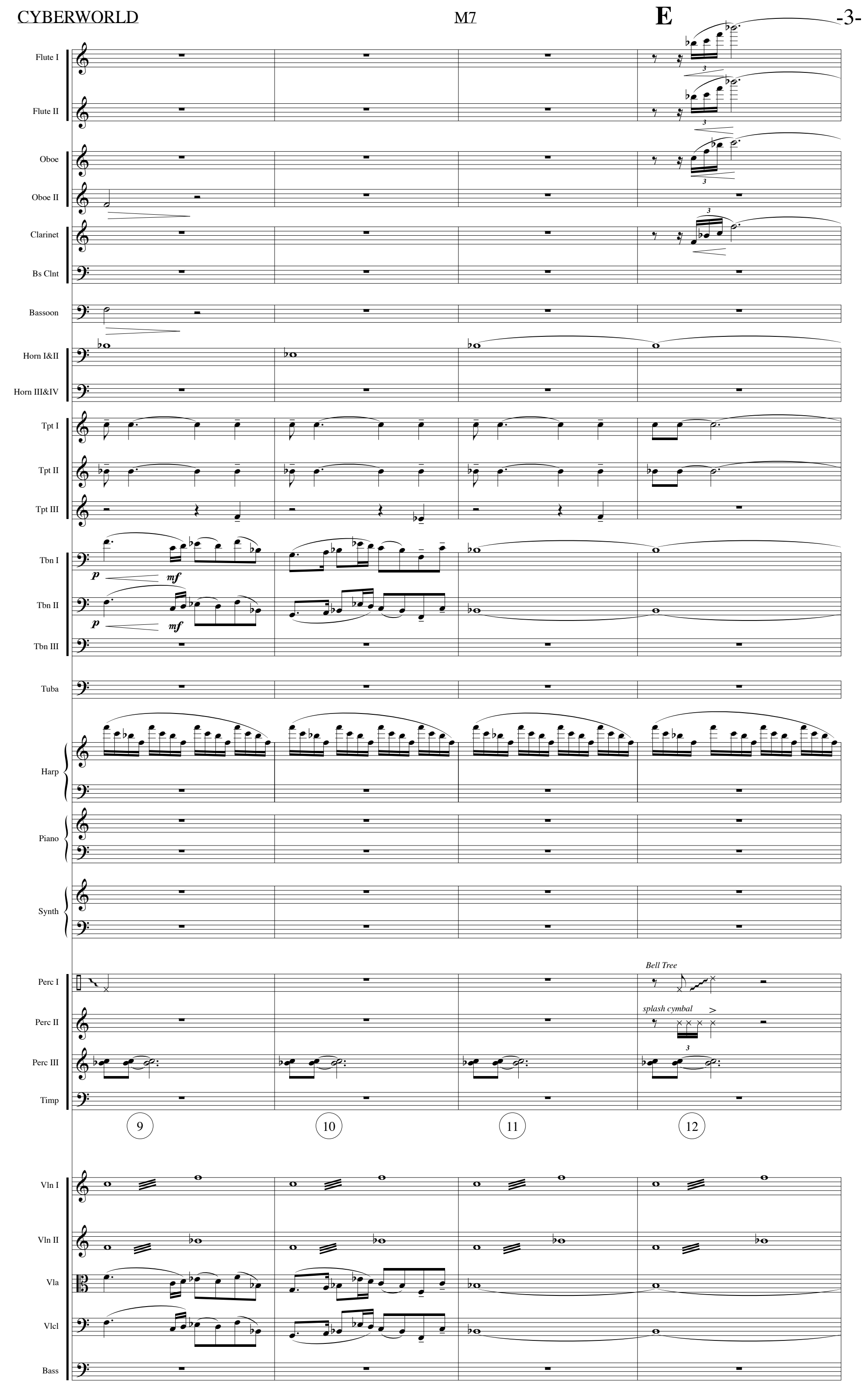
Z	Second Jabberwocky lunge	Larger dissonant chord voicing (added trumpets) and woodwind figure at a higher pitch level
AA	Cut to the chase	Chase motif – propulsive dissonant chords and 16th note figure in the strings
BB	Cut as chase continues – different camera angle	Chase motif modulates up a step and continues
CC	Cut to cave as Baby Krakken enters and Jabberwocky tries to follow	Tutti repeated chords with a highly dissonant voicing
DD	Jabberwocky gets stuck in entrance	Low sustained dissonant voicing
EE	Jabberwocky retreats	Low non-dissonant voicing diminuendos as danger momentarily subsides
FF	The Baby Krakken swims in the cave	This is the point where the director wanted me to help the audience get a sense of fear. This was achieved through the use of the harmony which has a small amount of dissonance
GG	Baby Krakken starts to swim towards exit	Return of Krakken theme but with a darker harmonic accompaniment as there is still danger lurking
HH	Camera moves through a school of fish	Woodwind figure of ascending 16th notes to a tremolo chord
II	The Jabberwockys appear as Baby Krakken exits cave	Low brass and horns ascending line and then to sustained dissonant chord crescendo as woodwinds play a melodic figure based on the accompaniment figure (harp and strings) from the previous section. This is now very dissonant against the sustained chord

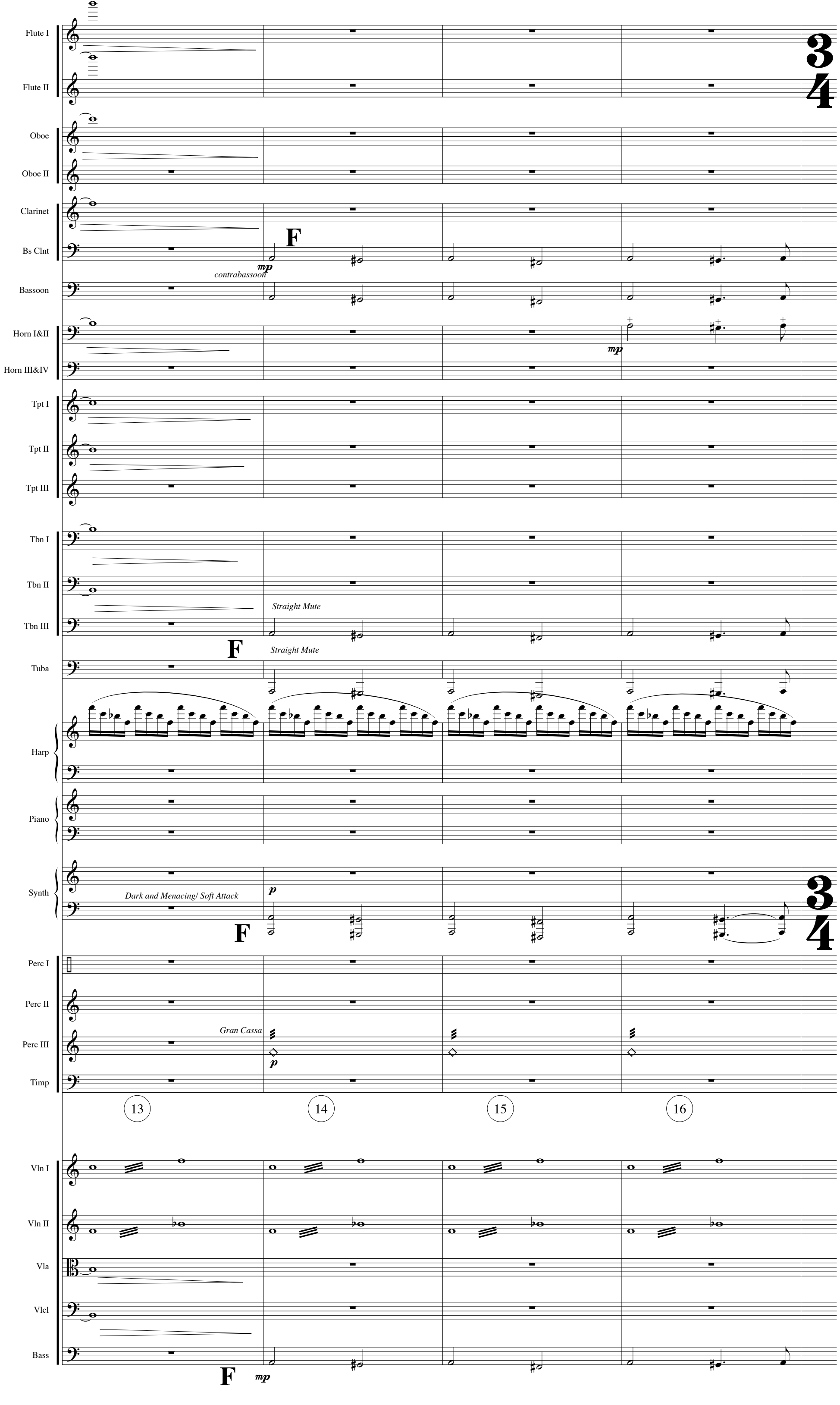
JJ	Cut to the chase resuming	Restatement of the chase motif from earlier
KK	1st Adult Krakken enters	Heroic statement variation of Krakkens theme. Notice dissonant 8th note figure in violas and horns for a continued sense of danger
LL	2nd adult Krakken swipes Jabberwocky with tail	Sforzando dissonant chord as tail hits Jabberwocky followed by horn rip as he is thrown toward the audience
MM	Cut to Phig in “exhibit hall” as she loses her balance	Consonant chord with diminuendo
NN	Phig begins to fall	Chromatically descending whole tone voicing in strings and winds over a pedal tone
OO	She grabs at a floating piece of material trying to stop fall	Accented whole tone voicing
PP	She grabs a second floating piece of material	A lower pitched accented whole tone voicing
QQ	Cut to shot from below as Platform begins to form	Descending string and winds slow down as clarinet plays whole tone ascending figure that switches WT scales to match scales of upper voicings
RR	The platform is completely formed	Final sustained Gaug chord

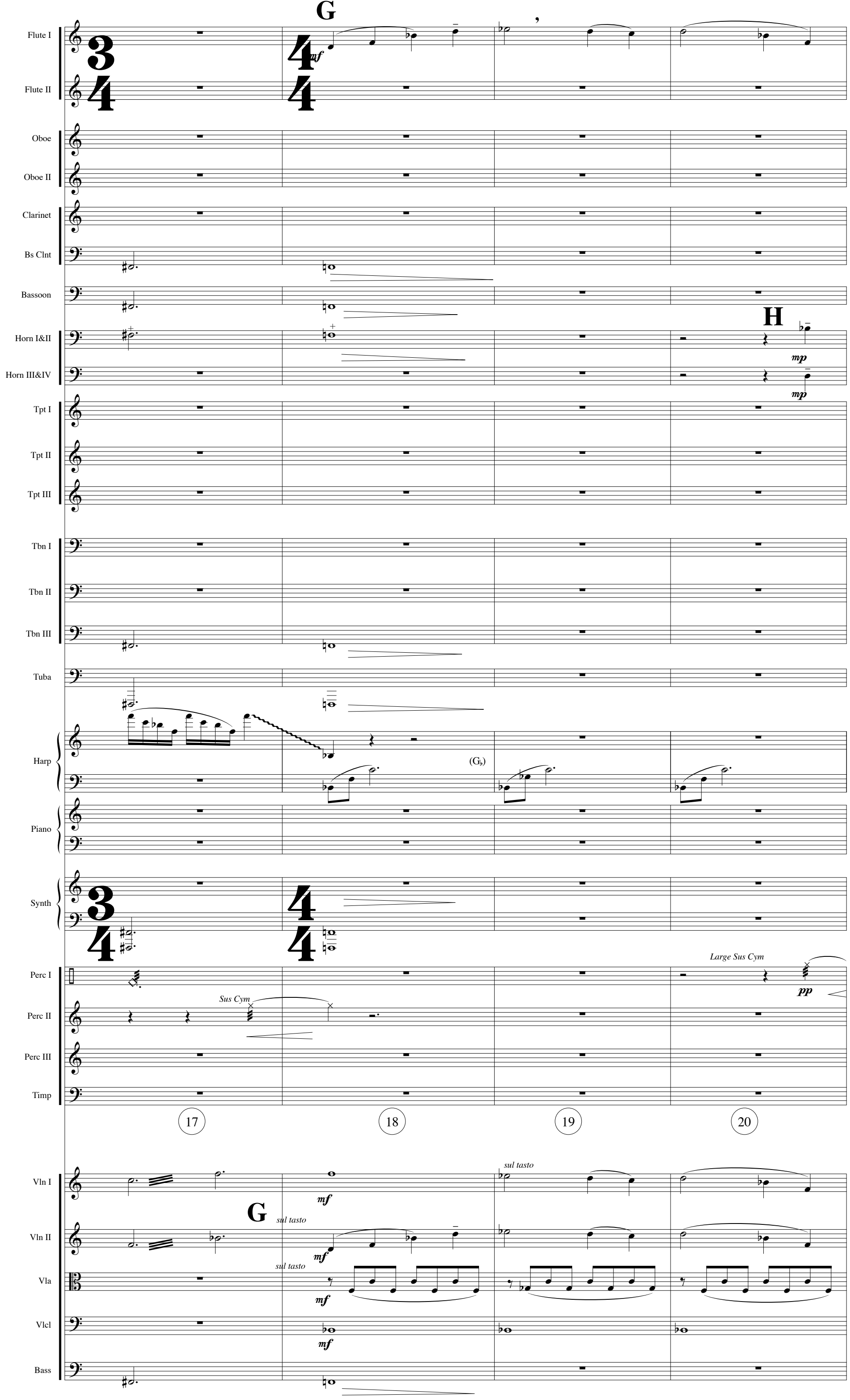
Below is a copy of the orchestral score with the hit points lettered to match the hits listed above. Again there are beats added and dropped using various techniques already discussed to establish downbeats, and at the end of the cue there is the use of the whole tone voicings techniques just demonstrated and discussed in the first animation excerpt.

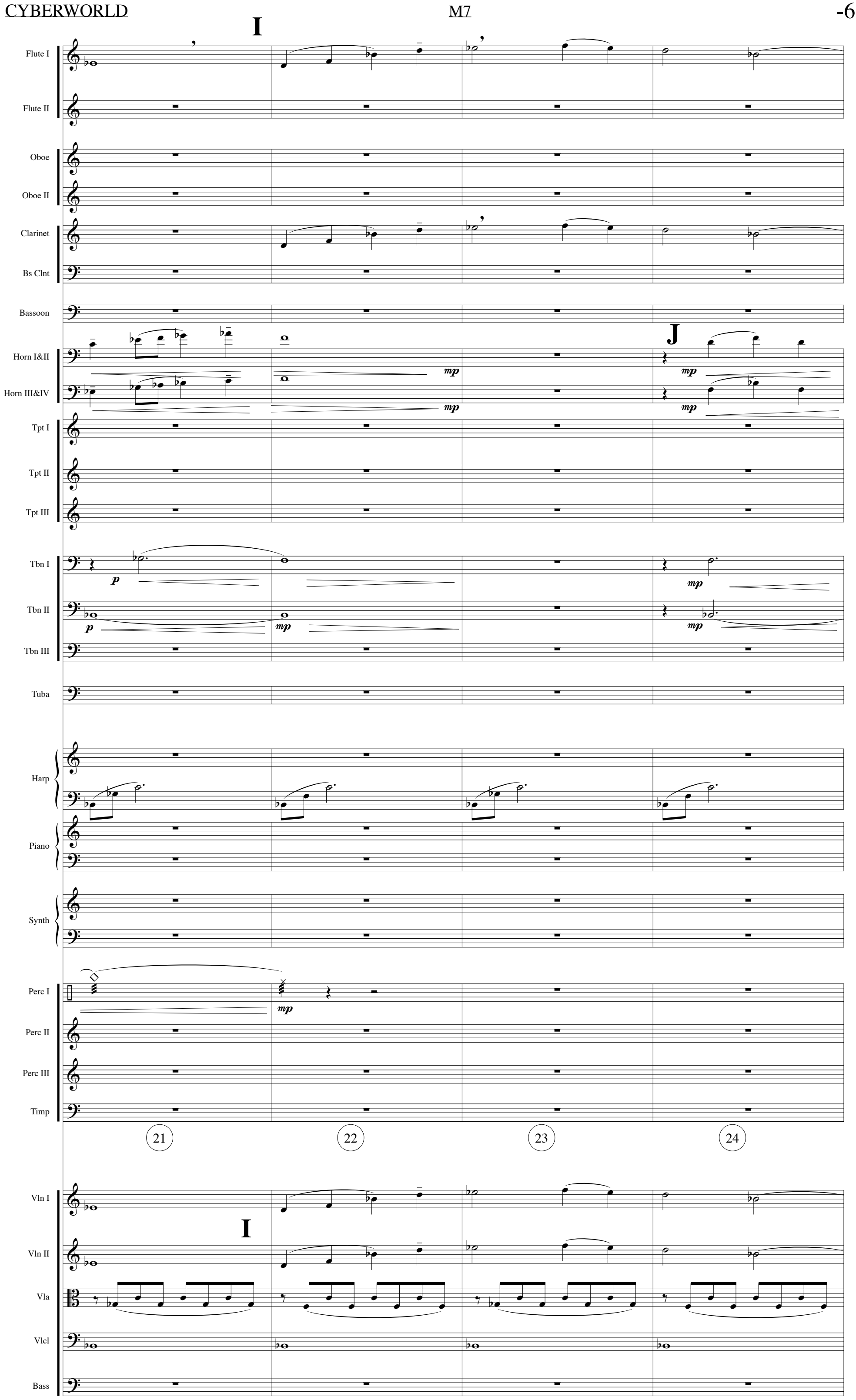

CYBERWORLD
CLIK = 12-6 / 4 FREE
M7
Krakken & Jabberwockys
Composed by Hummie Mann (ASCAP)
Flute I
Flute II
Oboe
Oboe II
English Horn
B
Clarinet
Bass Clarinet
Bassoon
French Horn I&II
A2
French Horn III&IV
Trumpet I
Trumpet II
Trumpet III
Trombone I
Trombone II
Trombone III
Tuba
A
Harp
Piano
Distorted Reality 2 / Carillon
Synth
Bell Tree
Percussion I
Percussion II
Percussion III
Timpani
1
2
3
4
Violin I
Violin II
Viola
Cello
Bass

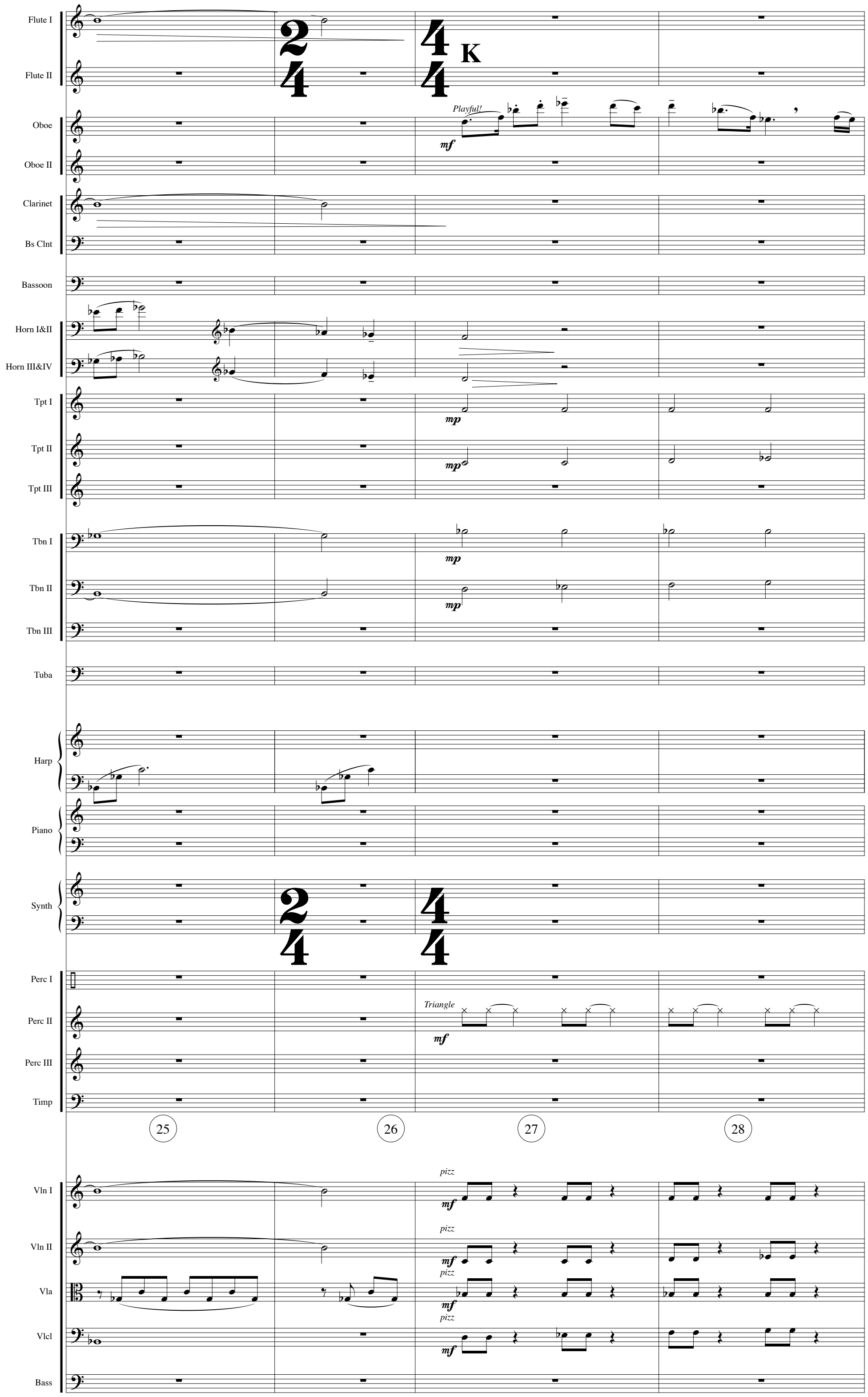

C
D
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Mark Tree
Sus Cym
Vibraphone
mf
3
3/4
4/4
5
6
7
8
Vln I
Vln II
Vla
Vlcl
Bass

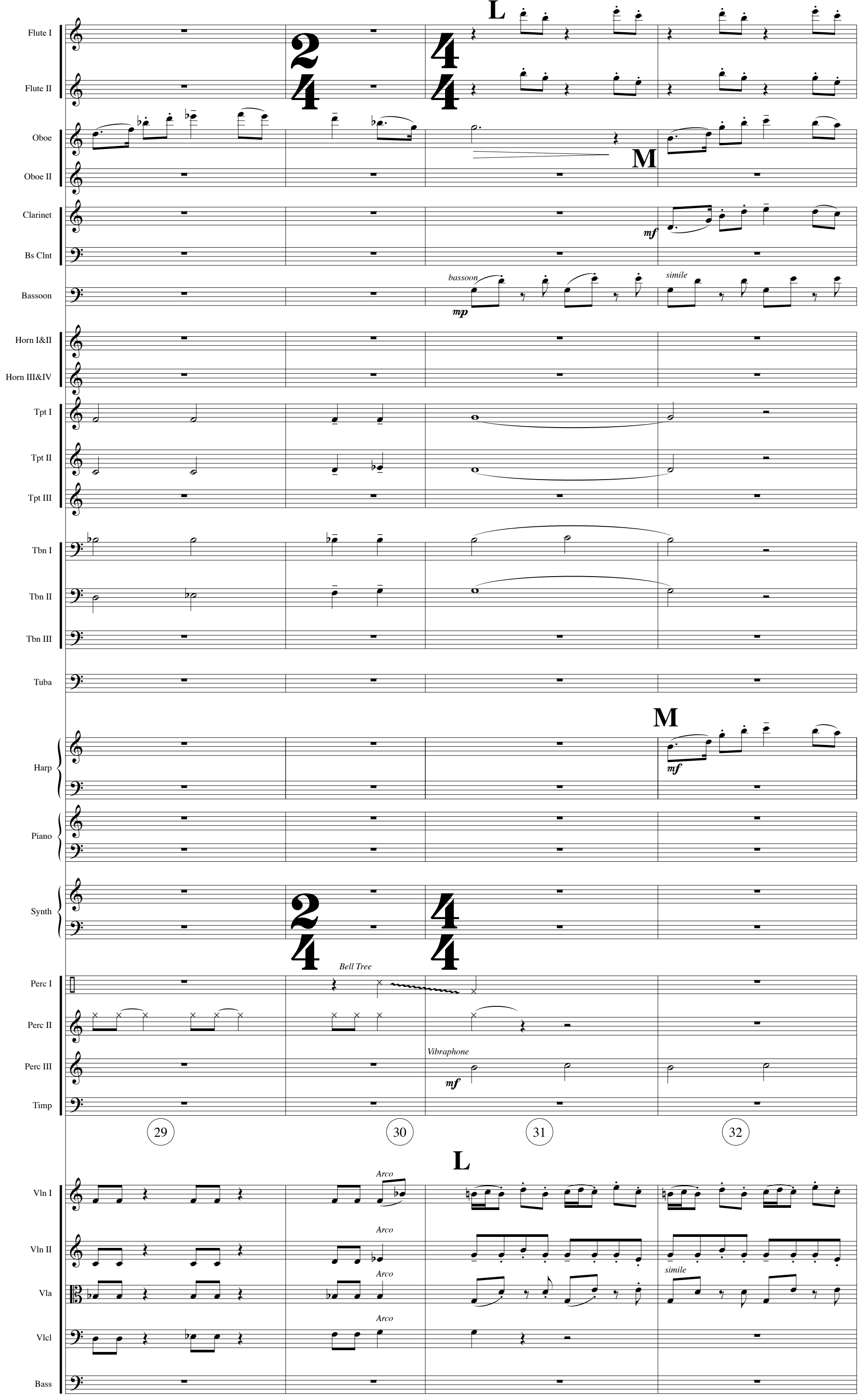

CYBERWORLD
M7
E
-3-
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
p
mf
Tbn II
p
mf
Tbn III
Tuba
Harp
Piano
Synth
Bell Tree
Perc I
splash cymbal
Perc II
Perc III
Timp
9
10
11
12
Vln I
Vln II
Vla
Vlcl
Bass

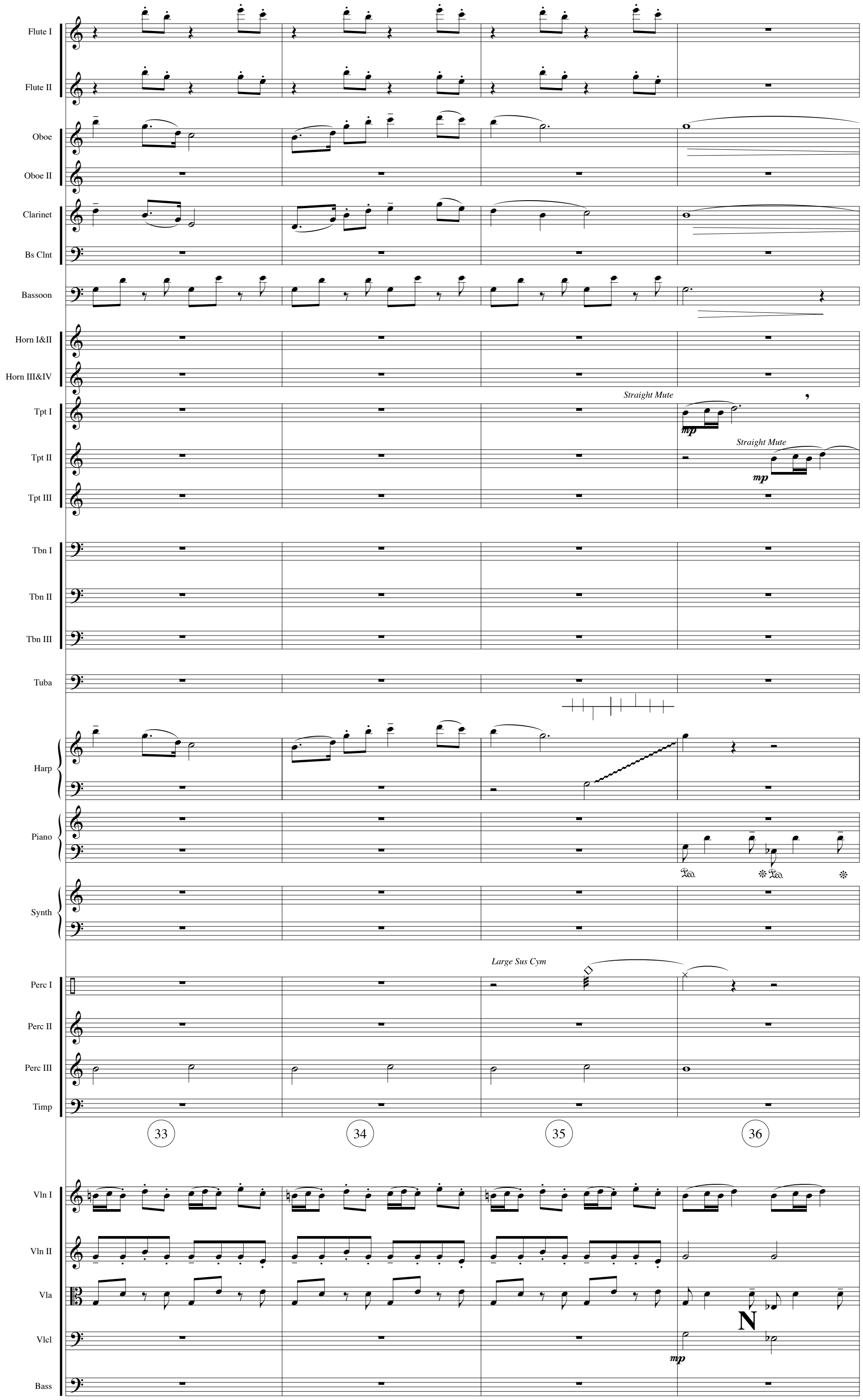

Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
F
mp
contrabassoon
mp
Straight Mute
Straight Mute
F
p
Dark and Menacing/ Soft Attack
F
Gran Cassa
p
F
mp
13
14
15
16
3
4

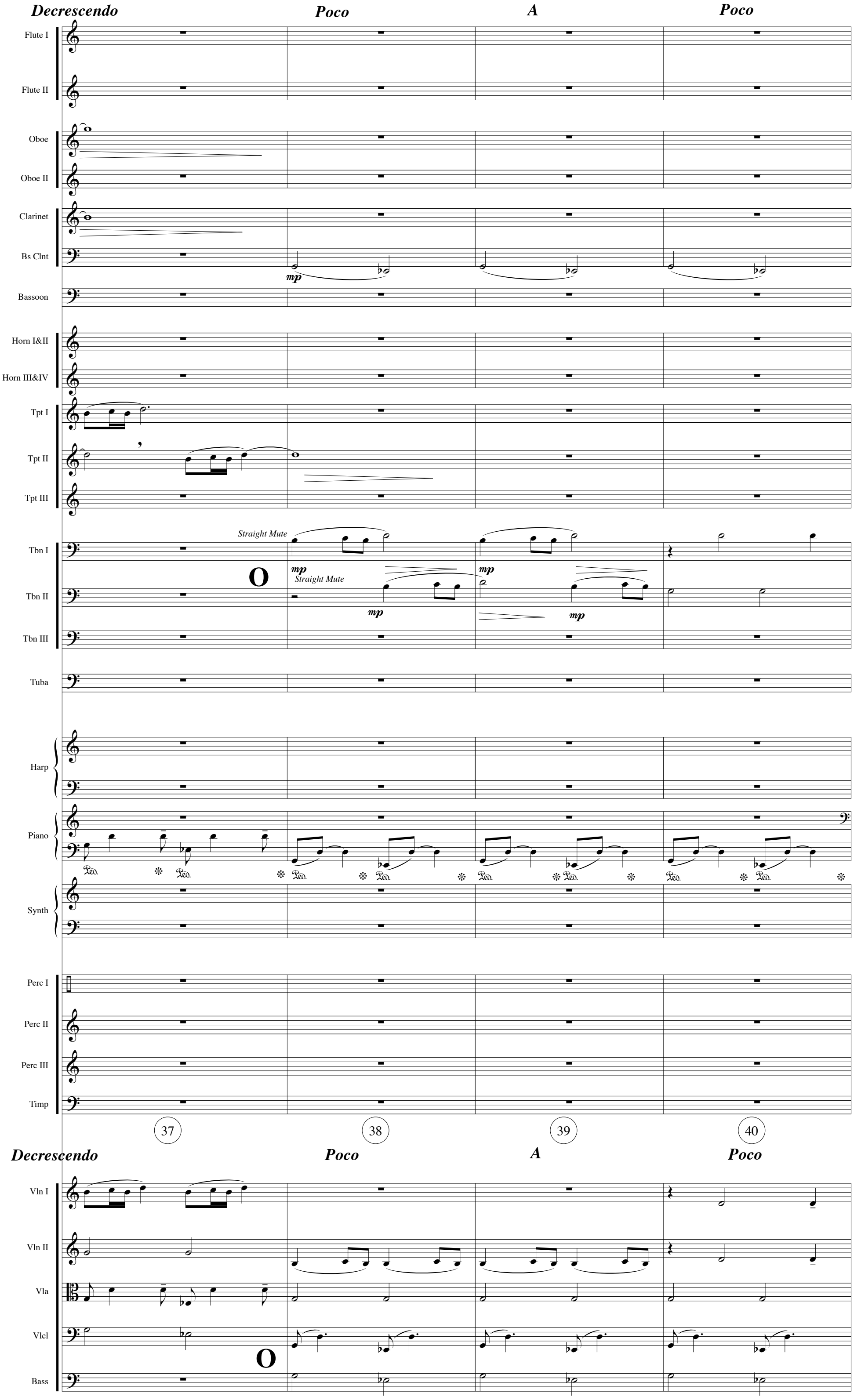

G
H
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
mf
mp
pp
(G♭)
Sus Cym
Large Sus Cym
sul tasto
17
18
19
20

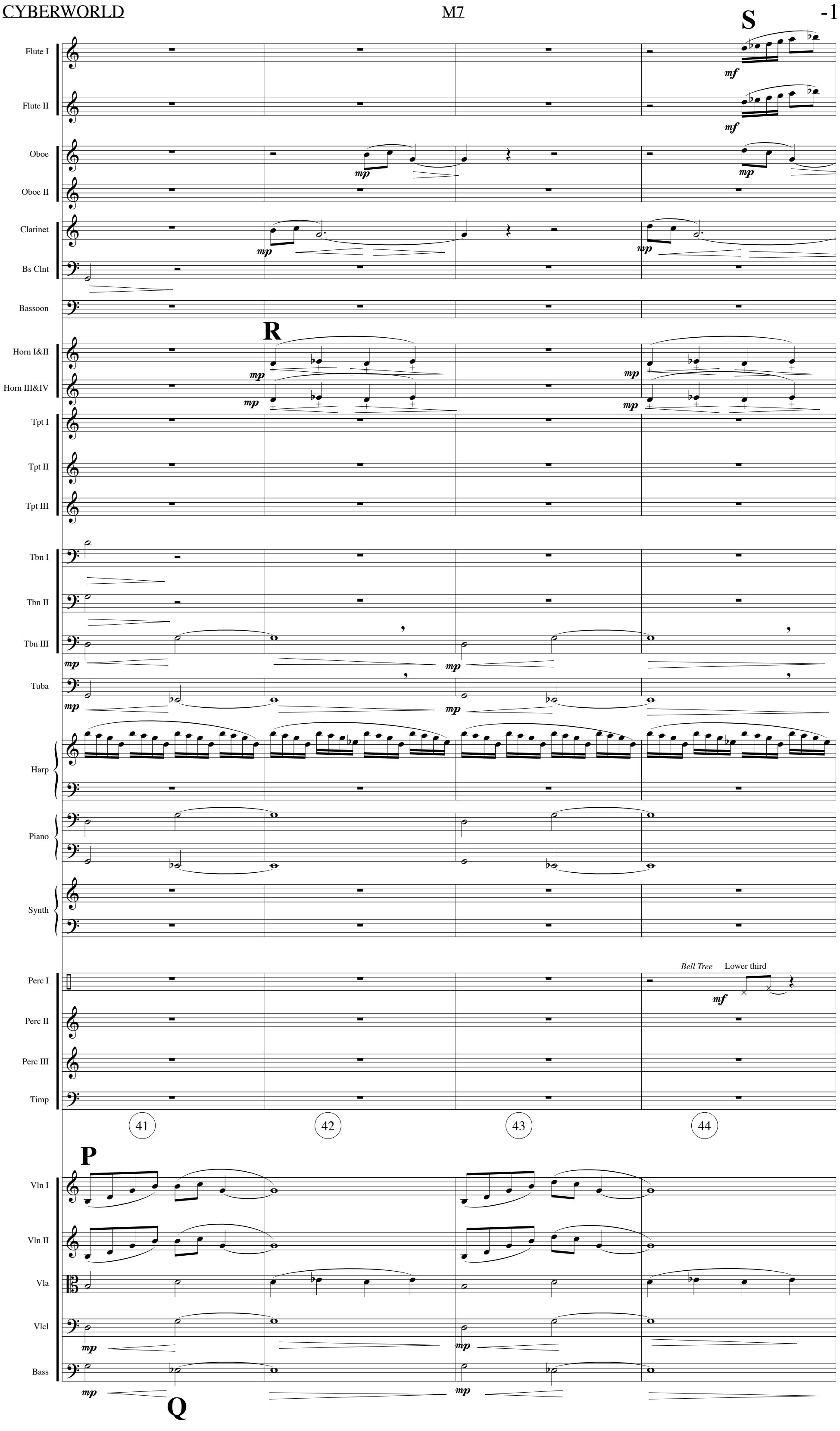

I
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
J
Horn I&II
Horn III&IV
mp
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
p
mp
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
21
22
23
24
Vln I
Vln II
Vla
Vlcl
Bass

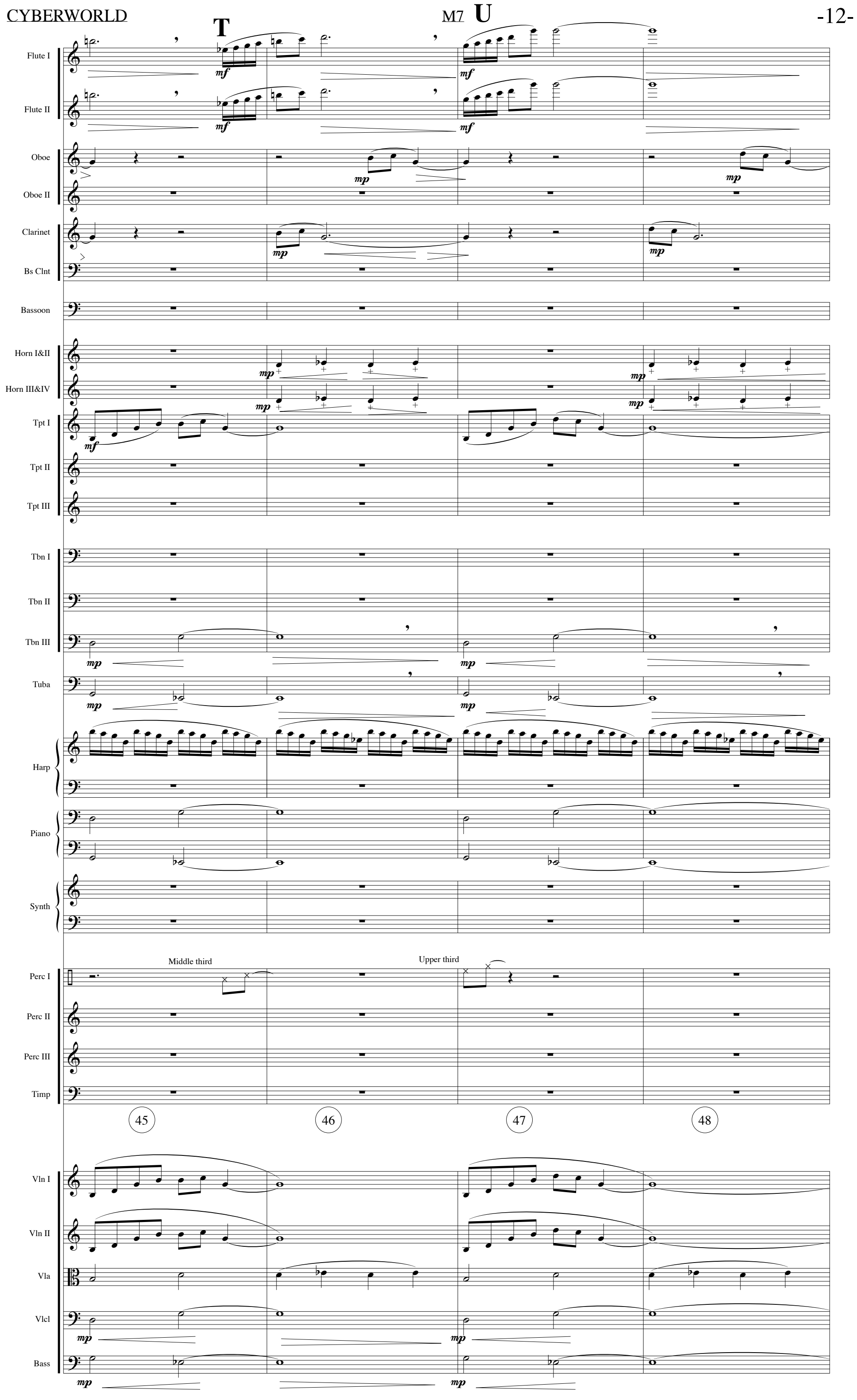

Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
K
Playful!
mf
mp
Triangle
pizz
25
26
27
28

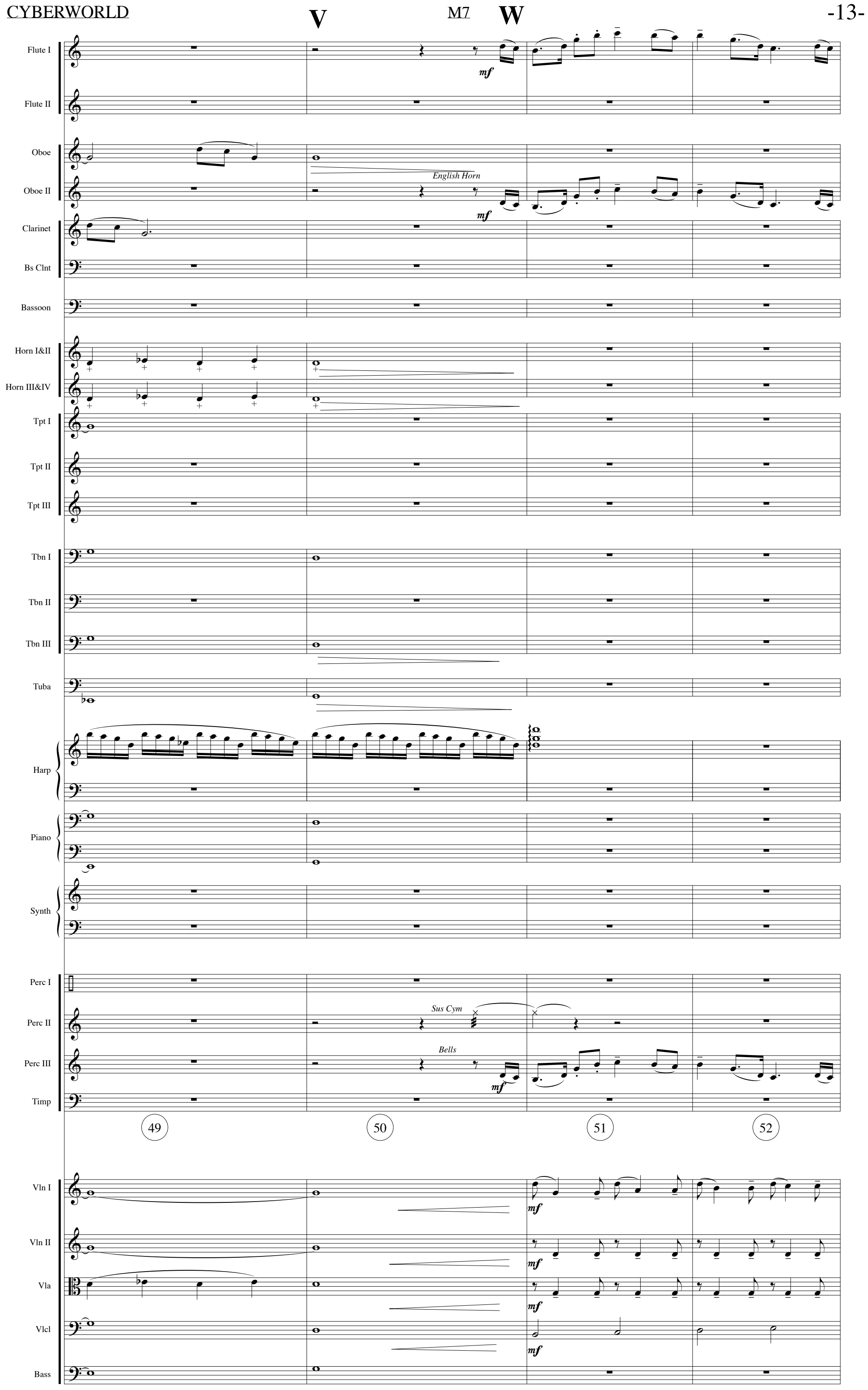

L
M
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
bassoon
mp
simile
mf
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Bell Tree
Perc I
Perc II
Perc III
Vibraphone
Timp
29
30
31
32
Vln I
Vln II
Vla
Vlcl
Bass
Arco

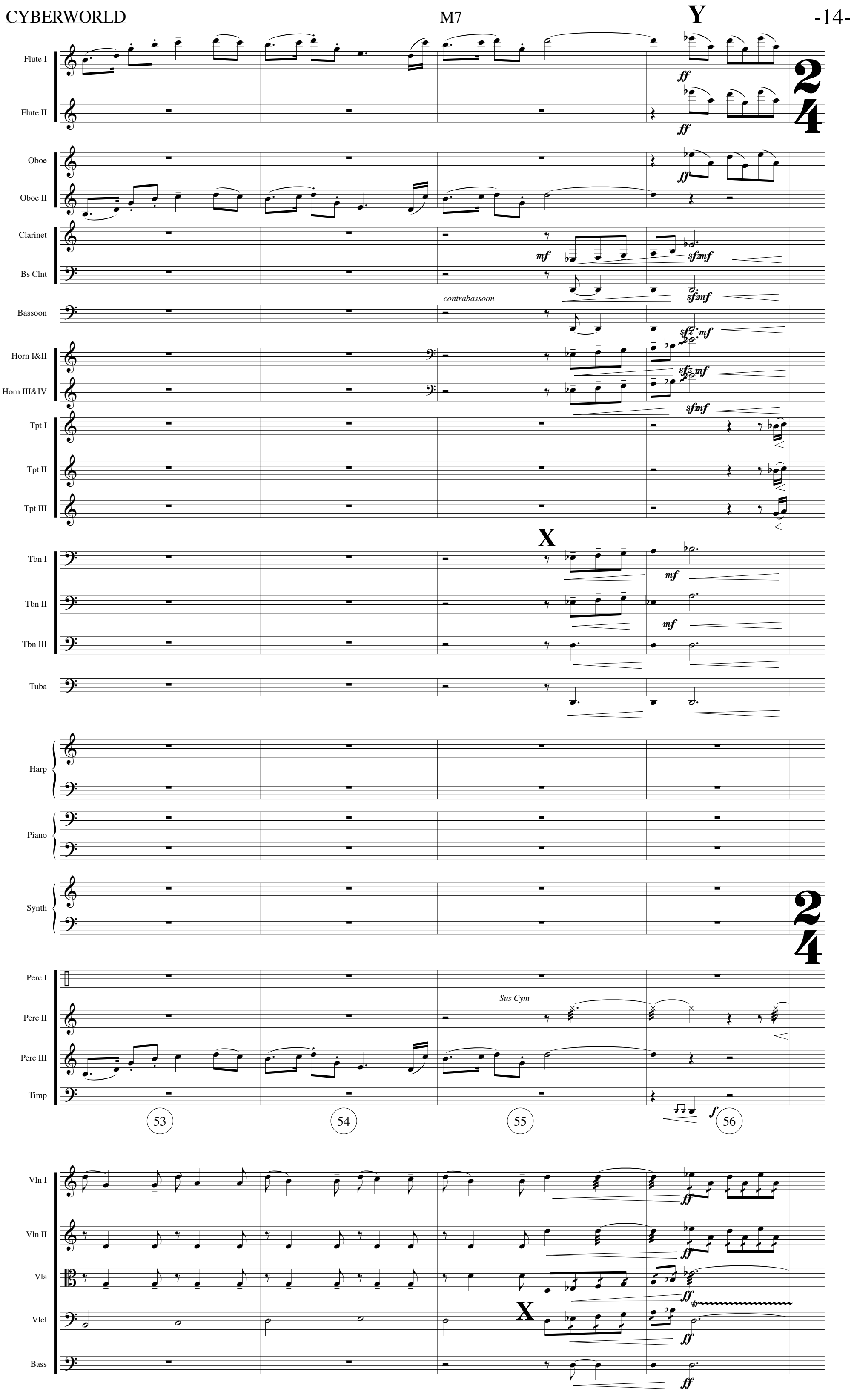

Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
Straight Mute
mp
Straight Mute
mp
Large Sus Cym
33
34
35
36
N
mp

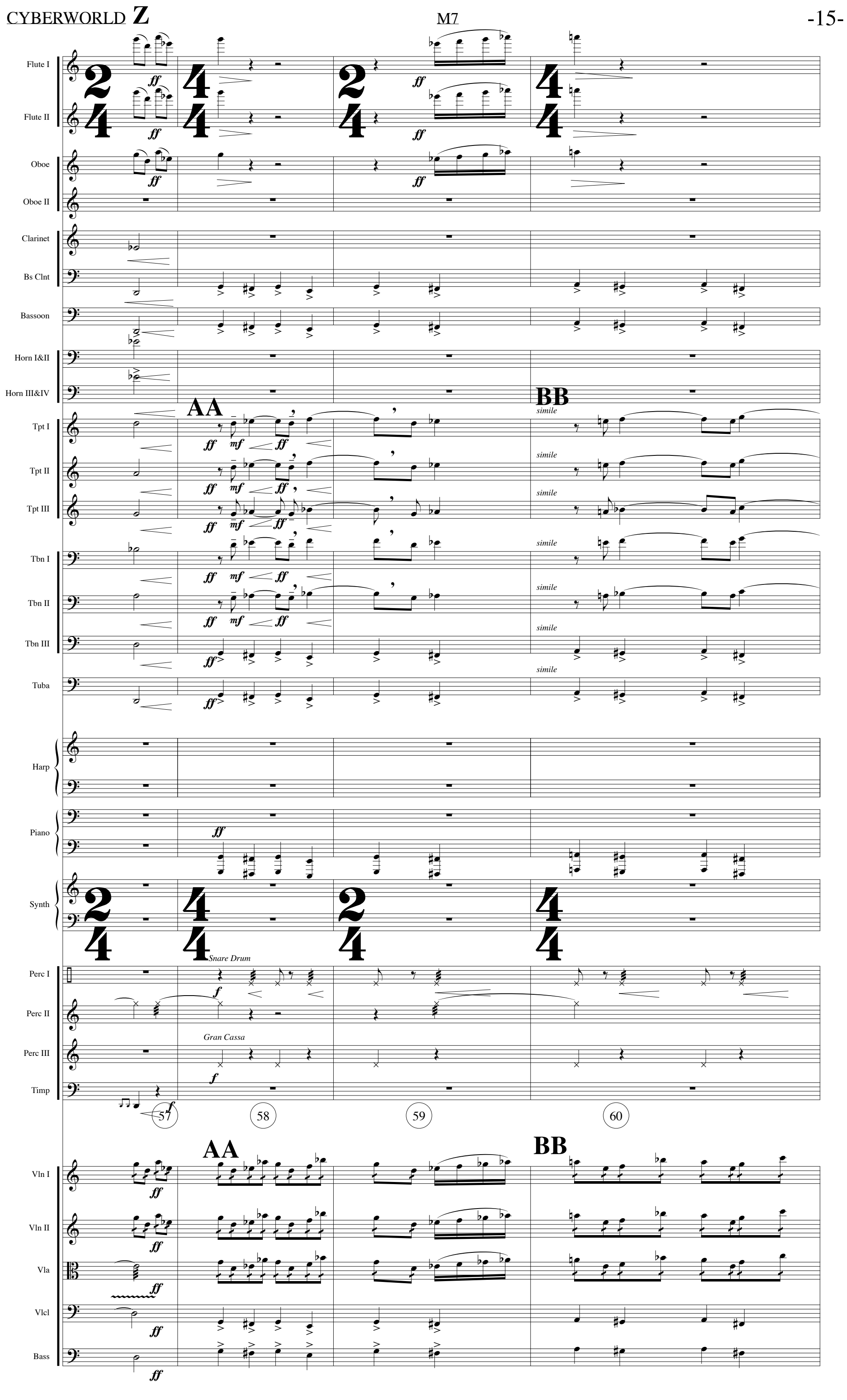

Decrescendo
Poco
A
Poco
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
mp
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Straight Mute
Tbn I
mp
Straight Mute
O
Tbn II
mp
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
37
38
39
40
Decrescendo
Poco
A
Poco
Vln I
Vln II
Vla
Vlcl
O
Bass

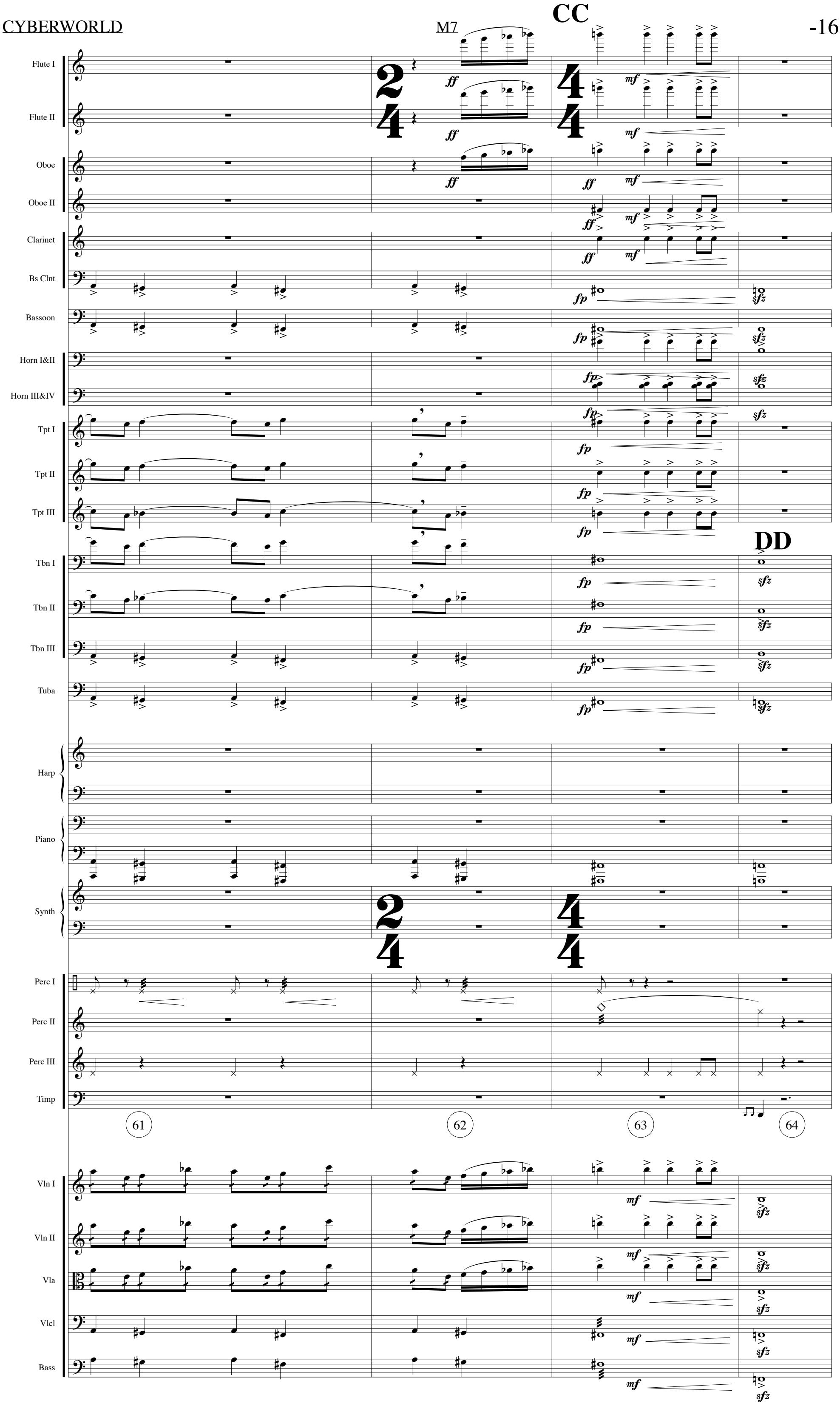

S
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
R
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Bell Tree
Lower third
Perc I
Perc II
Perc III
Timp
41
42
43
44
P
Vln I
Vln II
Vla
Vlcl
Bass
Q
mf
mp

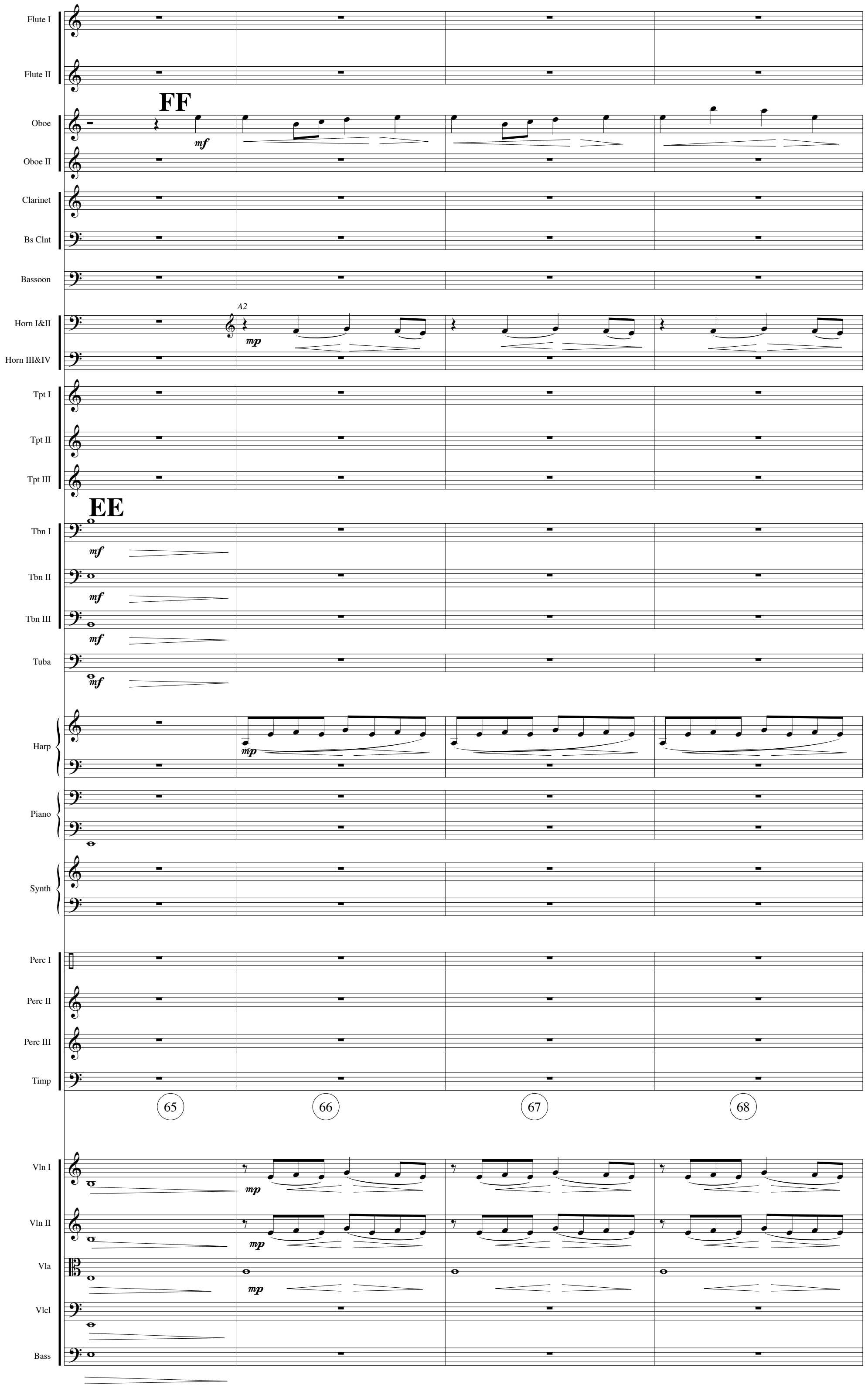

T
M7
U
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Middle third
Upper third
45
46
47
48
Vln I
Vln II
Vla
Vlcl
Bass
mf
mp

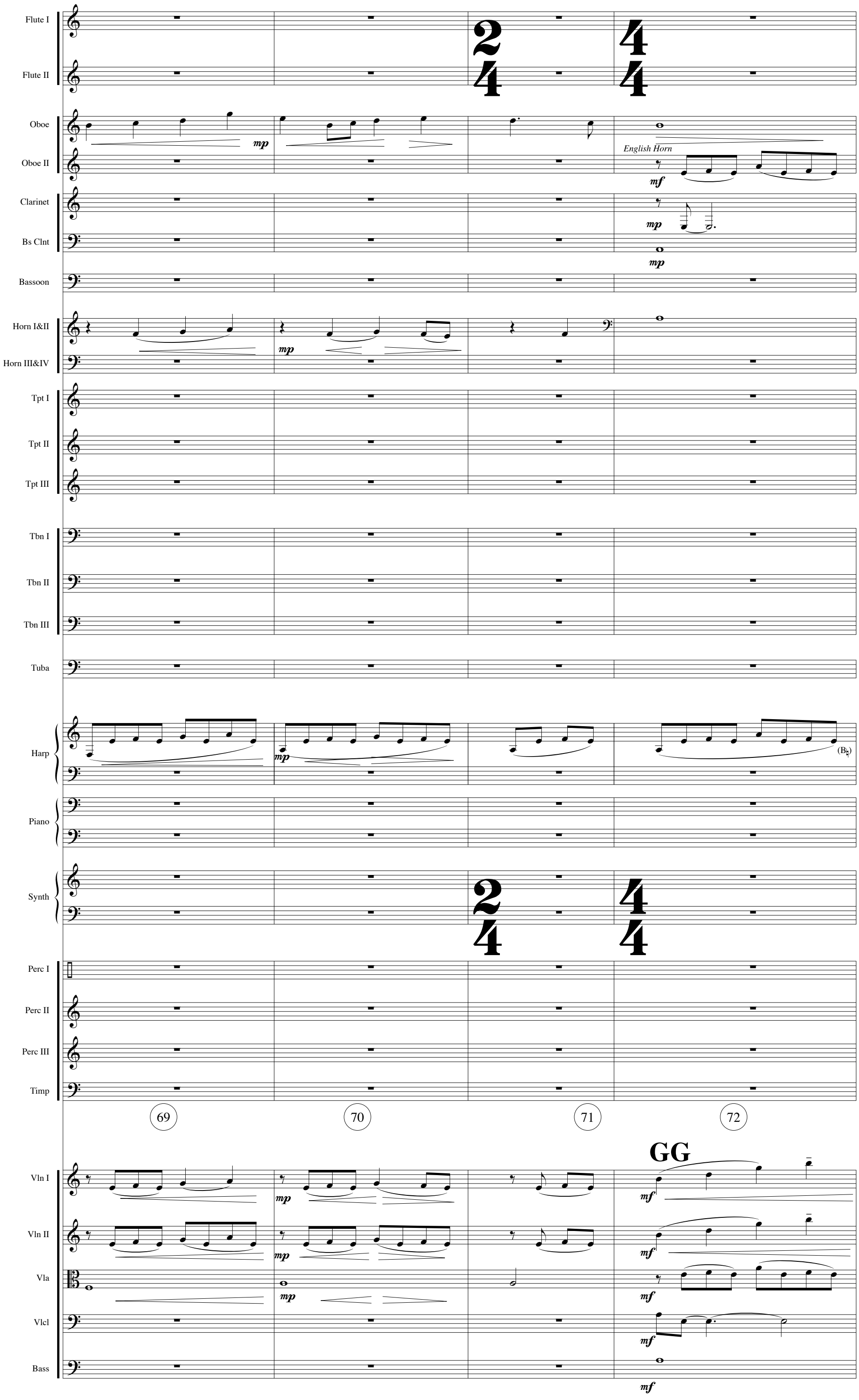

V
M7
W
Flute I
Flute II
Oboe
Oboe II
English Horn
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Sus Cym
Perc III
Bells
Timp
mf
49
50
51
52
Vln I
Vln II
Vla
Vlcl
Bass

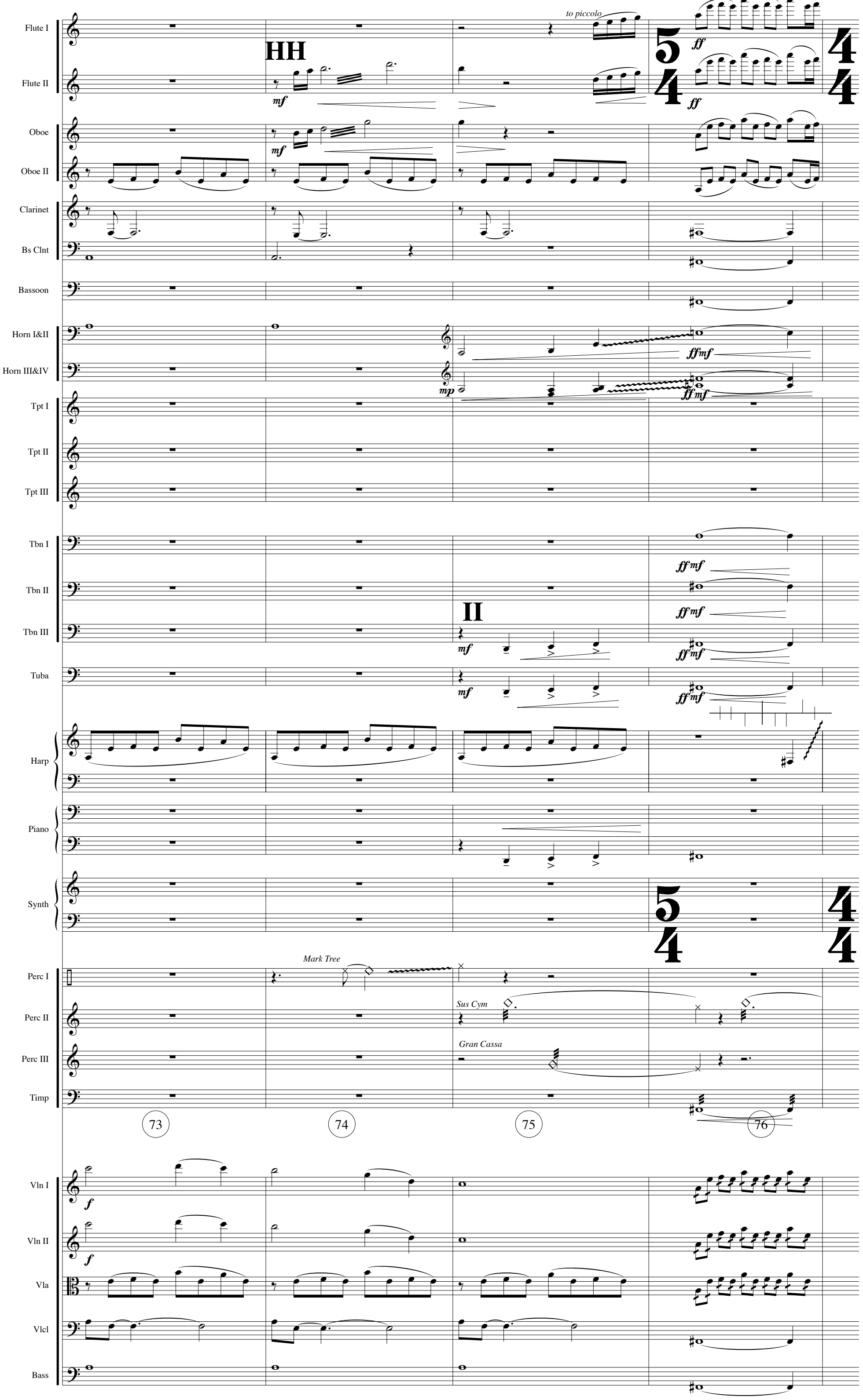

Y
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
contrabassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
X
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Sus Cym
Perc III
Timp
53
54
55
56
Vln I
Vln II
Vla
Vlcl
X
Bass
ff
mf
sfzmf
2
4

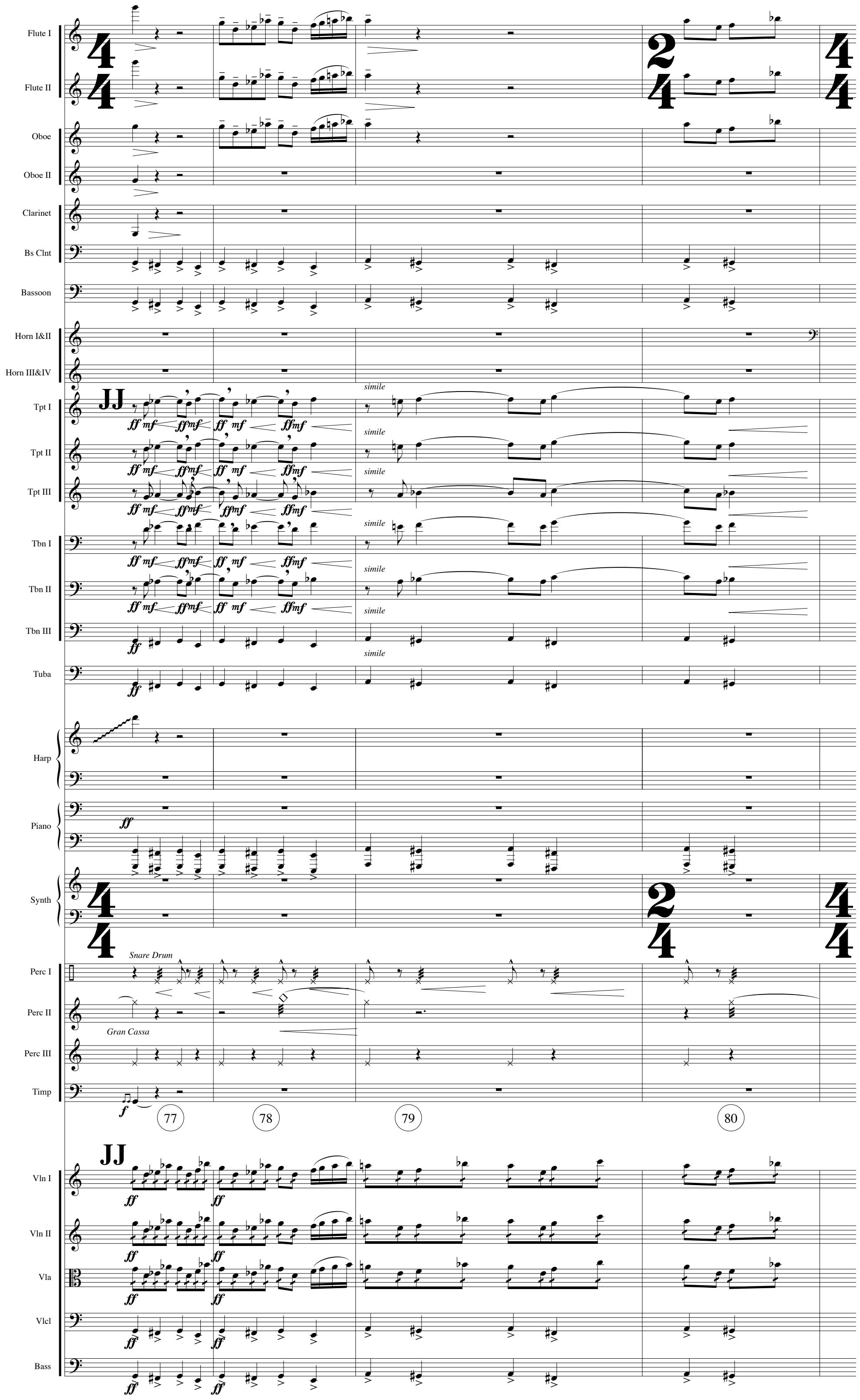

Z
M7
AA
BB
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
ff
mf
f
simile
Snare Drum
Gran Cassa
57
58
59
60

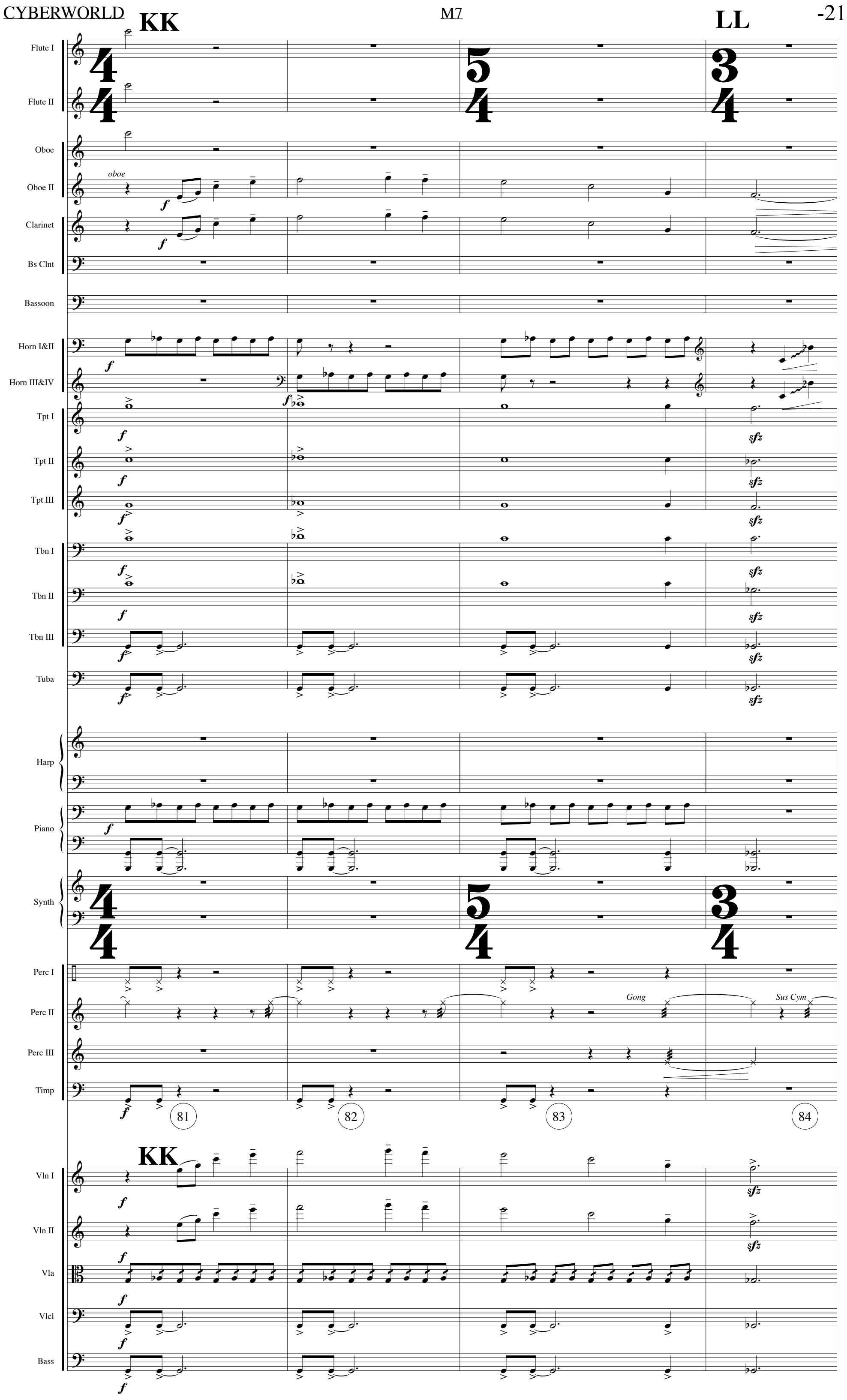

M7
CC
DD
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
ff
mf
fp
sfz
61
62
63
64

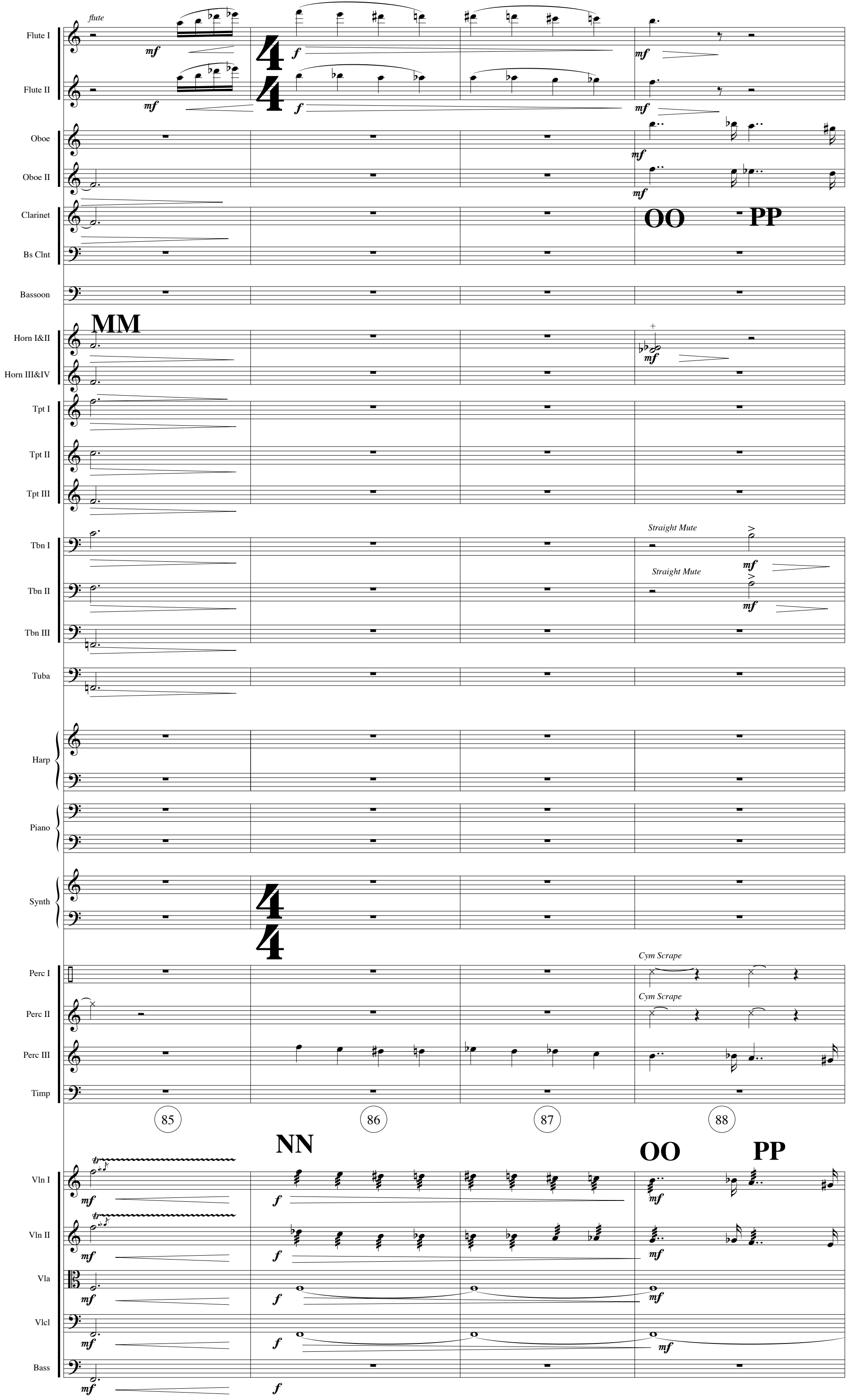

Flute I
Flute II
FF
Oboe
mf
Oboe II
Clarinet
Bs Clnt
Bassoon
A2
Horn I&II
mp
Horn III&IV
Tpt I
Tpt II
Tpt III
EE
Tbn I
mf
Tbn II
mf
Tbn III
mf
Tuba
mf
Harp
mp
Piano
Synth
Perc I
Perc II
Perc III
Timp
65
66
67
68
Vln I
mp
Vln II
mp
Vla
mp
Vlcl
Bass

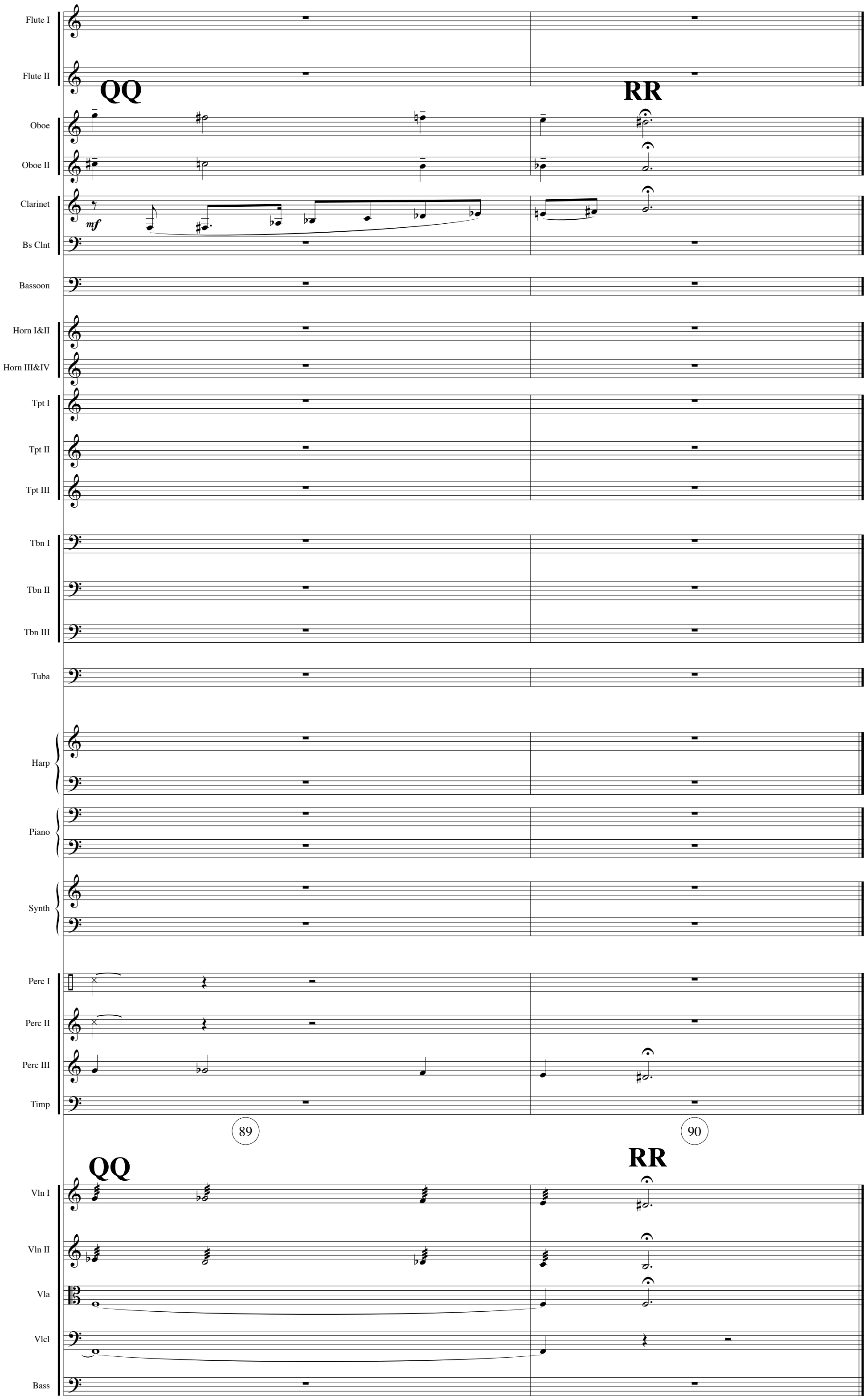

Flute I
Flute II
Oboe
Oboe II
English Horn
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
(B♮)
Piano
Synth
Perc I
Perc II
Perc III
Timp
69
70
71
72
GG
Vln I
Vln II
Vla
Vlcl
Bass
mp
mf


Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
HH
II
to piccolo
5
4
4
4
ff
mf
mp
f
ffmf
Mark Tree
Sus Cym
Gran Cassa
73
74
75
76


Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
JJ
simile
Snare Drum
Gran Cassa
ff
mf
f
77
78
79
80


CYBERWORLD
M7
-21-
KK
LL
Flute I
Flute II
Oboe
Oboe II
oboe
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Gong
Sus Cym
81
82
83
84
KK
Vln I
Vln II
Vla
Vlcl
Bass


flute
Flute I
Flute II
Oboe
Oboe II
Clarinet
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
Vln I
Vln II
Vla
Vlcl
Bass
MM
NN
OO
PP
Straight Mute
Cym Scrape
mf
f
85
86
87
88


Flute I
Flute II
QQ
RR
Oboe
Oboe II
Clarinet
mf
Bs Clnt
Bassoon
Horn I&II
Horn III&IV
Tpt I
Tpt II
Tpt III
Tbn I
Tbn II
Tbn III
Tuba
Harp
Piano
Synth
Perc I
Perc II
Perc III
Timp
89
90
QQ
RR
Vln I
Vln II
Vla
Vlcl
Bass

In this example there were only a few instances where the music actually replaced a sound effect, specifically early in the clip when the movement of the penguin's wings caused there to be some bubbles (**C**) and also when the school of small fish swim across screen being chased by another larger fish (**E**). But the musical decisions were still controlled by on screen movement – the 'discussion' between the mother and father Krakkens (**J**), the playful entrance of the baby Krakken (**K**), the introduction of the 3 green creatures (**L**), the combination of the playful Krakken theme with the green creature texture as they swim off together (**M**), etc. as were explained on the list of hits on pages 207 through 209. I have also included the audio track of the score – the Music Only version (track 6).

Laying out the music:

Although I have mentioned earlier that there are many texts that discuss the technique of calculating timings, I wanted to include a discussion of the process as applied to this example for those readers who are being introduced to the world of film composition for the first time here.

Firstly, I believe it is always important to start with musical concepts before dealing with timings. Since I know what I have to build in to my thematic material – elements that allow me to manipulate my music to support the technical and dramatic variations required – I always make music composition the primary decision. So first I decide on my musical vocabulary and policy and then I compose my thematic material using these parameters and testing for the dramatic variations that are required for each theme. For example, in this cue the Krakkens theme had to represent massive, grandiose creatures whose movements are slow, given their size, as well as a playful variation to represent the baby Krakken. There also had to be a dangerous version when Baby is swimming at the bottom of the ocean and a heroic variation as Daddy Krakken rescues his child from the jaws of the Jabberwockys. I had to devise a musical representation of the friendship between the baby Krakken and his friend, which I did by creating an accompaniment texture to represent the green creatures which could work under the Krakken playful variation – melodically achieved with diminution and some small rhythmic variations of the theme. So knowing these particular requirements, I come up with the musical ideas for the different creatures and situations and their dramatic variations, as was discussed in the working process chapters.

The next part of the process is laying out the piece. Here I use a piece of software called Auricle[7] that allows me to calculate how many beats of music I will need to compose at a particular tempo that allows me to sync my music with the main sections (or as I call them chapters) of the cue. So, for example, the first chapter of this film is the introduction of the underwater playground starting from the beginning of the cue until the cut to the mother Krakken (**G**). Within this chapter there are certainly other timing requirement: the bubbles coming off the wings of the penguin (**C**), the school of small fish being chased across the screen from the creature entering from the right hand side (**E**) and also the introduction of the Jabberwockys as the 'bad guys' (**F**). However the underlying texture is similar throughout this section as I wanted to tie this entire section/chapter together to the introduction of the underwater world.

Using the 'underwater playground' theme that I composed for the opening (and which is a non-recurring theme), I have an initial idea of tempo for the scene. I never allow sync points to decide the tempo for me as I feel that after watching any scene a few times, I get a sense of what feels like the right tempo from the film itself. (The only exception to this is when I have to mickey-mouse footsteps or some other recurring action, in which case the tempo is directly informed by the action onscreen). I feel that every piece of music has a tempo range where the piece feels somewhat natural. So if, for instance, I composed a thematic idea with a tempo of 120bpm, chances are good that it might well work within a range of 117 – 123bpm before it begins to sound forced or unnatural. Using Auricle, and having chosen an initial tempo where my underwater playground theme sounds right, I am able to calculate the number of beats required to fit into the space from the start of the cue to the start of the second chapter. I can also vary this tempo, using a slightly variable click, within the comfort range of my theme if it allows me to more accurately hit subsequent sync points. I also will move barlines (change the meter) so that the sync points that I feel warrant it – in this case the bubbles, school of fish and Jabberwocky entrance – will line up with downbeats. Sometime secondary elements are not on the beats but occur on off-beats, and in those instances I will compose gestures that musically work on off-beats. Therefore, the main thematic elements are what I consider first for deciding the tempo and form of piece and then the secondary hits are worked out by moving bar lines and/or composing musical elements that work on or off the beats. In this example the initial tempo from bar 1 – 18 was based on my 1st theme and also the fact that it is the 1st chapter of this cue.

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[7] Auricle was designed by Richard and Ron Grant and is the best software for doing film music calculations. It has been awarded a technical Oscar and Emmy. http://www.auricle.com

Even though the Auricle software allows me to constantly alter the tempo to hit all my sync points with an incredible amount of accuracy, being too accurate looks unnatural. There is a tolerance where hits look in sync even if the music is a little bit off. For example, in the timing notes I have circled the cut that occurs at 8:37:22 when the picture has an edit to the "3 Green Lizard like things" (the ninth boxed timing on page one). However on the Auricle, measure 31 actually occurs at 8:37:28. So the musical element used to score that cut in measure 31 actually occurs 6 frames late to the picture. Since video travels at 30 frames per second, this musical event is 2/10s of a second late. This is what I consider the maximum amount that a hit can be late and still look like it is in sync. In *On the Track* the tolerance mentioned is similar "… you rarely need to sync music to film more tightly than within 1/3 of a second."[8] It is worth noting that this tolerance is fine for most sync points in a film, what I call soft hits. However, if music is synching to a sound (an explosion, for instance) or is used to replace a sound effect (footsteps), then these 'hard hits' require a smaller tolerance since the human eye can see sound and picture out of sync if more than 2 frames off!

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[8] Fred Karlin and Rayburn Wright, *On the Track: A Contemporary Guide to Film Scoring* 2nd ed. (New York: Routledge, 2004), 111

Summation:

Although animation scoring has so many technical requirements, I feel that making use of recurring musical themes and gestures can make the cues sound like cohesive pieces of music, as I hope I have demonstrated here. This type of scoring, by its nature, will take many twists and turns, but if done properly will not only work in sync with the picture, but will also yield exciting, unusual and interesting pieces of music. The fact that there are 44 sync points in this cue that lasts only 2:59 – an average of one sync point every 4 seconds – does not mean that the music will be void of any form or linearity. Richard Stone, best known for his work on "Tiny Toon Adventures" (1990-92) and "Animaniacs" (1993-98) said that "The art of writing music for animation is in keeping the music musical, while hitting what needs to be hit without sounding choppy."[9] However you can see why most composers discuss animation scoring as the ultimate challenge to the point that some composers even believe that "… music for animated films is composed first and the scene is edited to the music, because otherwise it would not be possible to find all the synchronization points."[10] – Ennio Morricone. As I have demonstrated, this is not the case.

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[9] Richard Davis, *The Complete Guide to Film Scoring: The Art and Business of Writing Music for Movies and TV* (Boston: Berklee Press, 1999), 179

[10] Ennio Morricone and Sergio Miceli, *Composing for the Cinema: The Theory and Praxis of Music in Film,* translated by Gillian B. Anderson (Lanham, Maryland: Scarecrow Press, 2014), 64

10 - Case Study 3

Scoring Animation

Audio and Video Examples

11 - Case Study 4

Language of the Heart

Film/Scene Background:

This short film was an episode of the anthology series "Picture Windows" produced by Norman Jewison. Starring Michael Lerner and directed by Jonathan Kaplan, it first aired in June 1995 on the Showtime Network. The story is about an aspiring ballerina, Anna, and a busker violinist, Mischa. Every day when Anna returns home from rehearsal, she passes Mischa performing on the street corner for spare change and is enchanted by his beautiful playing and a particular melody – Mischa's theme. Some nights, he uses his meager earnings to buy a ticket to the ballet only to watch Anna dance - and so they fall in love with each other through their art. Lerner plays the role of the lecherous ballet orchestra conductor who tries to initiate an affair with Anna – one of many he has had with a few of the young dancers in the ballet chorus. One winter evening, after the ballet's performance, the alcoholic concertmaster of the orchestra slips and falls down breaking his arm. Since he can no longer play, auditions are held to find a replacement concertmaster who can take over so the season can continue. The Maestro endures a frustrating day of auditions, and then it is finally Mischa's turn to play and try to impress him. From a dressing room back stage; Anna overhears the haunting melody she has heard on the street many times before. She sneaks into the hall where Mischa is playing, and distracts him causing him to lose his concentration and make a mistake. In a rage, the Maestro decides that he has no choice but to cancel the rest of the season. Anna, feeling guilty that Mischa losing his concentration was her fault, comes up with a plan and invites the Maestro back to her apartment knowing that Mischa will be playing outside her window that evening, as he often is. She is certain that the Maestro will realize how gifted a player he is upon hearing him again. As happens with all best laid plans, when they arrive at Anna's apartment, Mischa is not there. After a comedic tussle, the Maestro realizes that his reason for coming was not going to materialize and he departs. Once gone, Anna discovers the Maestro's pocket watch, which had fallen out of his pocket during the tussle, and when he returns to retrieve it, Mischa is out on the sidewalk playing. In what is the final montage sequence of the film, we see Mischa playing on the street corner, Anna sitting in her window enchanted by the music and the Maestro getting out of his car where we can see the look of realization that comes over him. The scene then transitions to the future where Mischa is now the concertmaster, the orchestra is performing his beautiful theme and Anna is dancing as the Prima Ballerina. As in previous case studies, the techniques discussed here are ones that I have used in a variety of projects, but this score demonstrates the technique to be discussed in a clear and obvious manner.

Compositional/Technical Challenge:

There are 2 techniques that I am going to discuss in this case study. One is a compositional technique where I will demonstrate how the melodic writing of a theme for a film can be quite specifically informed by its uses in the film; and the other is a technical film music recording technique called pre-recording.

There are multiple instances in this film where we see Mischa playing his theme and so that piece of music was pre-recorded. "…whenever movies are made that include on-screen performances or dancing, whether it be music videos, musicians appearing in TV commercials, or full-blown film musicals, prerecording is almost always the option of choice…"[1] This technique is one of the few times where music is recorded prior to shooting the film, and then is played back over speakers (or using some other form of playback) on the set so that the actors can lip-sync, dance or mime playing their instruments. This is done so that the scene can be shot from multiple camera angles and the music will always be performed at the same tempo. By doing this, the different shots of the performance can then be edited together for the final film. Also, since pre-records are done in a recording studio, the sound quality of the performance is much better as it is recorded in an optimal situation for recording audio. I will expand on this process in the next section.

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[1] Fred Karlin and Rayburn Wright, *On the Track: A Contemporary Guide to Film Scoring,* 2nd ed. (New York: Routledge, 2004), 439

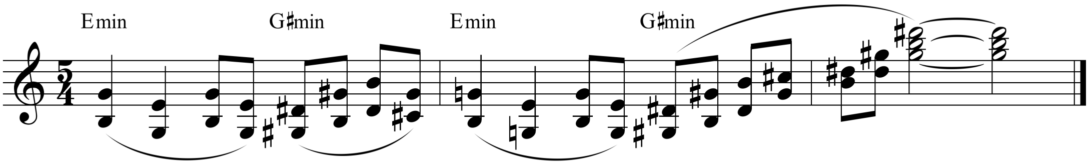
The screenwriter had written in the script that Mischa plays ‘a beautiful, haunting piece of music,’ so I had to write a piece that could live up to that description. Compositionally, as I do with any film score, I had to consider the stylistic elements - vocabulary – that I would use to compose the music. The additional unique challenge here was that beside the dramatic uses of my theme, I also had to consider that the piece was going to be performed on camera in a distinct number of ways.

The first requirement was that it had to work as an unaccompanied solo for when we see Mischa standing on the street playing for change. Secondly it had to work as underscore with a filmic romantic tone when we see Anna sitting in her window enchanted by the piece and falling in love with Mischa and his music. The third way it had to work was as an early 20th Century ballet score for when we see/hear it being performed in the final scene montage that I described above.

Similar to the techniques explored in the second case study where I discussed composing a theme along with its dramatic variations, here I had to compose a piece that would also meet certain stylistic requirements as well as being usable in dramatic variations as well. However, because of the fact that the piece had to work as an unaccompanied solo, that informed the way I would compose the melody, as I will explain.

Explanation of the Technique:

As usual, the first thing necessary before composing anything was to make decisions about the vocabulary of the music that would work for the film. Obviously the score would ultimately be orchestral and feature a solo violin as the script had already dictated my instrumentation choices. Since the melody had to be ‘hauntingly beautiful’ and work as a romantic piece, I felt it would be best if it were lyrical, memorable and singable. The film is a period piece, so for my harmonic vocabulary I decided to make use of ‘classical’ sounding progressions – mostly triadic harmonies and inversions, the use of secondary dominants and diminished chords – these elements were chosen “... to support the era of the film…"[2] However, since the film takes place roughly between 1925-1935, judging by the set, costumes and automobiles; I was also able to use some early 20th Century harmonic elements as well. So I incorporated some progressions where the root movement is by either a major or minor 3rd (sometimes referred to as mediant progressions) creating interesting non-diatonic chord progressions. I had observed this in the opening of the Neptune movement of "The Planets" by Gustav Holst. Below is a reduction of the opening woodwind figure establishing this type of chord progression as stated in the opening bars of the piece:



In this example the harmonic progression moves from E minor to G♯ minor – two chords that do not exist in any major or minor tonality and have a distinctly early 20th Century flavor.

In writing the melody, I wanted the piece to sound complete – meaning that the melody should imply some harmonic movement, so I decided to make use of a compositional device I had observed in the Prelude of Johann Sebastian Bach's solo Cello Suite No. 1 in G major, BWV 1007. In this work, Bach composed a melody that made extensive use of arpeggiation as a method of outlining the harmonies, so that even though the work is performed by solo cello, the listener can perceive the harmonic movement or progression, as can be seen by the excerpt below.

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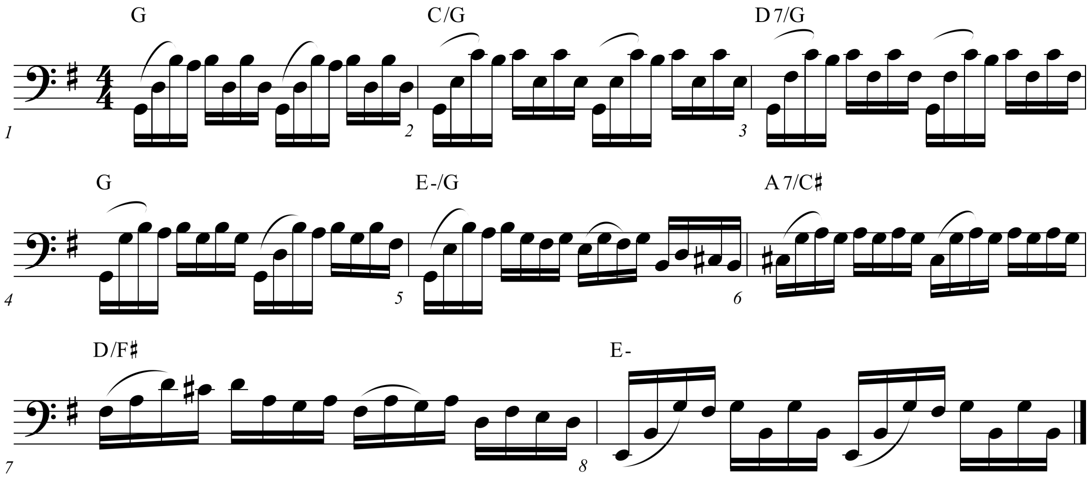
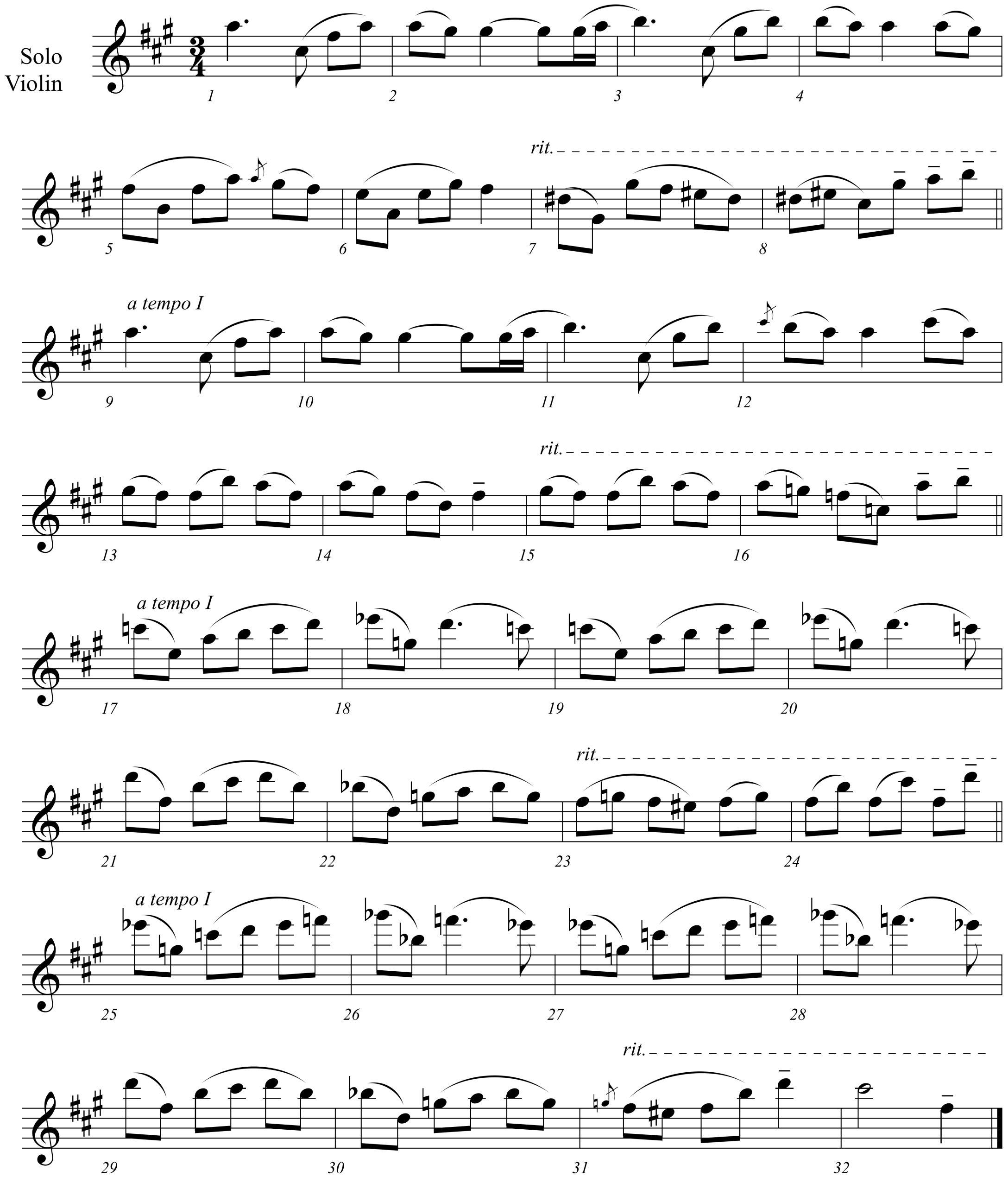
[2] Karlin & Wright, 182



I decided that this would be a useful technique to apply to the initial composing of "Mischa's Theme" for this film as it would support the unaccompanied version of the theme. As you can see, the actual melodic contour of the theme I was to compose was dictated by the use of this technique.

Having made decisions about the vocabulary of my piece, I was ready to begin composing. To recap, the melody would make use of arpeggiated figures to outline the harmonic progression and yet be lyrical and singable; the harmonic language would suggest a classical style by primarily making use of triadic chords, inversions, secondary dominants and diminished chords; and to more accurately reflecting the era of the film, I would also include some mediant progressions.

Below is the first section of the solo version of the piece that I composed. Audio track 1 one on the CD is an excerpt of a cue from the film that starts with a long section of the unaccompanied solo violin and then the orchestra enters towards the end. This demonstrates the implied harmonic movement that was written into the piece as a result of using an arpeggiated melody.


Solo Violin
rit.
a tempo I
rit.
a tempo I
rit.
a tempo I
rit.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

Unfortunately I do not have in my collection of recordings an entire unaccompanied version of the pre-recorded solo violin. But, as demonstrated in the first example above, the extended solo violin section implies a chord progression so the listener hears not only a melody, but also the harmonic movement as well.

For purposes of the pre-record, I composed a very simple piano accompaniment whose primary purpose was being pitch reference for the violinist. This was an instrumental part that I knew never going to be used, so it was strictly a functional accompaniment. In other words, the actual pre-record track is not the final version of the music, only the elements that will be seen on camera will be kept. So in this instance, the pre-record is being performed by a solo violin accompanied by piano. The piano part will eventually be muted in the recording and other instruments (in this case a small orchestra) playing completely different parts are added. In this way, the scene can be dramatically scored using the orchestra that will be recorded months later, after the film was shot.

As I discussed earlier in this thesis, the textural/accompaniment element of a score is the element of the music that supports the on screen drama. The only difference here from composing dramatic variations, as I demonstrated in case study two, is that in this situation, the exact same melodic performance from the pre-record is used as the melody in sync with the on-screen performance. Also, even though we only created one pre-record of the entire piece, this pre-recorded track was used in multiple sequences in the film, and the accompaniment was varied to score the different dramatic contexts. The first example above, for instance, has the orchestra entering at a different point in the piece and playing a different accompaniment than the final version in the film, as was dictated by the on-screen drama.

Another interesting element of the full pre-record is that after the film was shot, the director decided that the second section of the piece, that is only ever used in the final scene, should be shortened – largely due to the fact that the actress who played Anna was not a professional dancer and watching her dance for as long as the original version of the pre-record lasted, would have made this fact more obvious. As you will see in the final montage sequence video, the director did some creative editing to try and conceal this fact. Besides this, the full piece was edited to shorten it even more for the other cues that made use of it in the film. Unfortunately, the actor who played Mischa had limited violin training (if I recall correctly he played in grade school) and Lerner, as Maestro, had never conducted before. These will be obvious to the musicians who watch this film, but most people would not notice. In a bigger budget film, the actors would go through much more rigorous training and/or have professional musicians as stand ins.

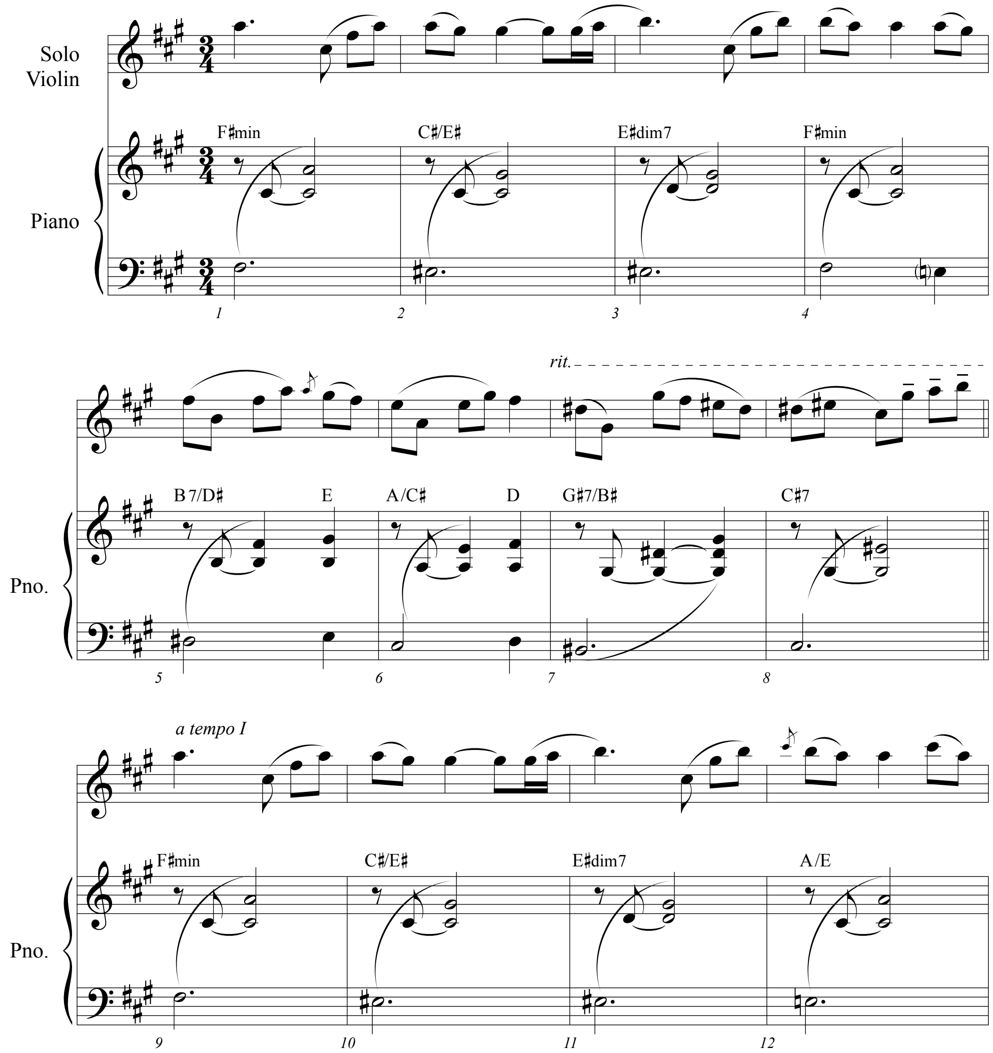
When recording this pre-record, the pianist and violinist were in individual isolation booths – hearing each other over headphones - so that the two tracks could ultimately be separated since we would not be keeping or using the piano track in the final versions in the film. Both musicians performed to a complex variable click track while I conducted following the visual streamers on the screen, generated by Auricle. This click/streamer track was also used months later with the orchestra at the final scoring session when we added the orchestral accompaniment to the various cues that made use of this pre-record.

Below is the pre-recorded violin with the piano accompaniment of just the first section of the piece. Again, the piano part was purposely simple and generic as its function was only to help the violinist play in tune since that is the only part of the pre-record that would be used in the final score (as you heard in the first example above). This is the audio track 2 on the enclosed CD.

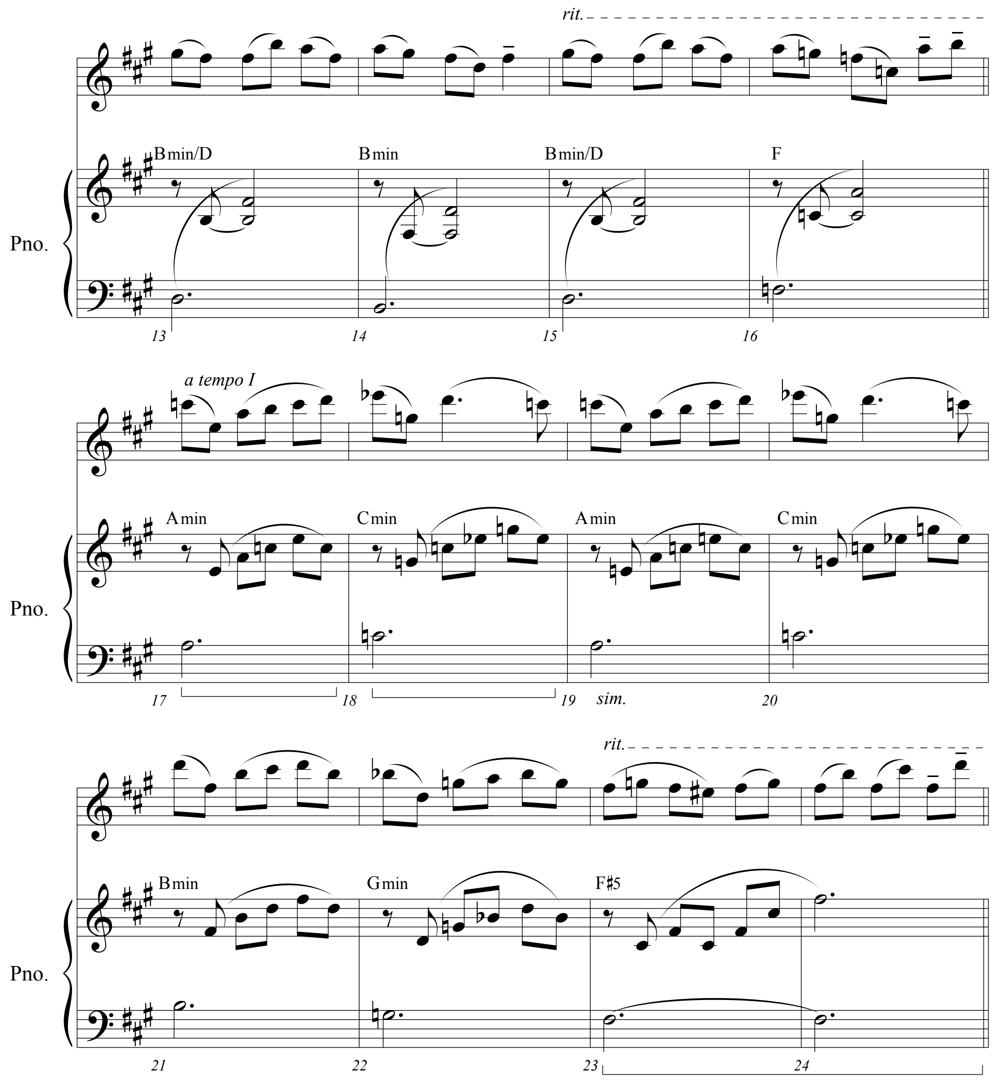
Language of the Heart

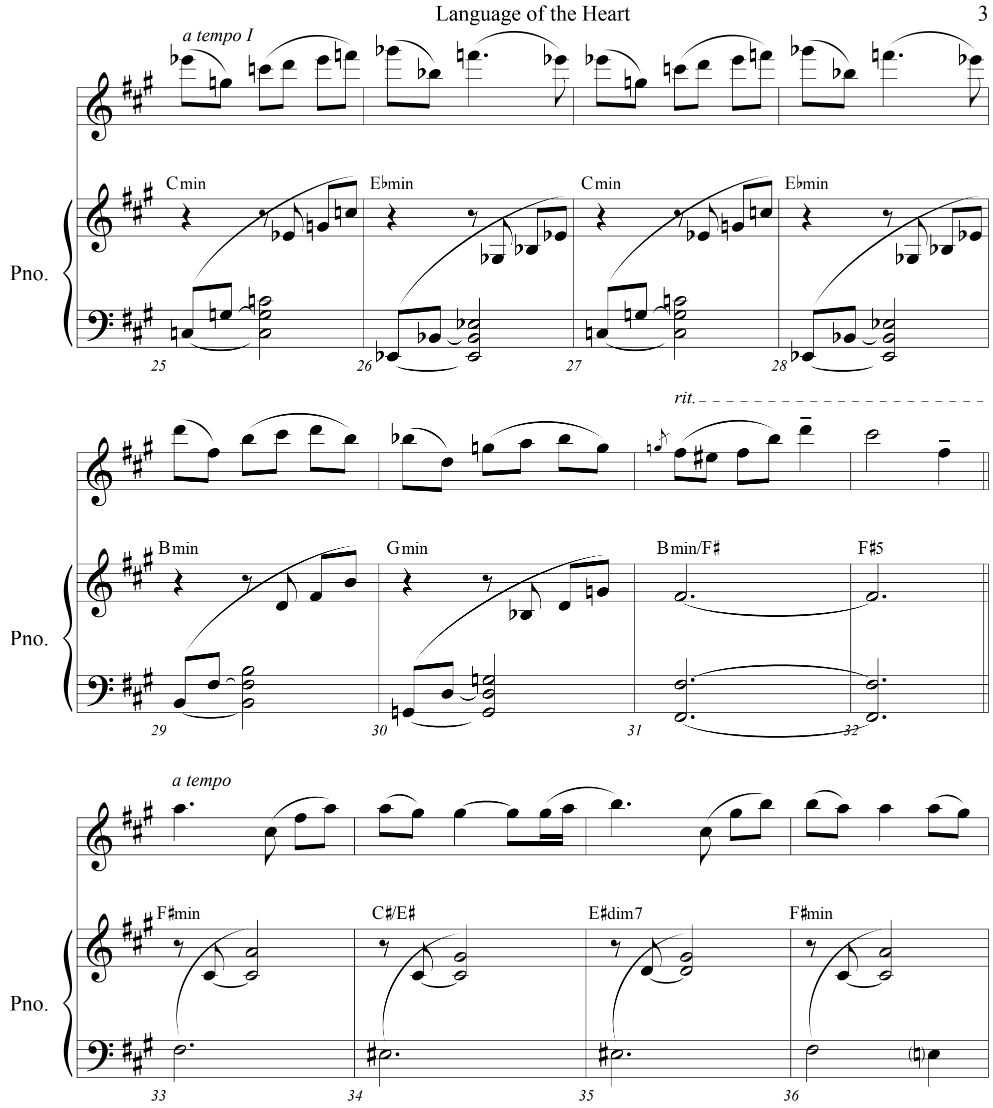
Pre-record version

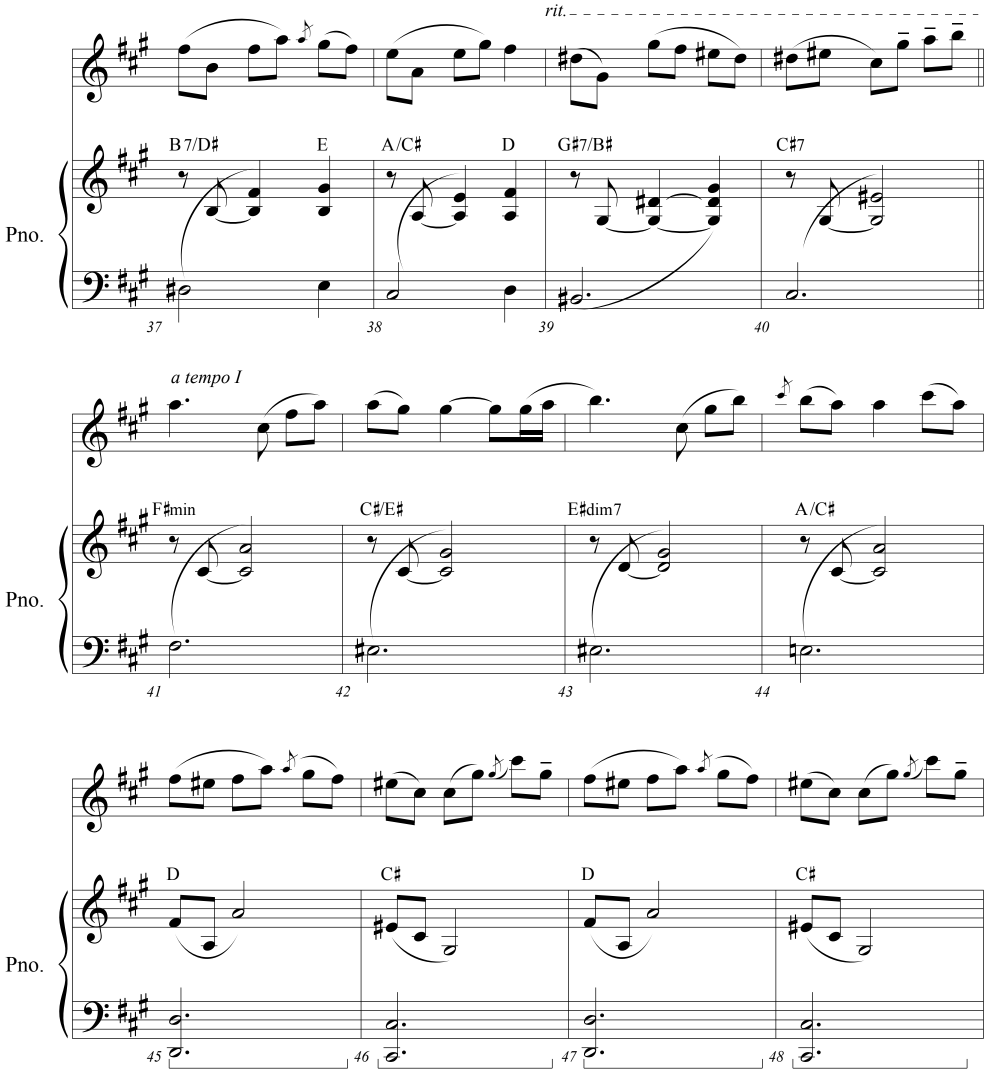
Hummie Mann

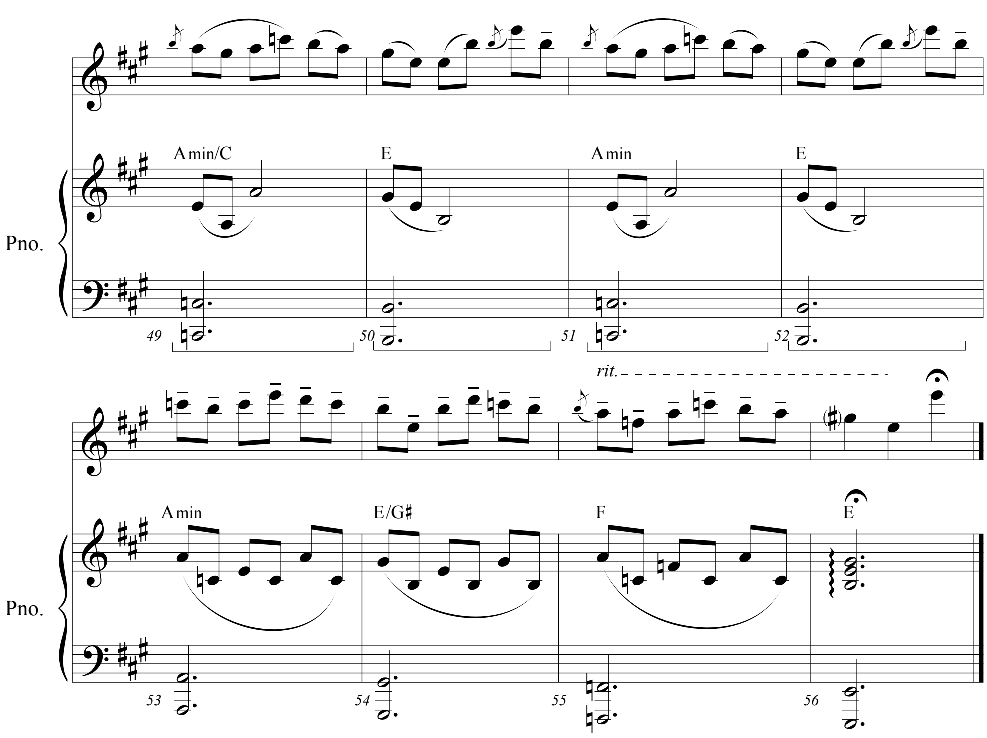

Solo Violin
Piano
Pno.
F♯min
C♯/E♯
E♯dim7
F♯min
B 7/D♯
E
A/C♯
D
G♯7/B♯
C♯7
rit.
a tempo I
F♯min
C♯/E♯
E♯dim7
A/E
1
2
3
4
5
6
7
8
9
10
11
12

©


rit.
Bmin/D
Bmin
Bmin/D
F
Pno.
13
14
15
16
a tempo I
Amin
Cmin
Amin
Cmin
Pno.
17
18
19
sim.
20
rit.
Bmin
Gmin
F♯5
Pno.
21
22
23
24


Language of the Heart
3
a tempo I
Cmin
E♭min
Cmin
E♭min
Pno.
25
26
27
28
rit.
Bmin
Gmin
Bmin/F♯
F♯5
Pno.
29
30
31
32
a tempo
F♯min
C♯/E♯
E♯dim7
F♯min
Pno.
33
34
35
36


rit.
B 7/D♯
E
A/C♯
D
G♯7/B♯
C♯7
Pno.
37
38
39
40
a tempo I
F♯min
C♯/E♯
E♯dim7
A/C♯
Pno.
41
42
43
44
D
C♯
D
C♯
Pno.
45
46
47
48


Pno.
Amin/C
E
Amin
E
49
50
51
52
rit.
Amin
E/G♯
F
E
53
54
55
56

The violin part from this pre-recorded track was used in all the different cues that show Mischa performing this piece throughout the film and as mentioned before, each of them were edited to a different length depending on the scene.

The final montage sequence, described earlier, begins with the sound of Mischa's distant solo violin as heard by Anna inside her apartment. The orchestra enters on a picture dissolve to Mischa on the street and then continues to score and support the on-screen drama. After the 1st section of the piece, which we have heard a few times before, the piece continues with a very short pseudo cadenza, which is used when the film cuts to sometime in the future and Mischa is now the orchestra's concertmaster. His haunting theme is restated with a very different orchestral accompaniment composed to suggest an early 20th century ballet work as we see Prima Ballerina Anna performing with the ballet orchestra in the foreground.

Notice that at that point the music no longer functions as dramatic underscore, but instead functions completely as a piece of ballet music with the on-screen orchestra performing it. In order to change the accompaniment to sound even more 'of the era,' I made use of increased chromaticism in the accompaniment for a different harmonic approach than in the first section, even though the melody stays the same. This musical change was used to "… support the chronological development of musical style to [help] indicate the passage of time, …"[3]

Another interesting point about this piece is that I had to extend the end, adding a woodwind figure to match the final movements of the actress's performance. Below is the final score for this montage sequence, which can be followed along with audio track 3 on the CD. Note that on the score, the solo violin part is notated only for reference with the note "Do Not Copy" marked in the margin. When recording the orchestra, the players hear the click track and the soloist in their headphones.

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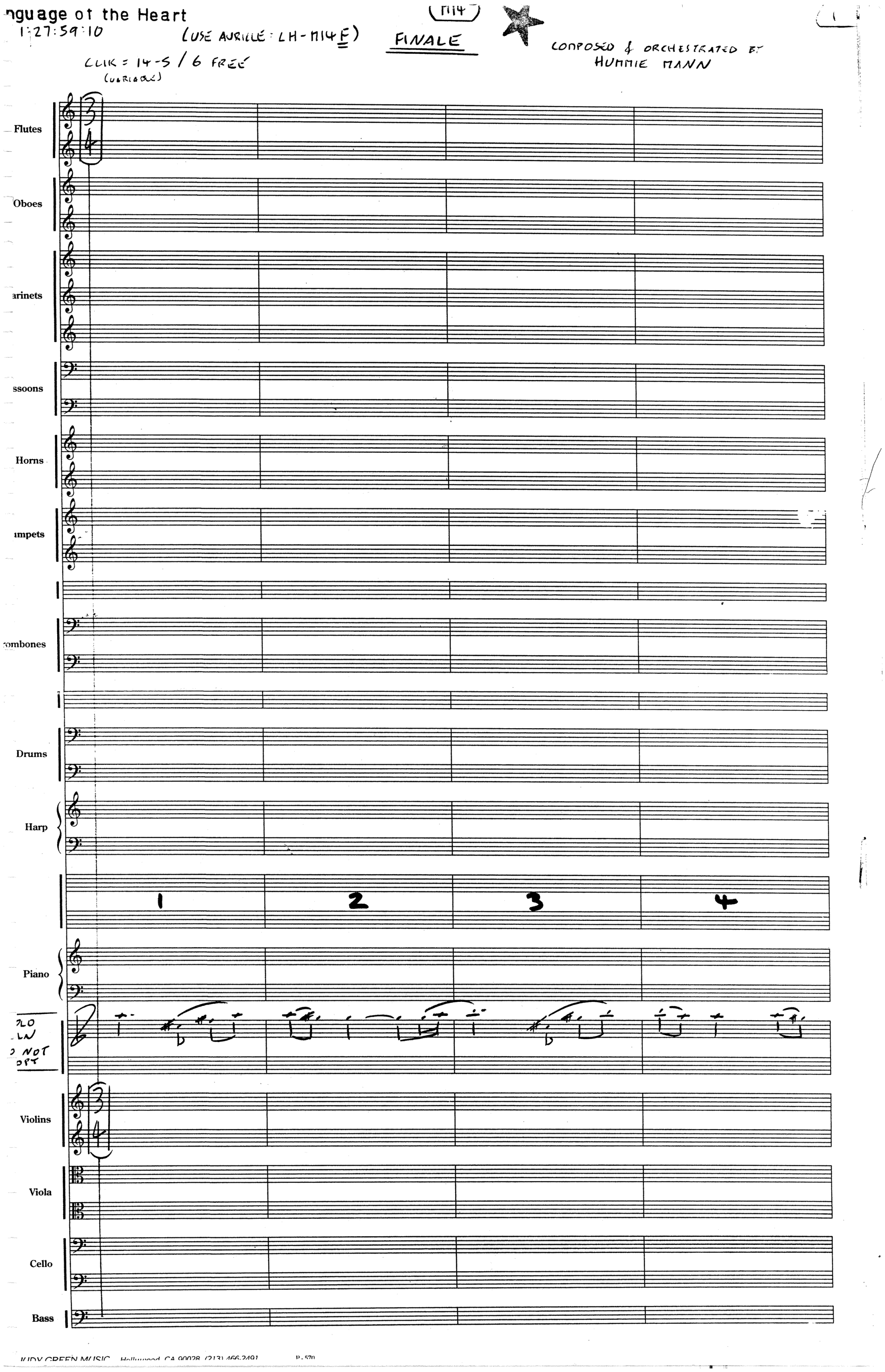
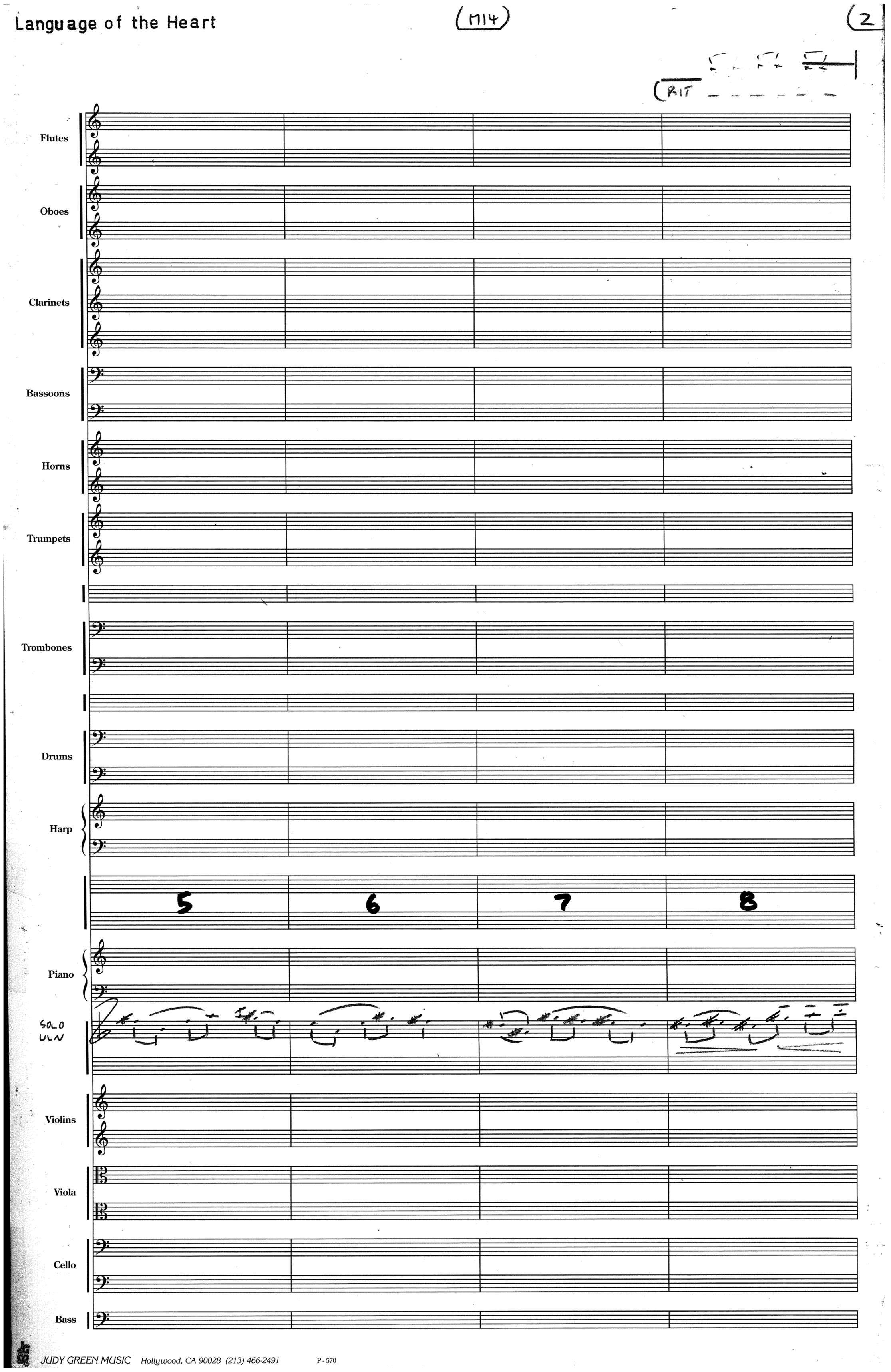
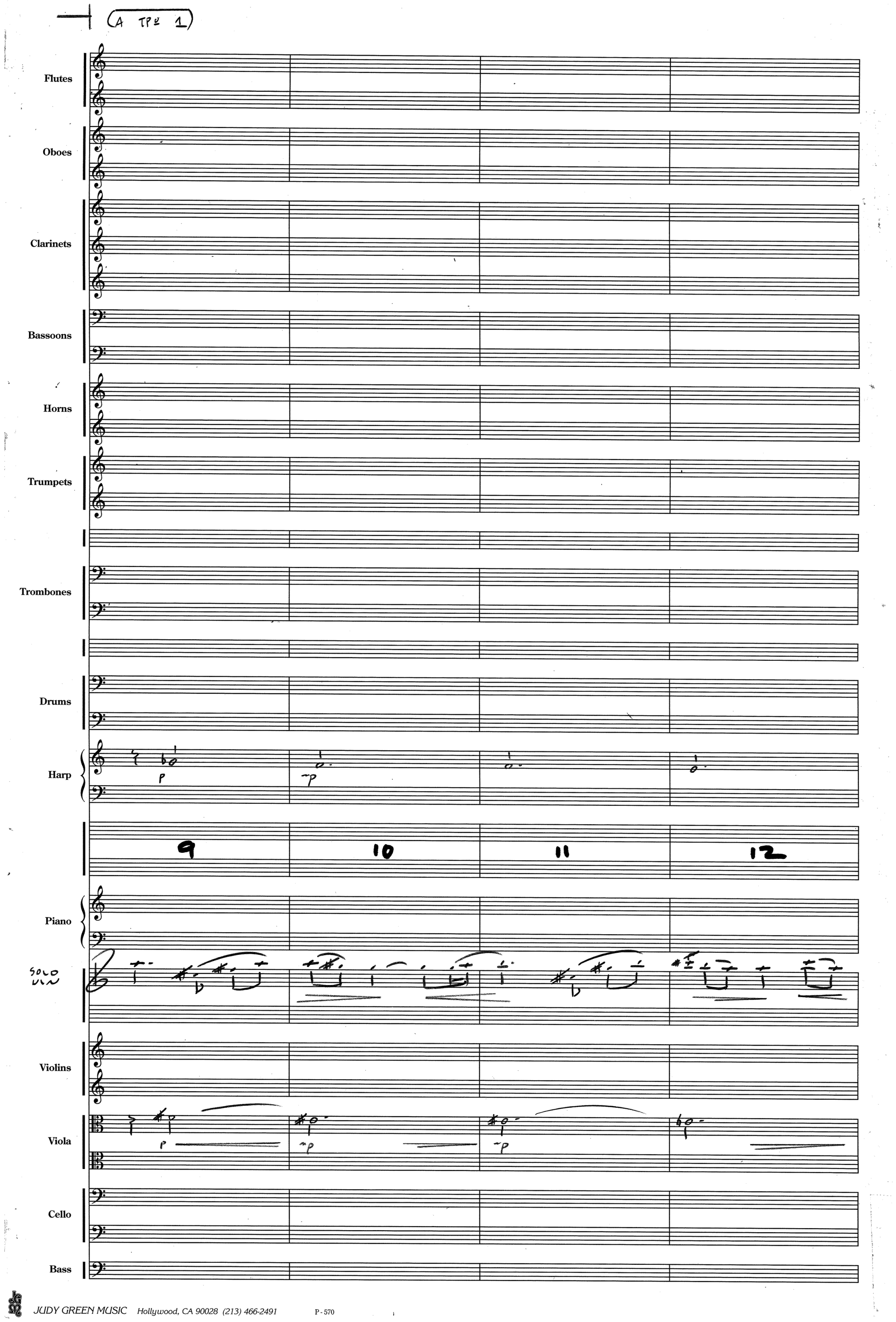
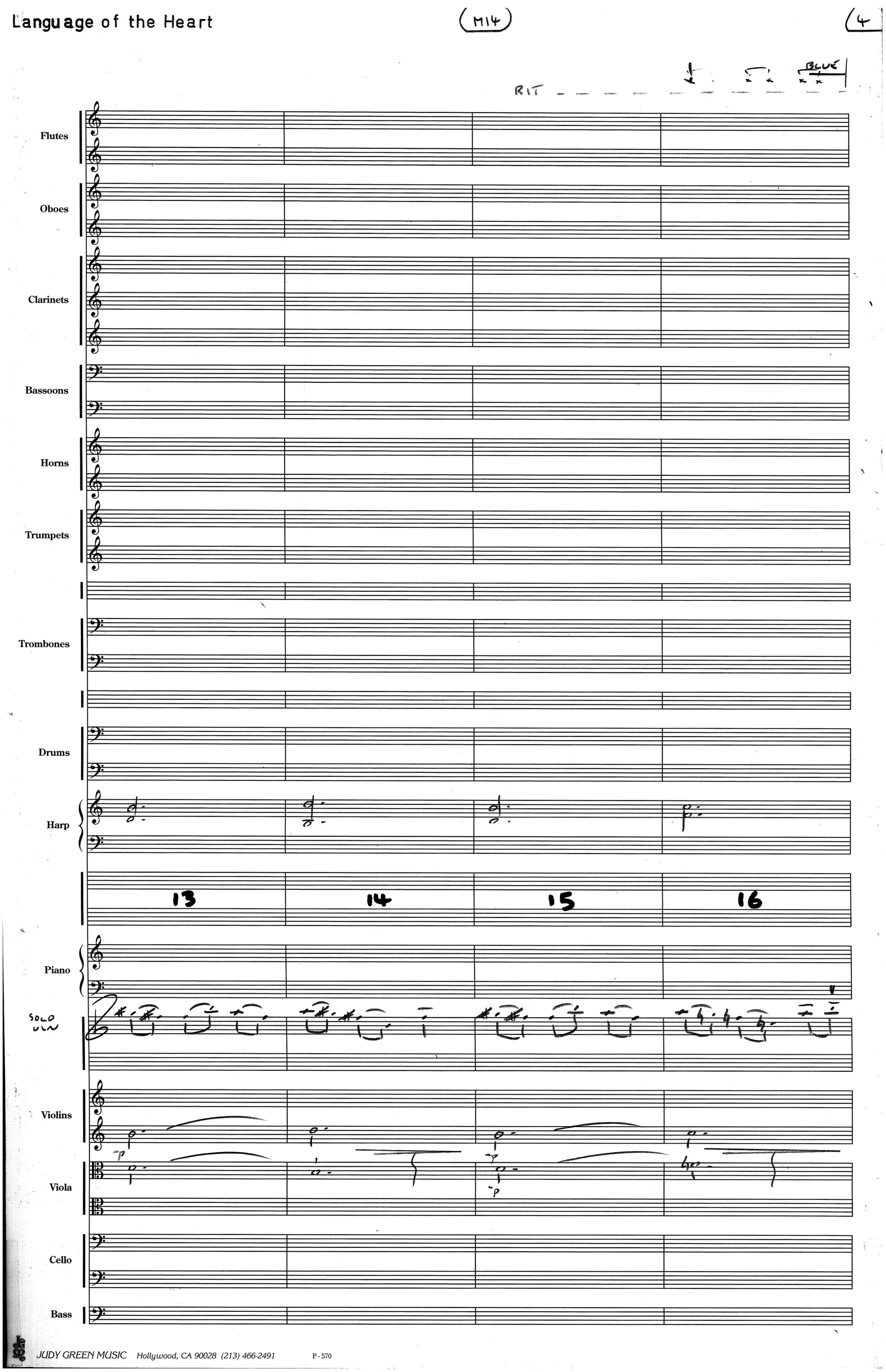
[3] Karlin & Wright, 182

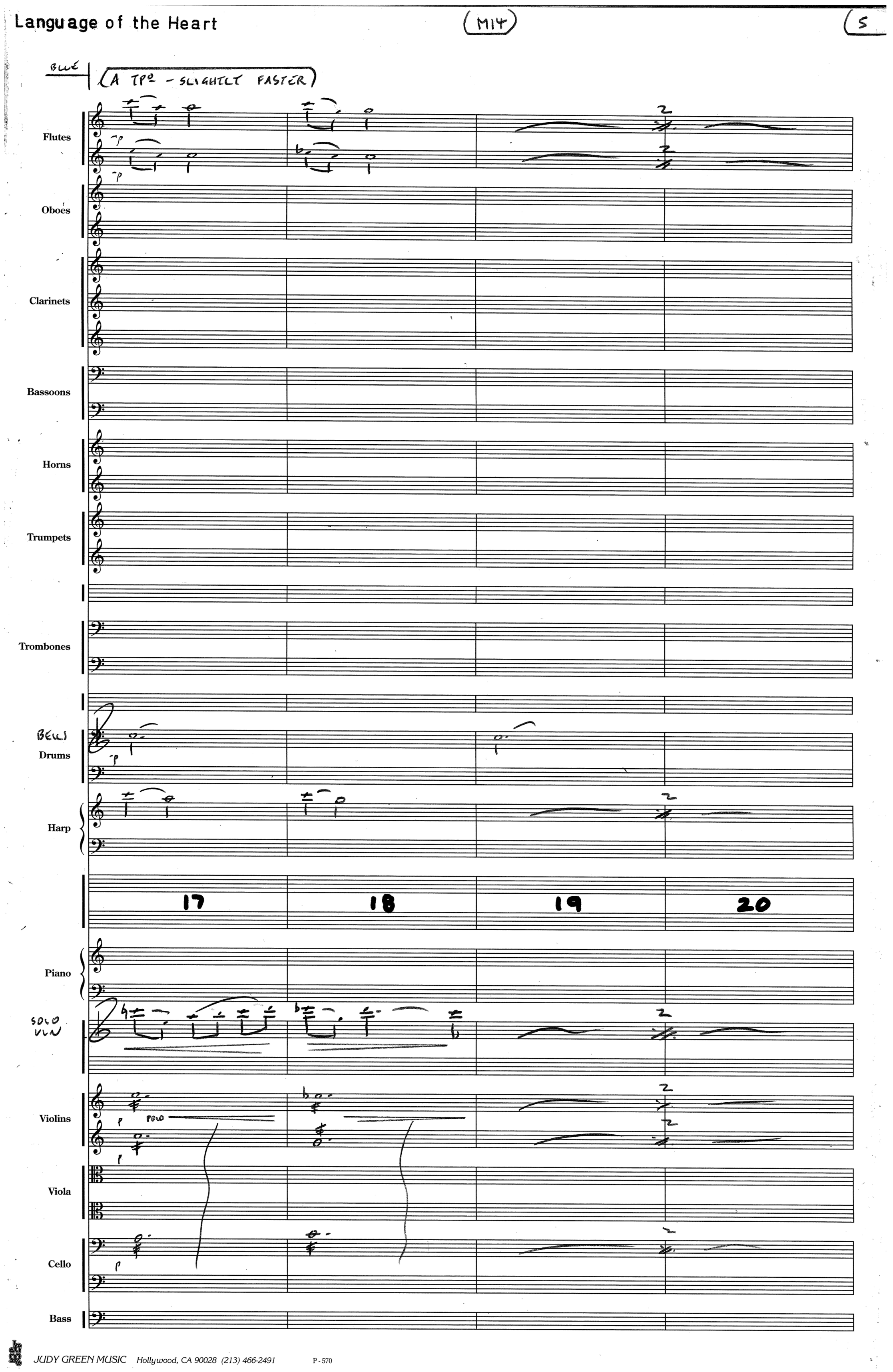

nguage of the Heart
1:27:59:10
(USE AURILLE: LH-M14F)
M14
FINALE
COMPOSED & ORCHESTRATED BY
HUMMIE MANN
CLIK = 14-5 / 6 FREE
(VARIABLE)
Flutes
Oboes
arinets
ssoons
Horns
mpets
ombones
Drums
Harp
1
2
3
4
Piano
LO
LN
NOT
PT
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491

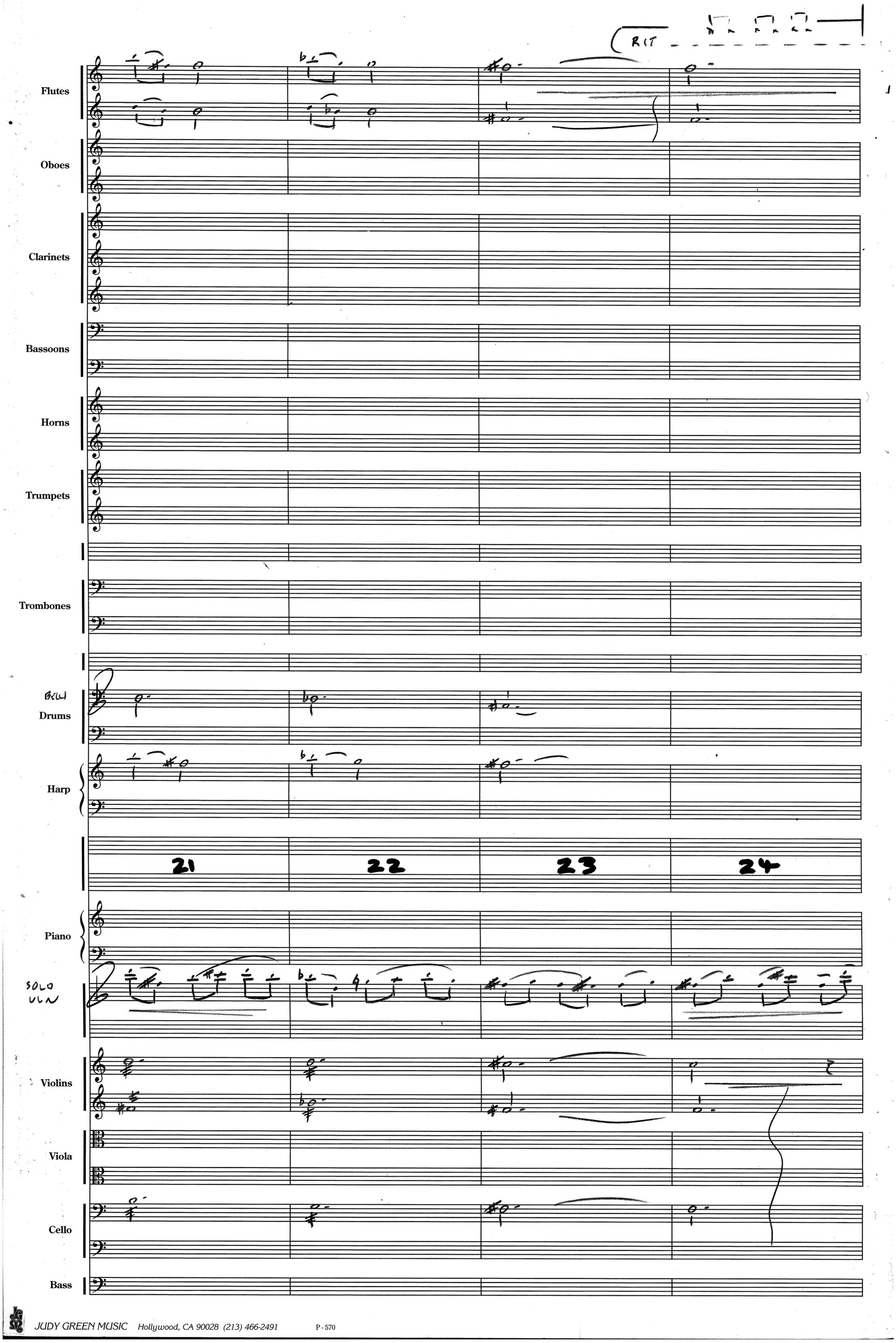

Language of the Heart
(M14)
(2
RIT
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
5
6
7
8
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

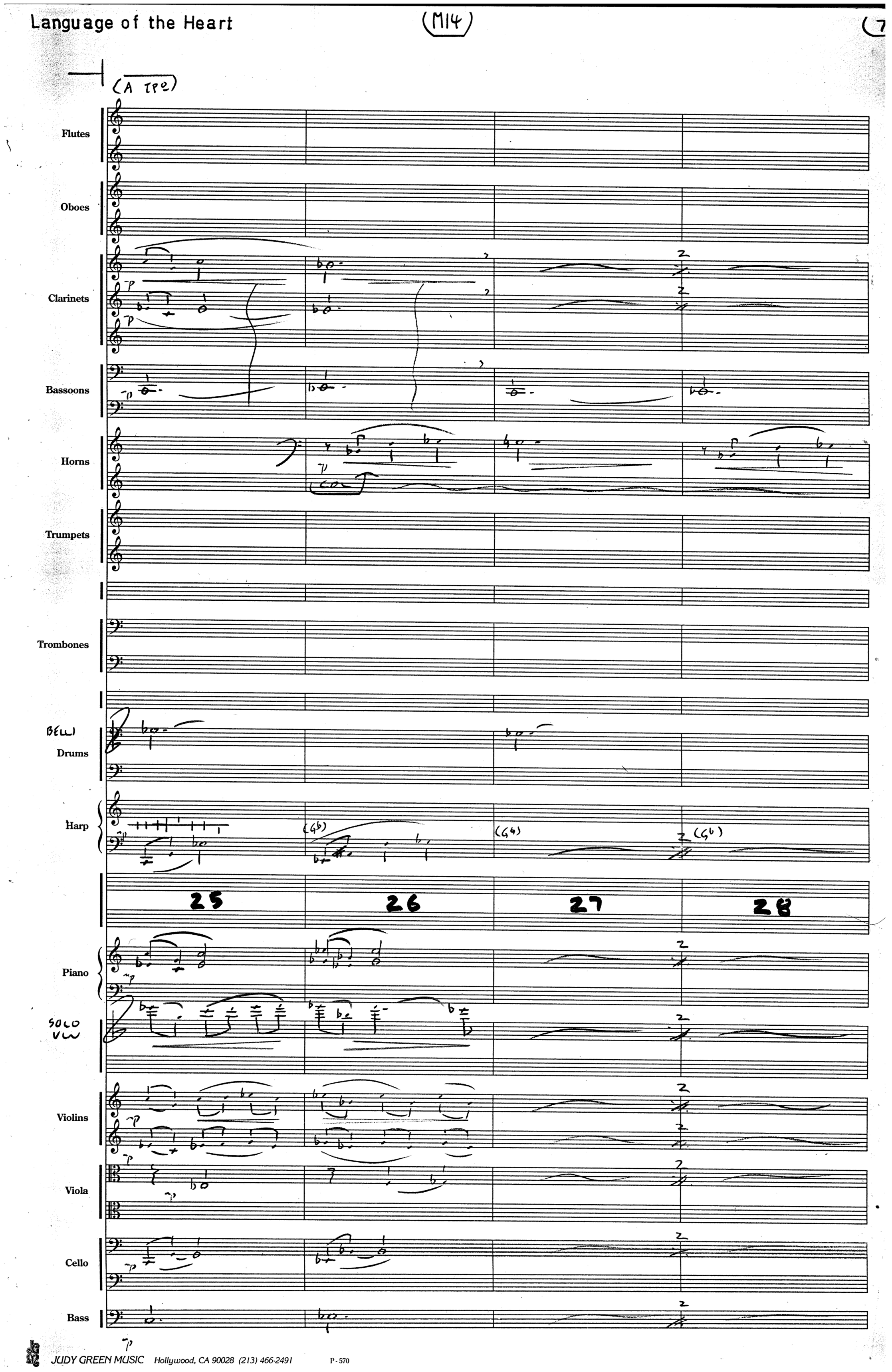
Language of the Heart (M14) (3

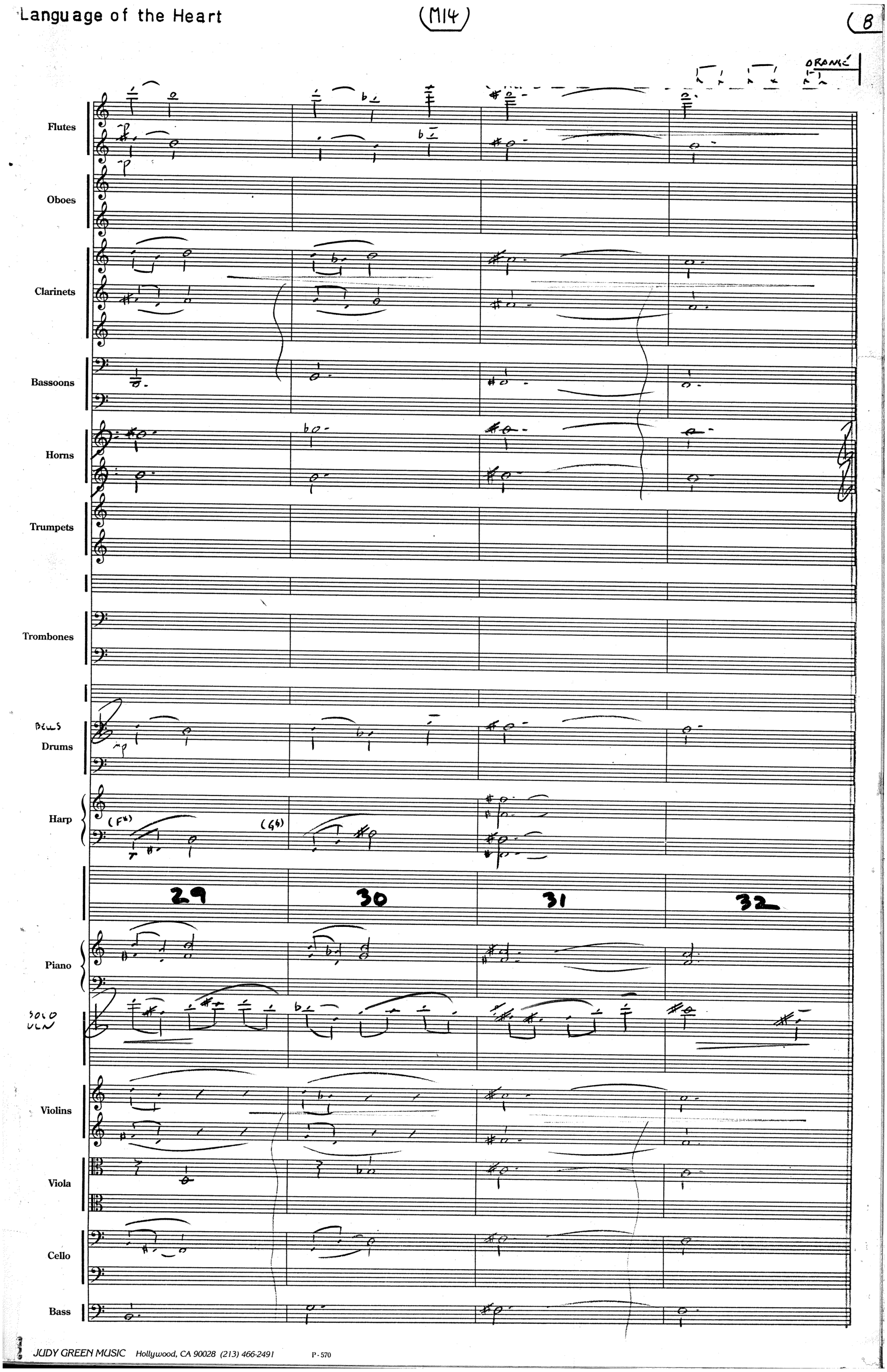

(A TPE 1)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
p
~p
9
10
11
12
Piano
SOLO VLN
Violins
Viola
p
~p
~p
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

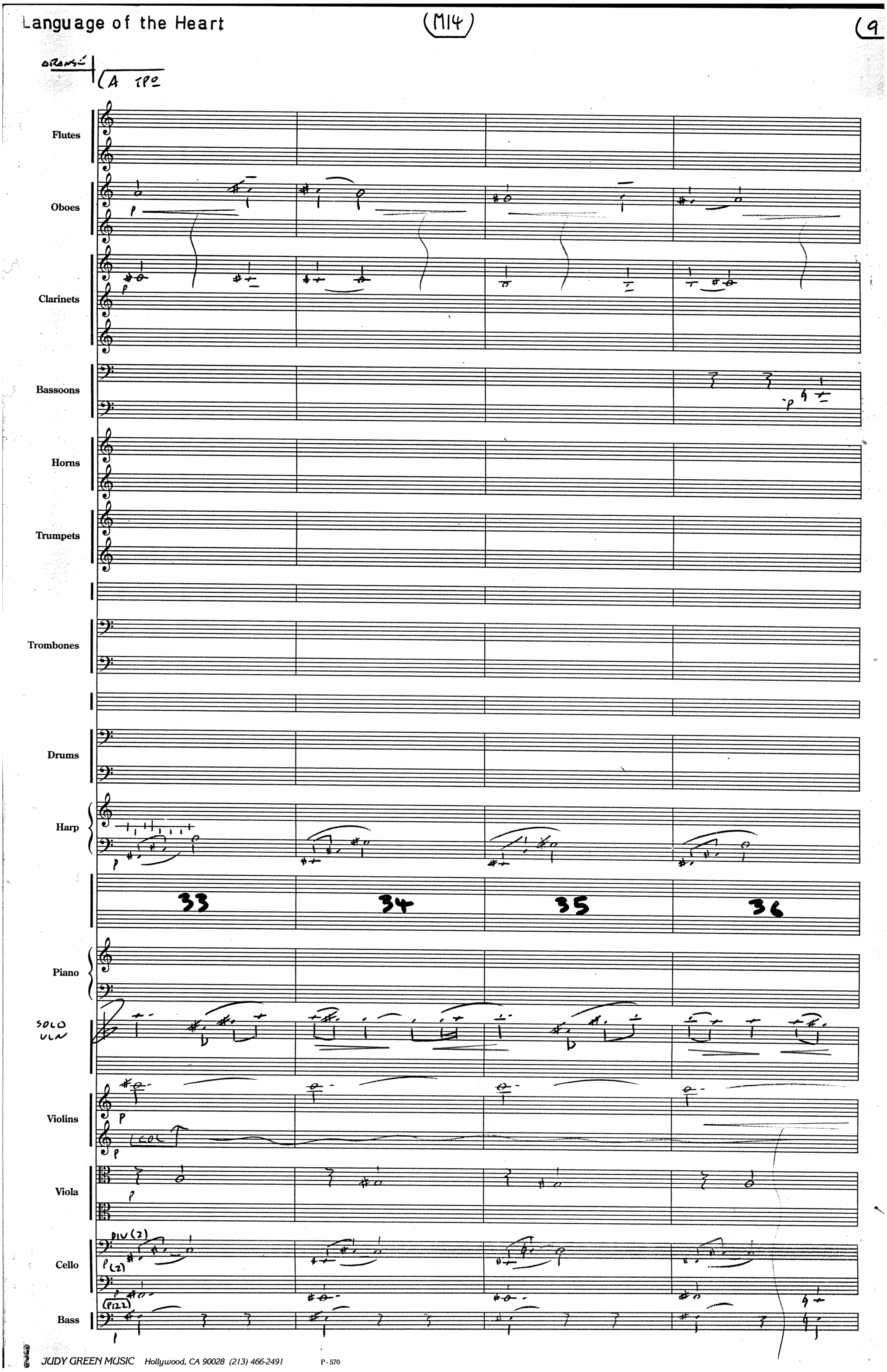

Language of the Heart
M14
4
RIT
BLUE
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
13
14
15
16
Piano
SOLO VLN
Violins
p
Viola
p
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

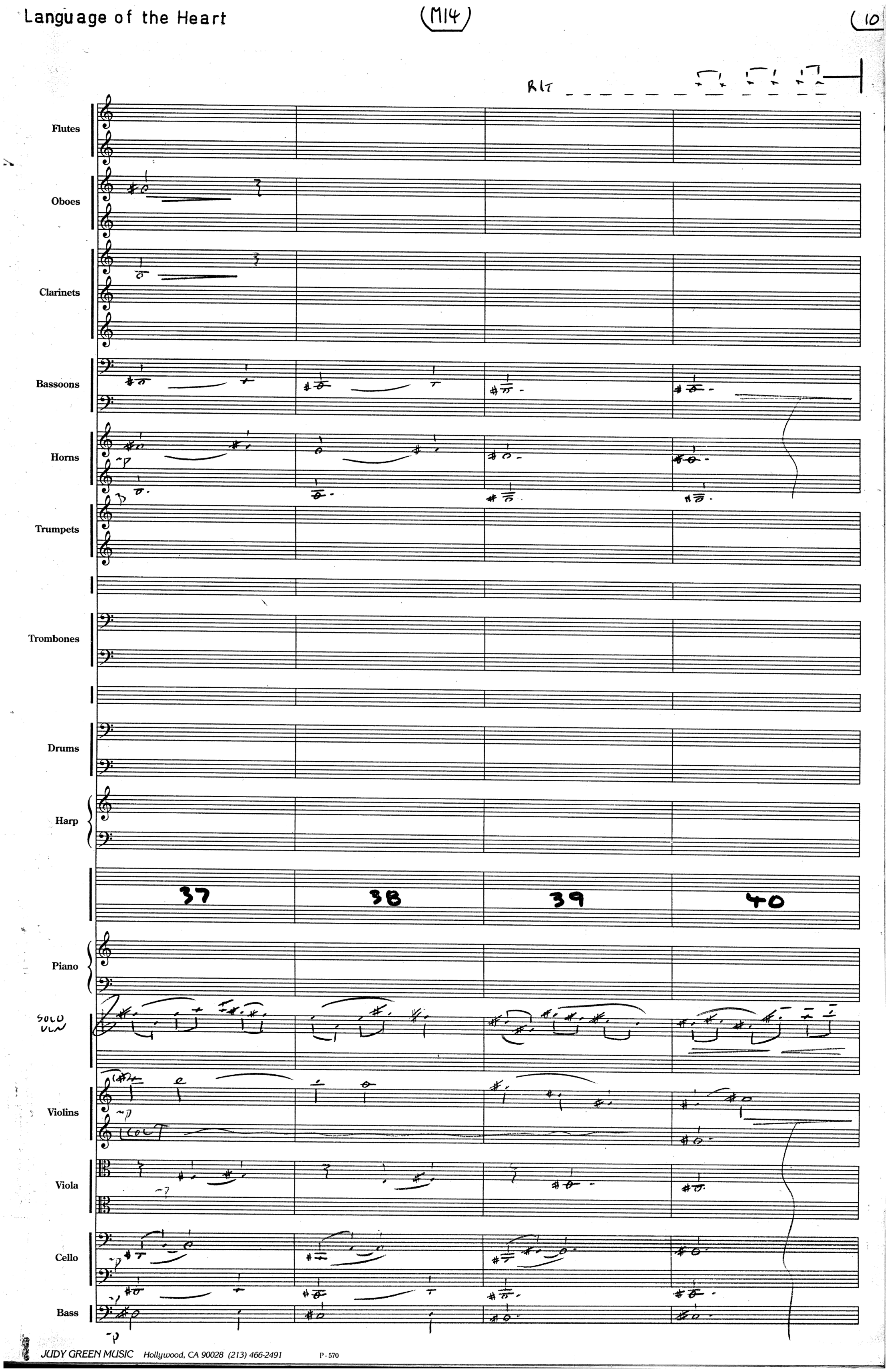

Language of the Heart
(M14)
(5
BLUE
(A TPO - SLIGHTLY FASTER)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
BELLS
Drums
Harp
17
18
19
20
Piano
SOLO VLN
Violins
POCO
Viola
Cello
Bass
p
2
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

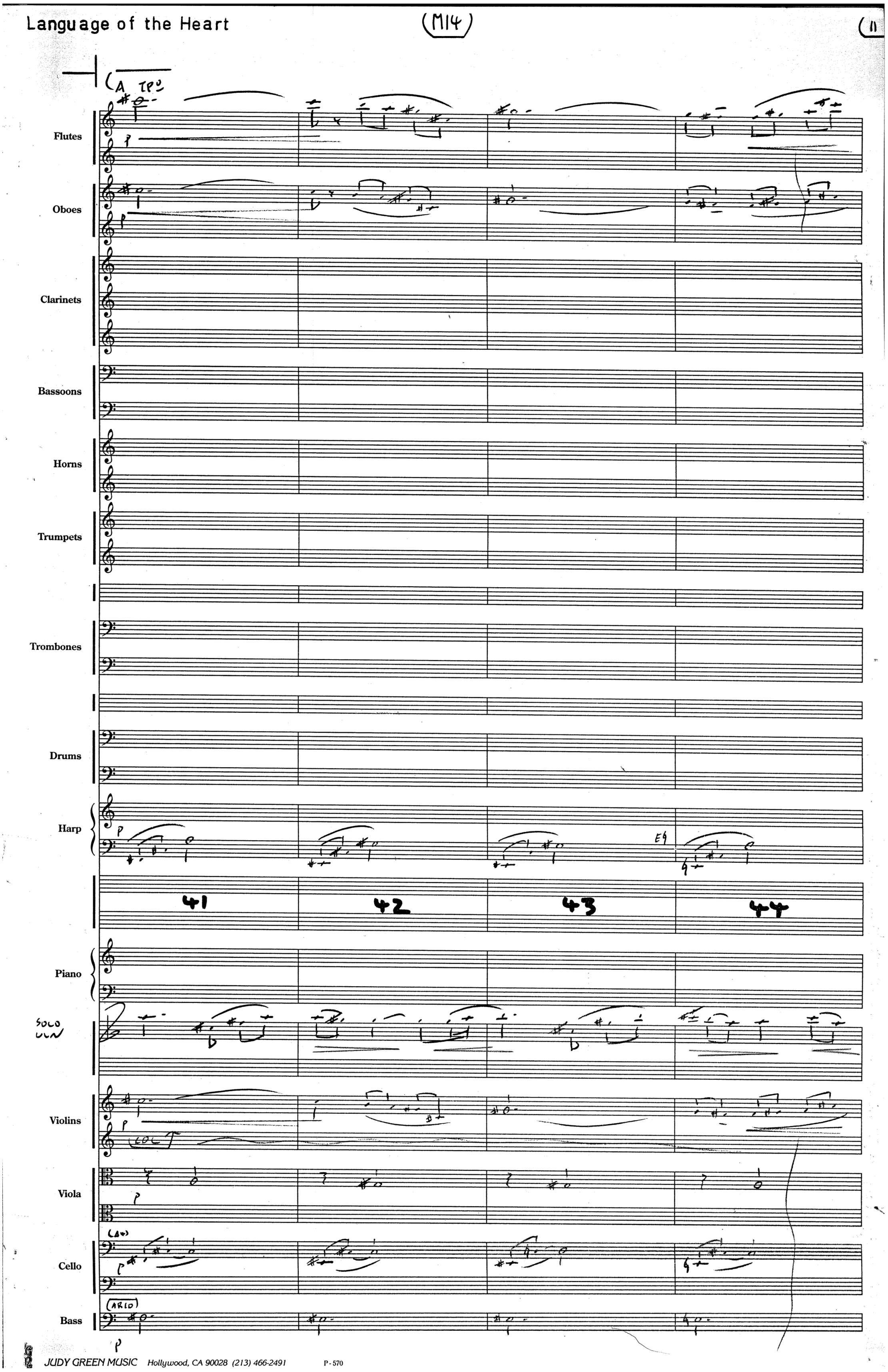

RIT
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Bell
Drums
Harp
21
22
23
24
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570


Language of the Heart
(M14)
(7
(A TPO)
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
BELL
Drums
Harp
(G♭)
(G♮)
(G♭)
25
26
27
28
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

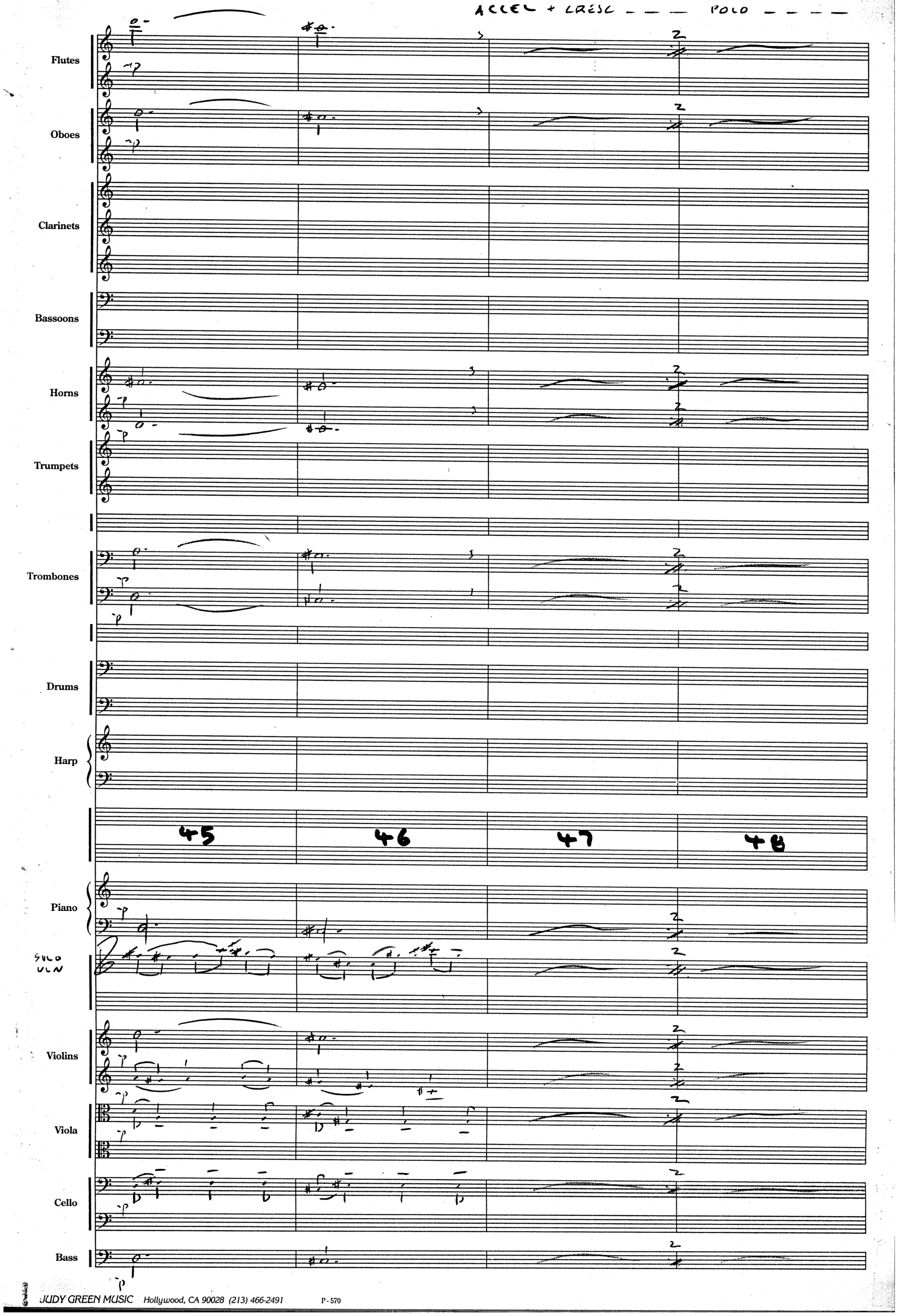

Language of the Heart
(M14)
(8
ORAMIC
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Bells
Drums
Harp
(F♮)
(G♮)
29
30
31
32
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

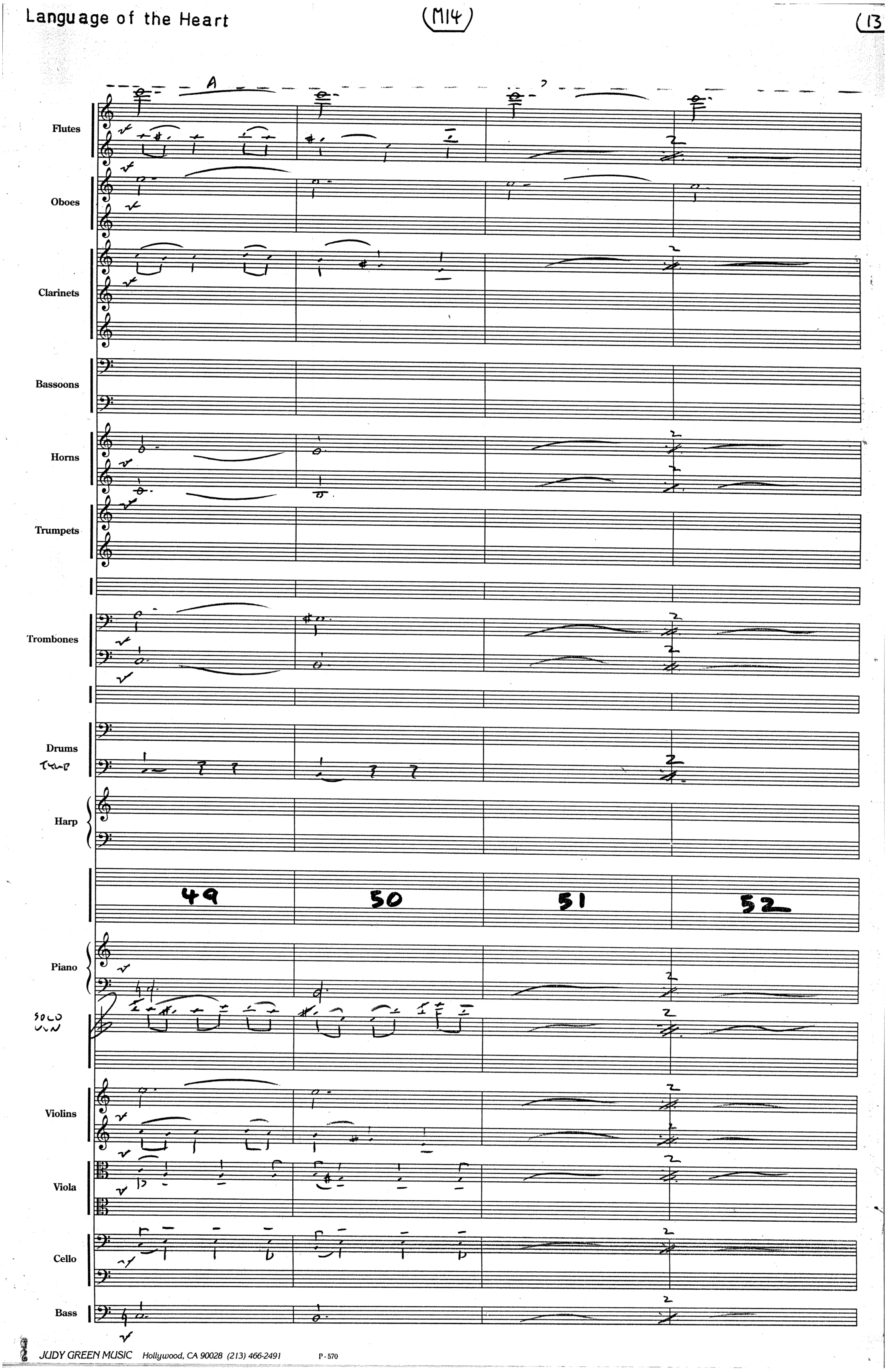

Language of the Heart
(M14)
(9
A tpo
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
33
34
35
36
Piano
solo vln
Violins
col
Viola
Cello
div (2)
Bass
(pizz)
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

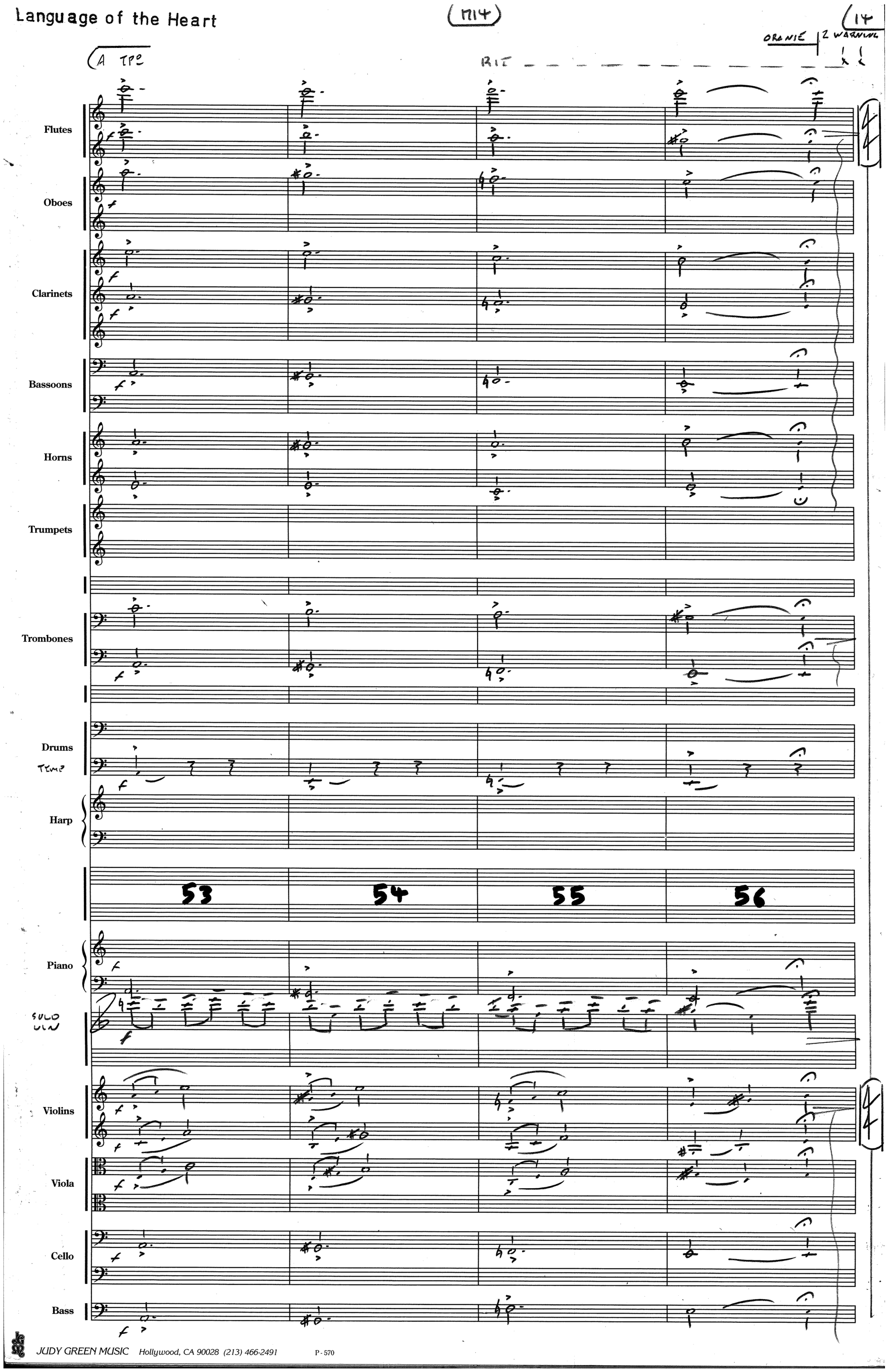

Language of the Heart
(M14)
(10
RIT
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
37
38
39
40
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

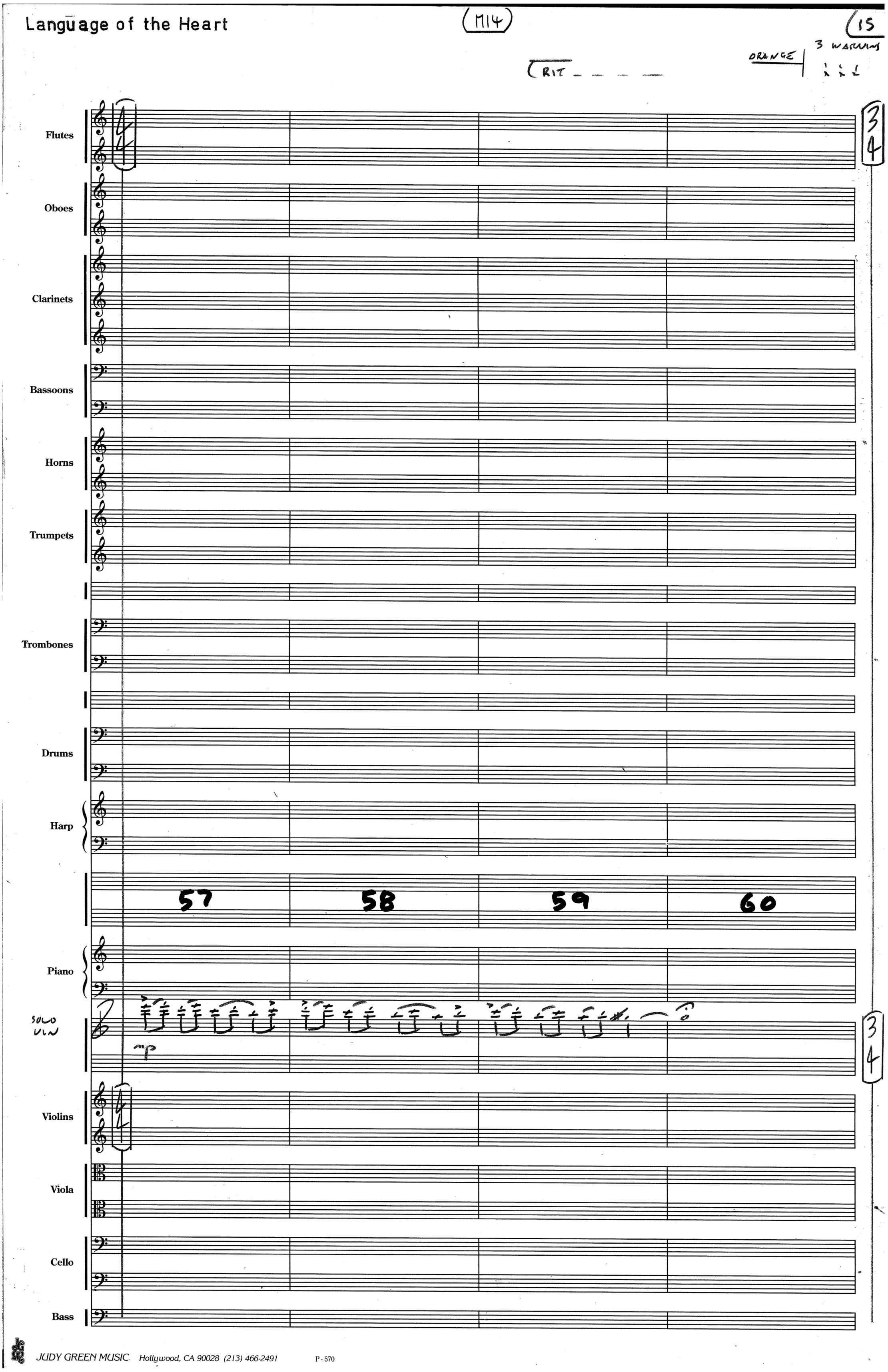

Language of the Heart
(M14)
(11
A Tpo
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
E♮
41
42
43
44
Piano
Solo Vln
Violins
col
Viola
Cello
(arco)
Bass
(ARCO)
p
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

Language of the Heart (M14) 12

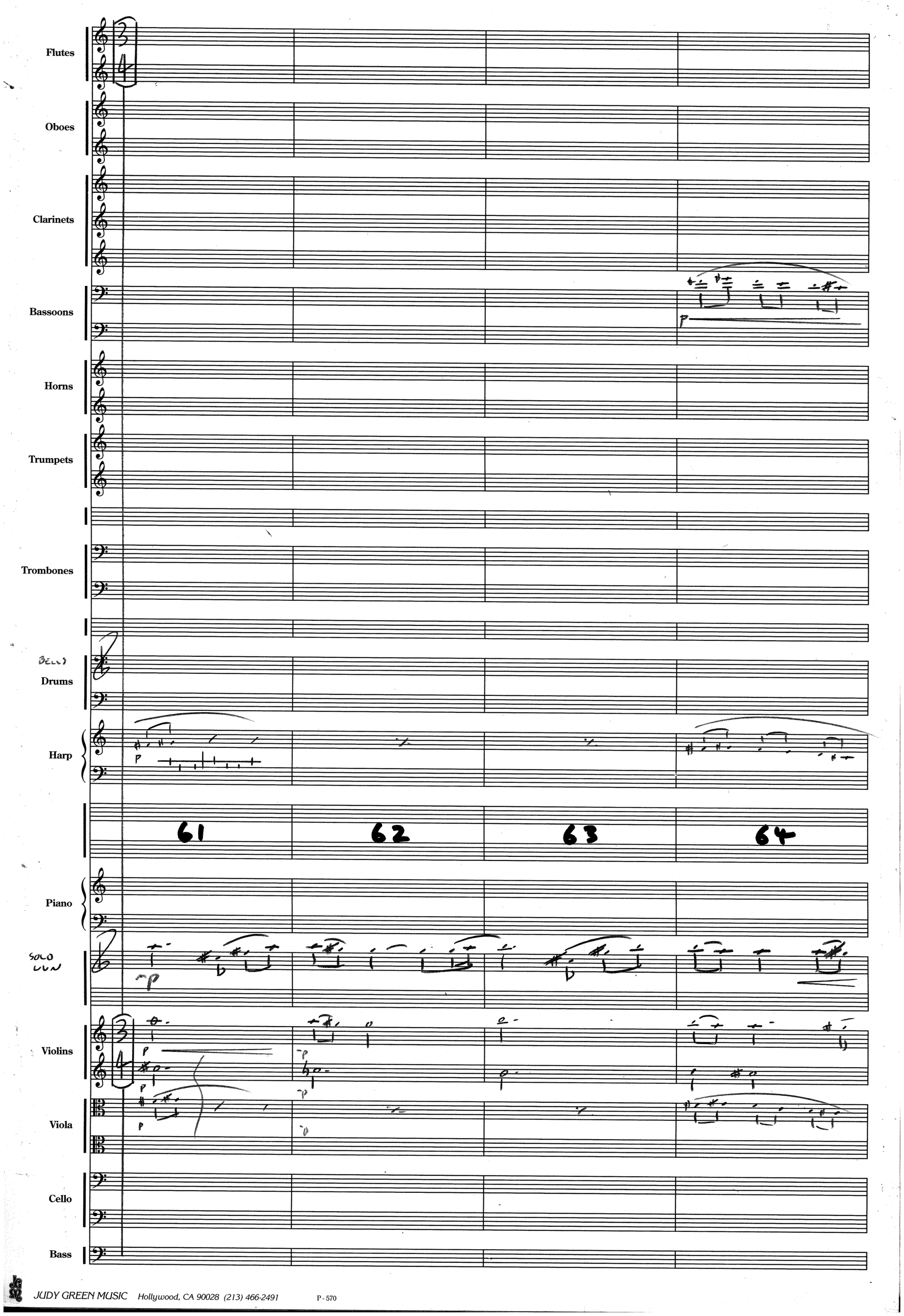

ACCEL + CRESC — — — POCO — — — —
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
45
46
47
48
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


Language of the Heart
(M14)
(13
A
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Timp
Harp
49
50
51
52
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

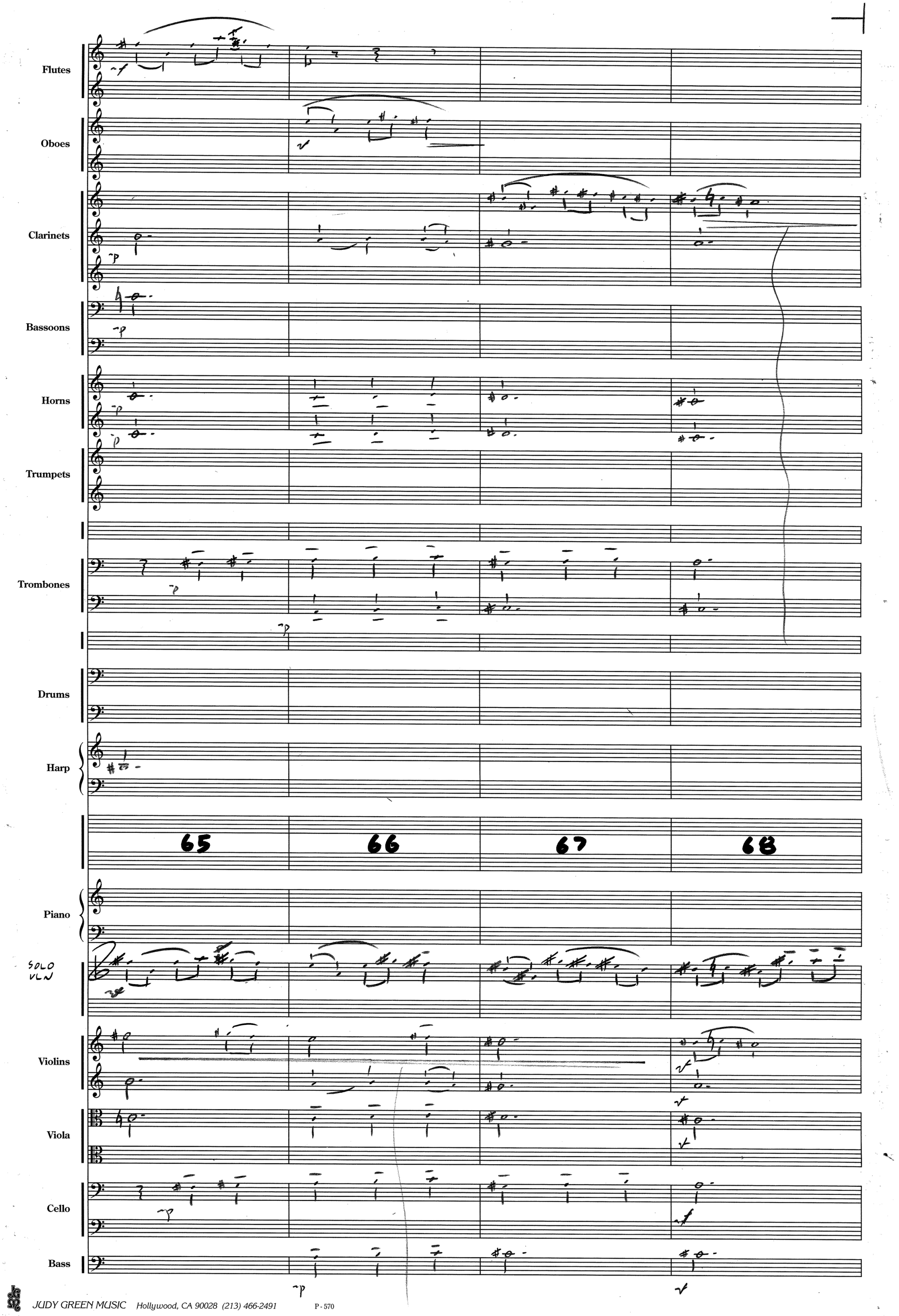

Language of the Heart
(M14)
14
2 WARNING
A TPO
RIT
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
TIMP
Harp
53
54
55
56
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


Language of the Heart
(M14)
(15
CRIT _ _ _ _
ORANGE
3 WARNINGS
4/4
3/4
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
57
58
59
60
Piano
SOLO VLN
mp
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

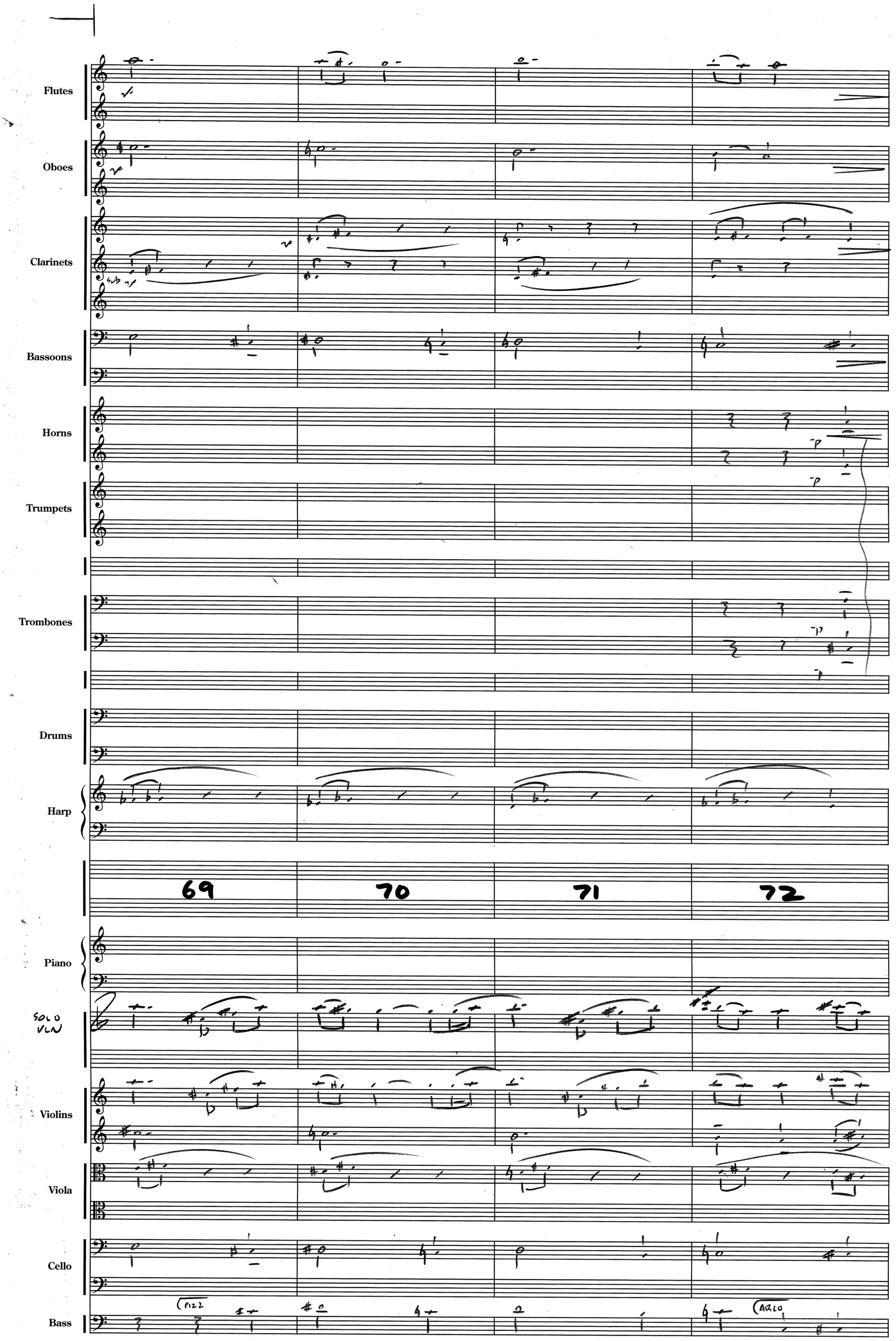
Language of the Heart (M14) 16


Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Bells
Drums
Harp
61
62
63
64
Piano
Solo Vln
Violins
Viola
Cello
Bass
p
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570

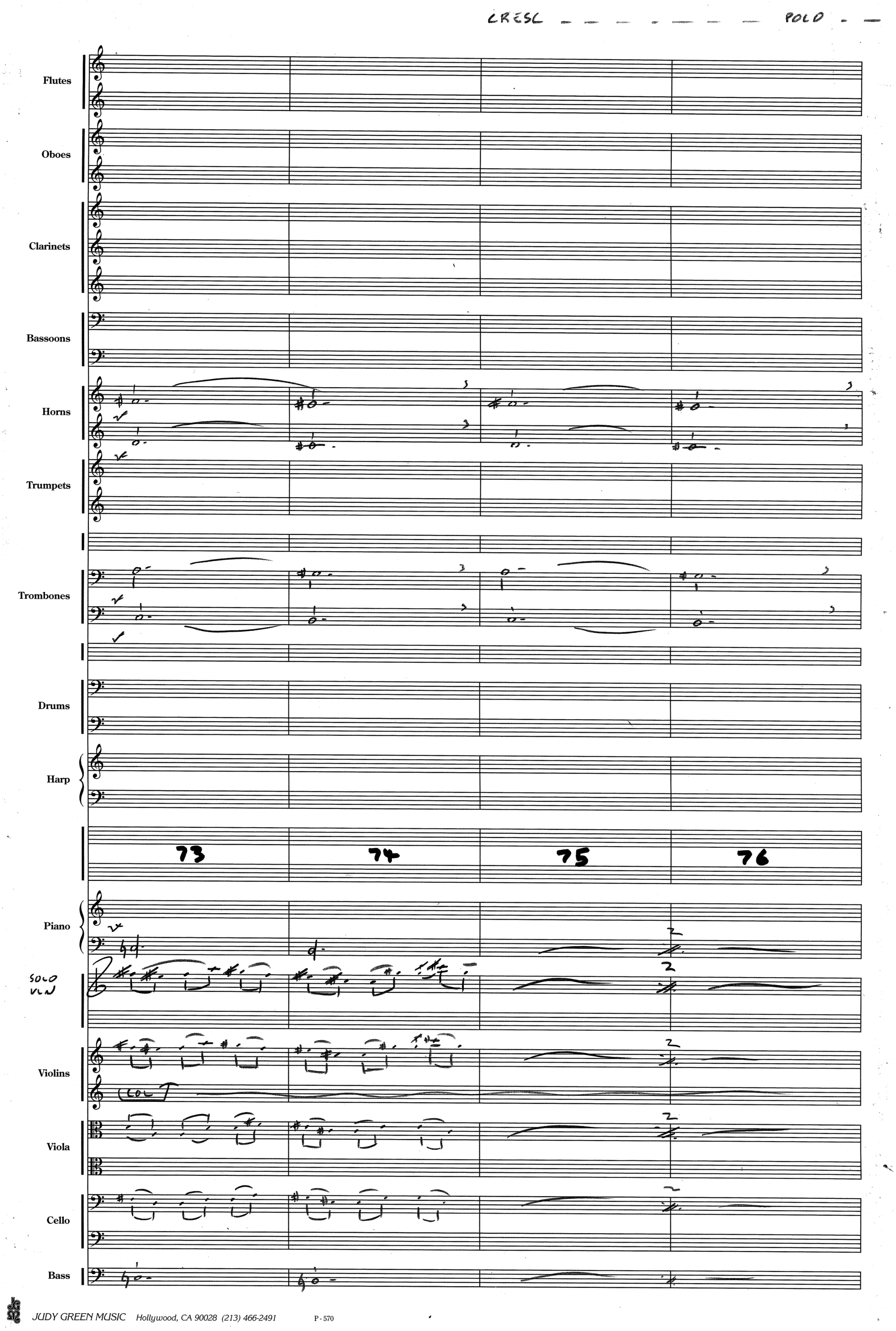
Language of the Heart (M14) 17

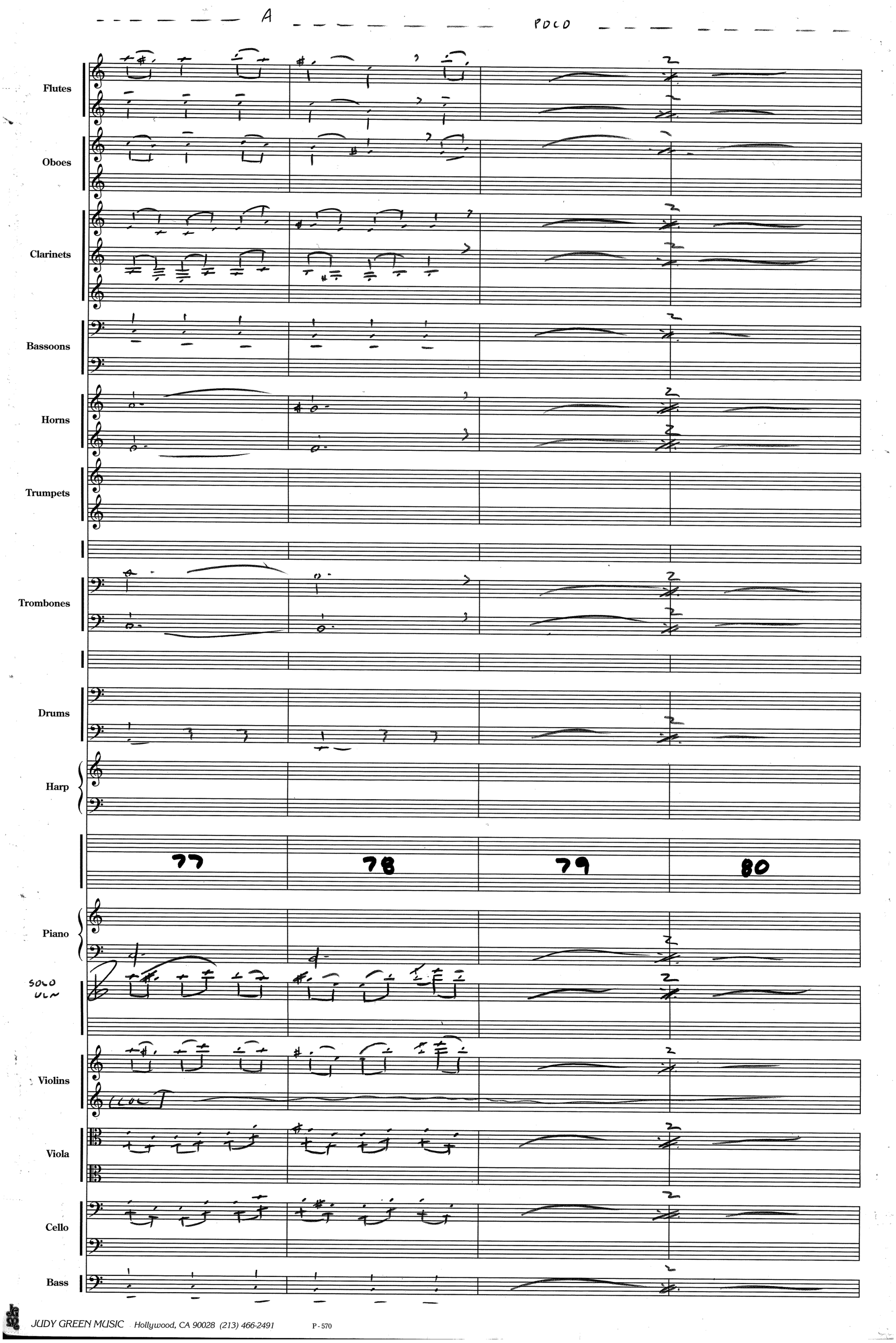

Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
Piano
SOLO VLN
Violins
Viola
Cello
Bass
65
66
67
68
p
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

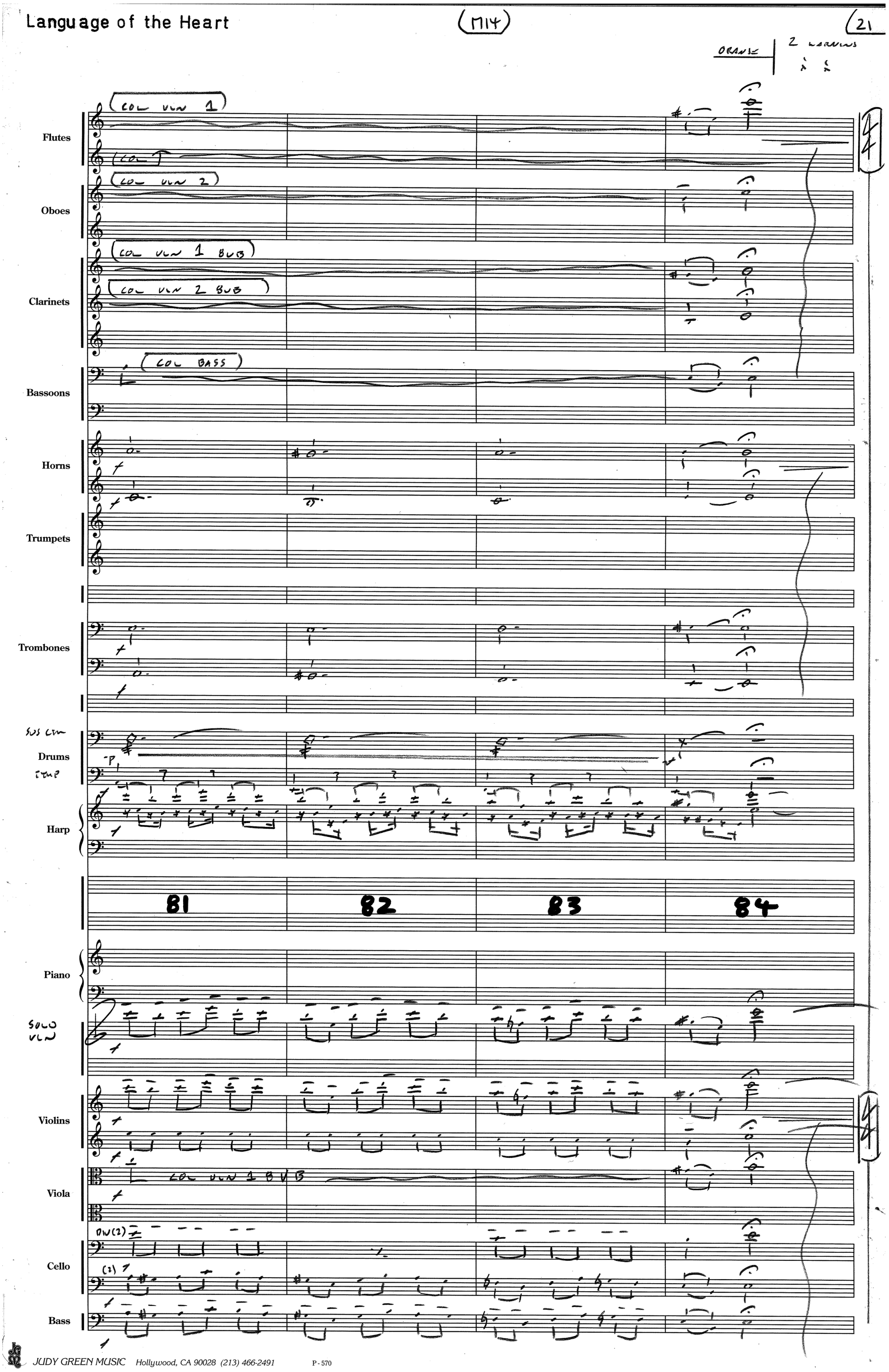
Language of the Heart (M14) (18

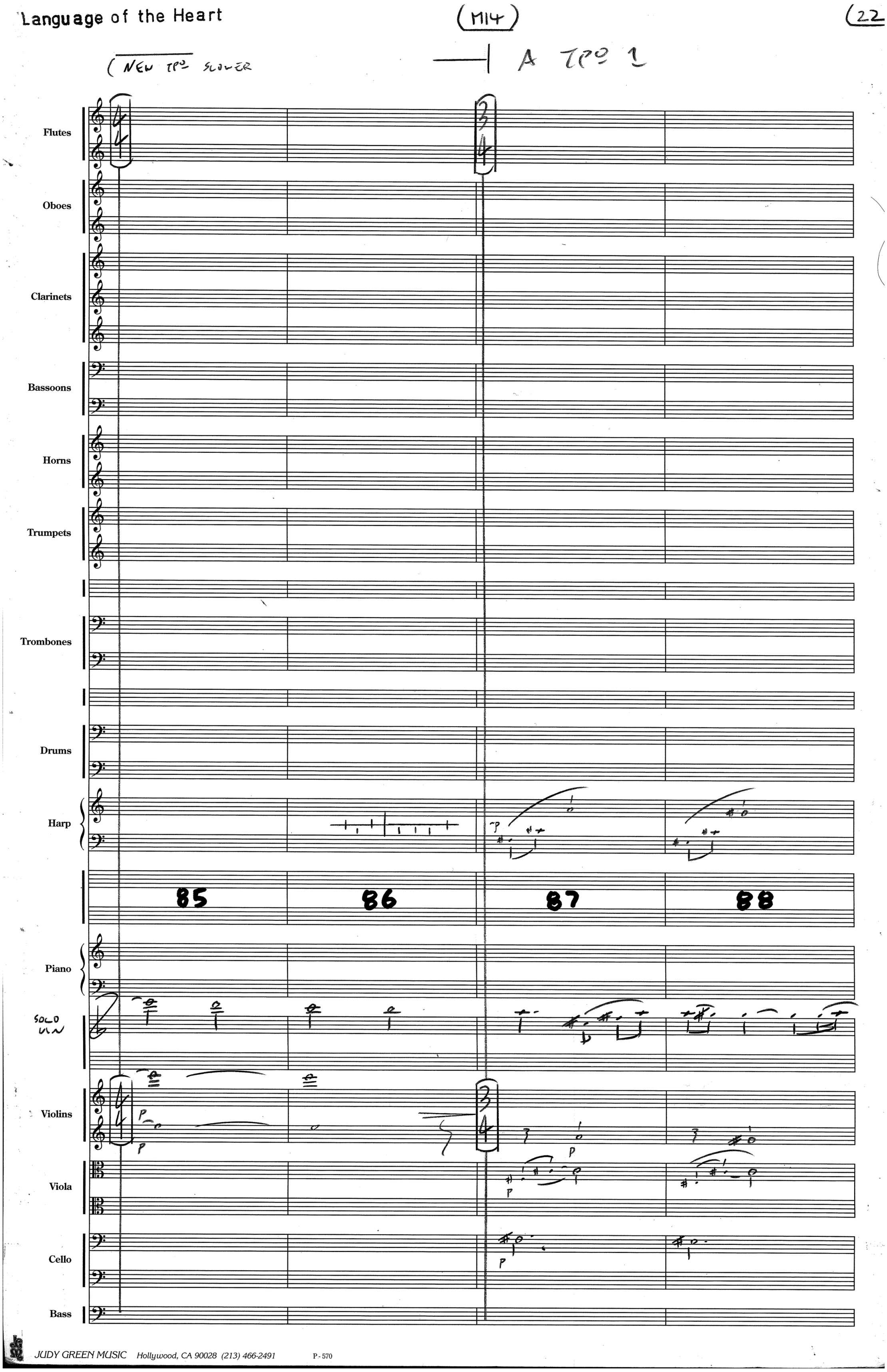

Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
69
70
71
72
Piano
solo vln
Violins
Viola
Cello
Bass
pizz
arco

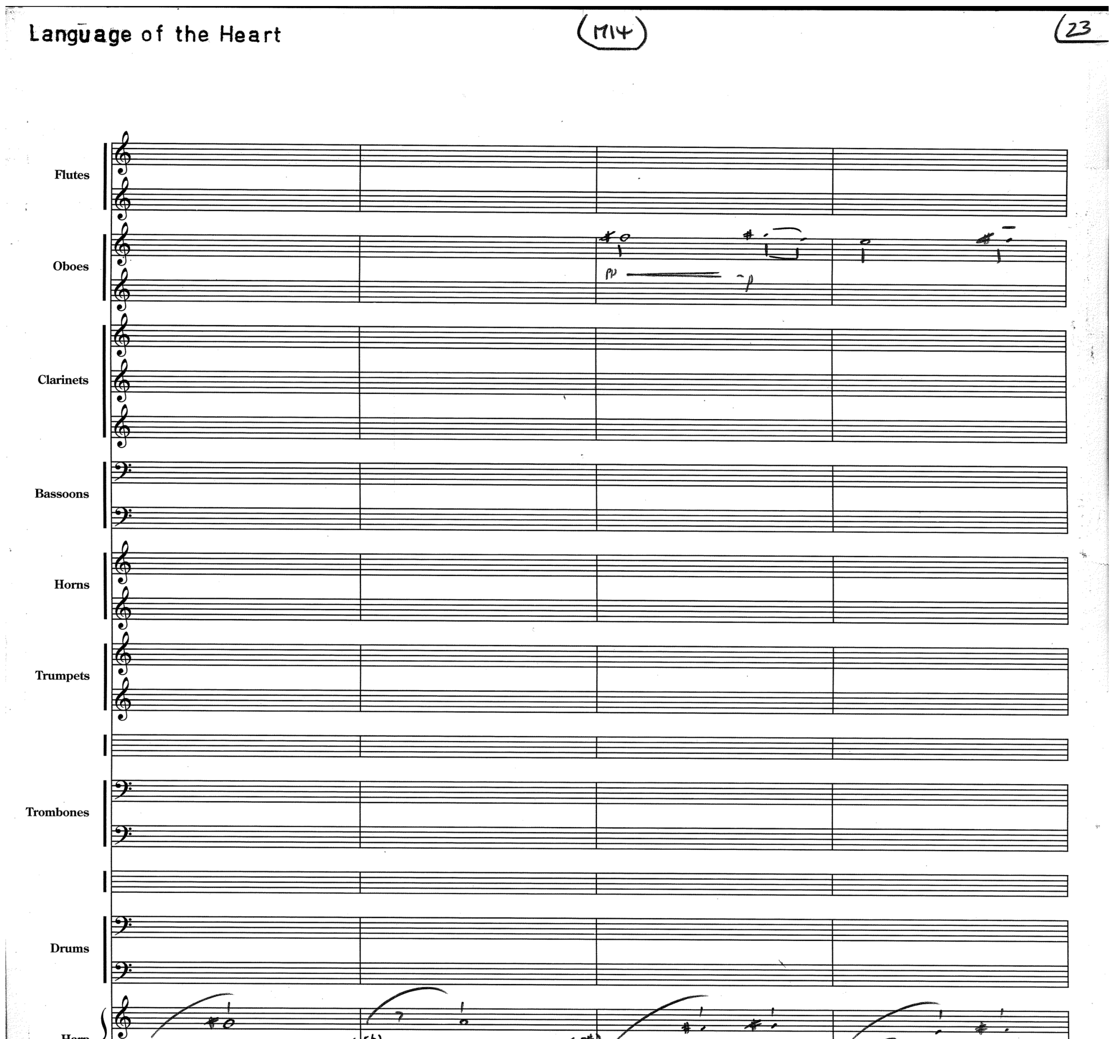
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570

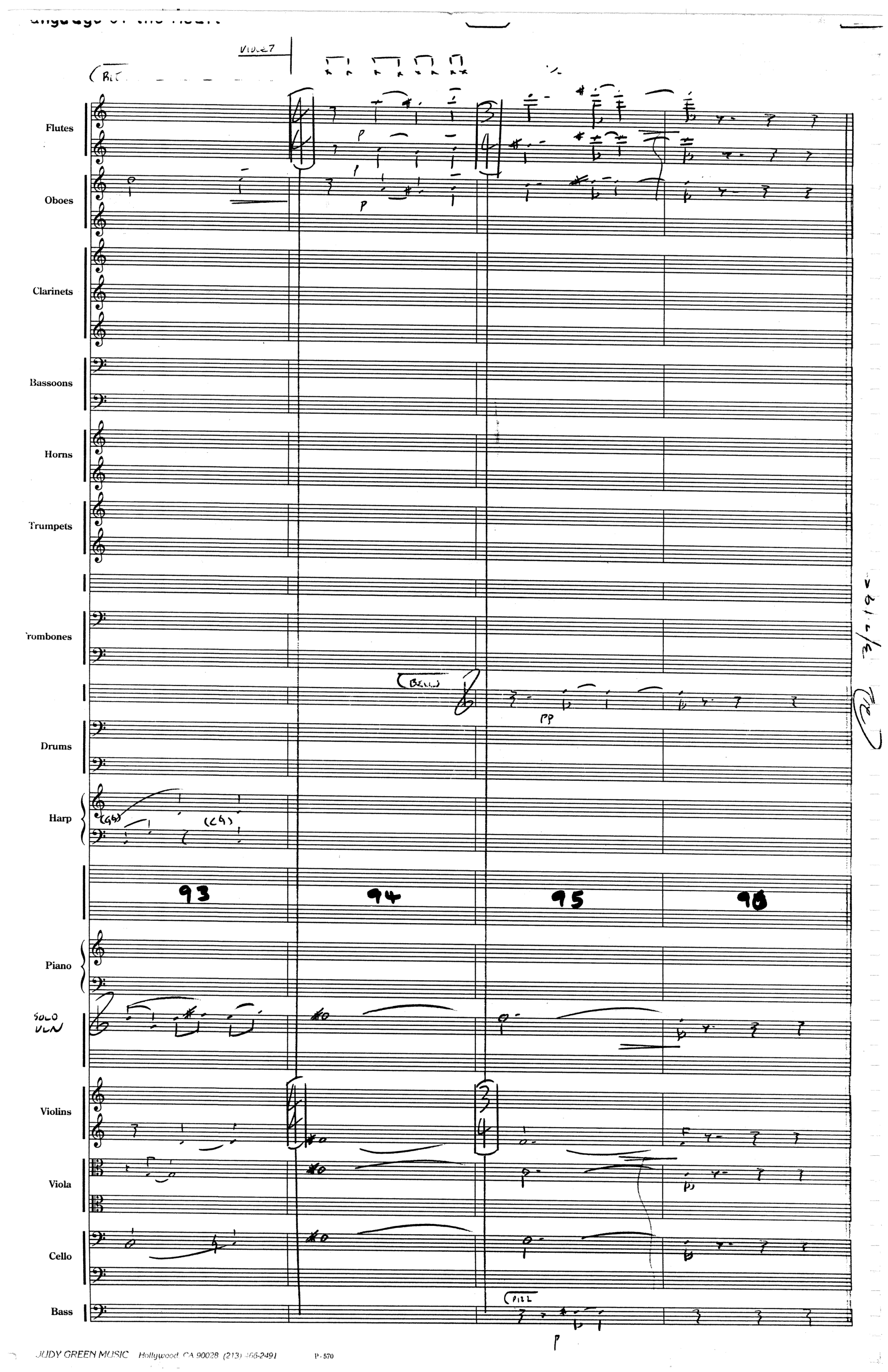

CRESC — — — — — — — — POCO — —
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
73
74
75
76
Piano
SOLO VLN
Violins
COL
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570


A
poco
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
77
78
79
80
Piano
SOLO VLN
Violins
Viola
Cello
Bass
2
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570


Language of the Heart
(M14)
21
ORANGE
2 WARNINGS
4/4
Flutes
COL VLN 1
COL T
Oboes
COL VLN 2
Clarinets
COL VLN 1 8VB
COL VLN 2 8VB
Bassoons
COL BASS
Horns
Trumpets
Trombones
SUS CYM
Drums
TIMP
Harp
81
82
83
84
Piano
SOLO VLN
Violins
Viola
COL VLN 1 8VB
Cello
DIV (2)
(1)
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


Language of the Heart
(M14)
(22
(NEW TPO SLOWER
A TPO 1
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
85
86
87
88
Piano
SOLO VLN
Violins
Viola
Cello
Bass
p
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570

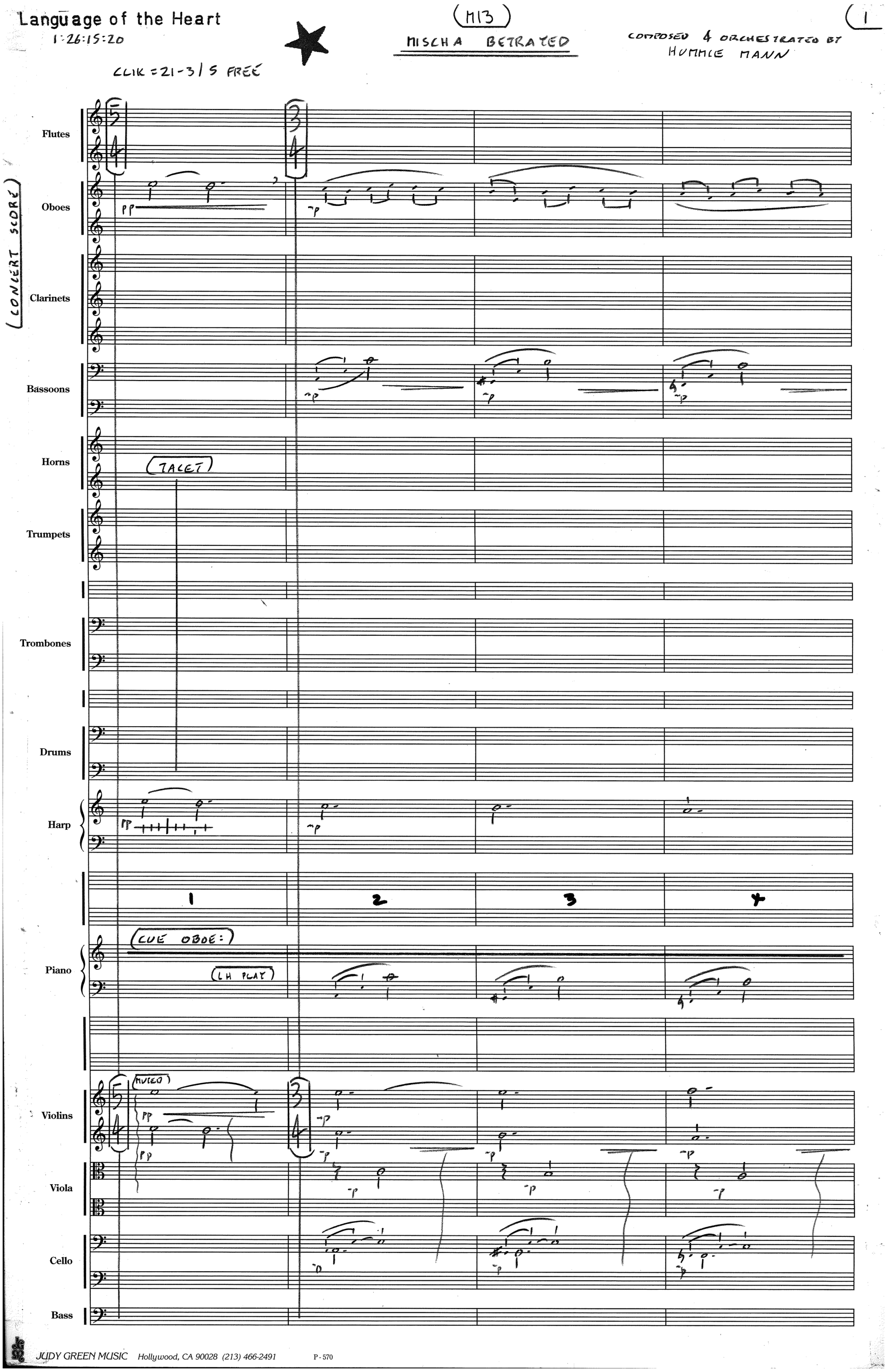

Language of the Heart
(M14)
23
Flutes
Oboes
pp
p
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
(Eb)
(D#)
(Db)
89
90
91
92
Piano
SOLO VLN
Violins
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

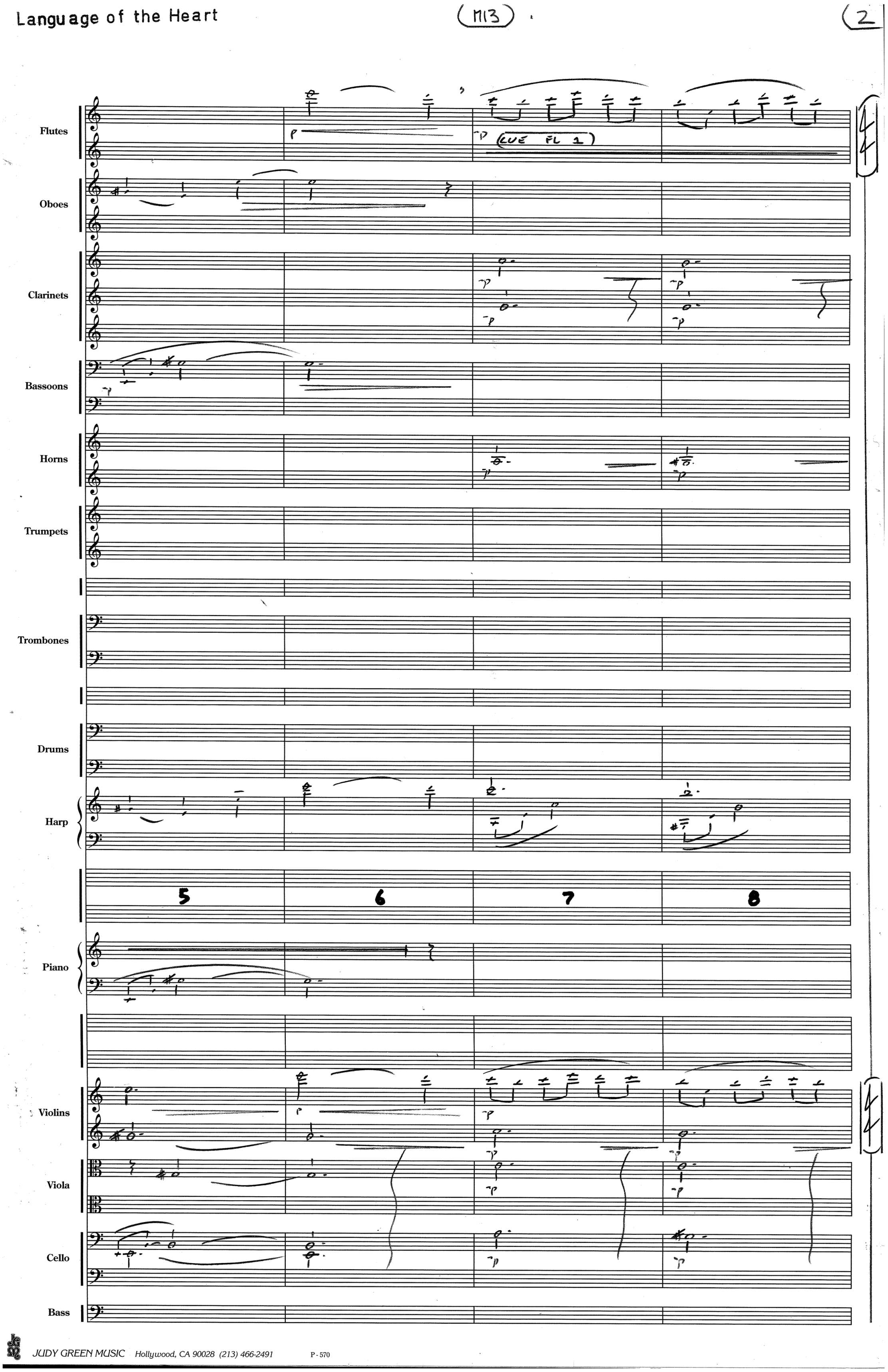

Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
Piano
SOLO VLN
Violins
Viola
Cello
Bass
(BELL
(PIZZ
p
pp
93
94
95
96
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491 P-570

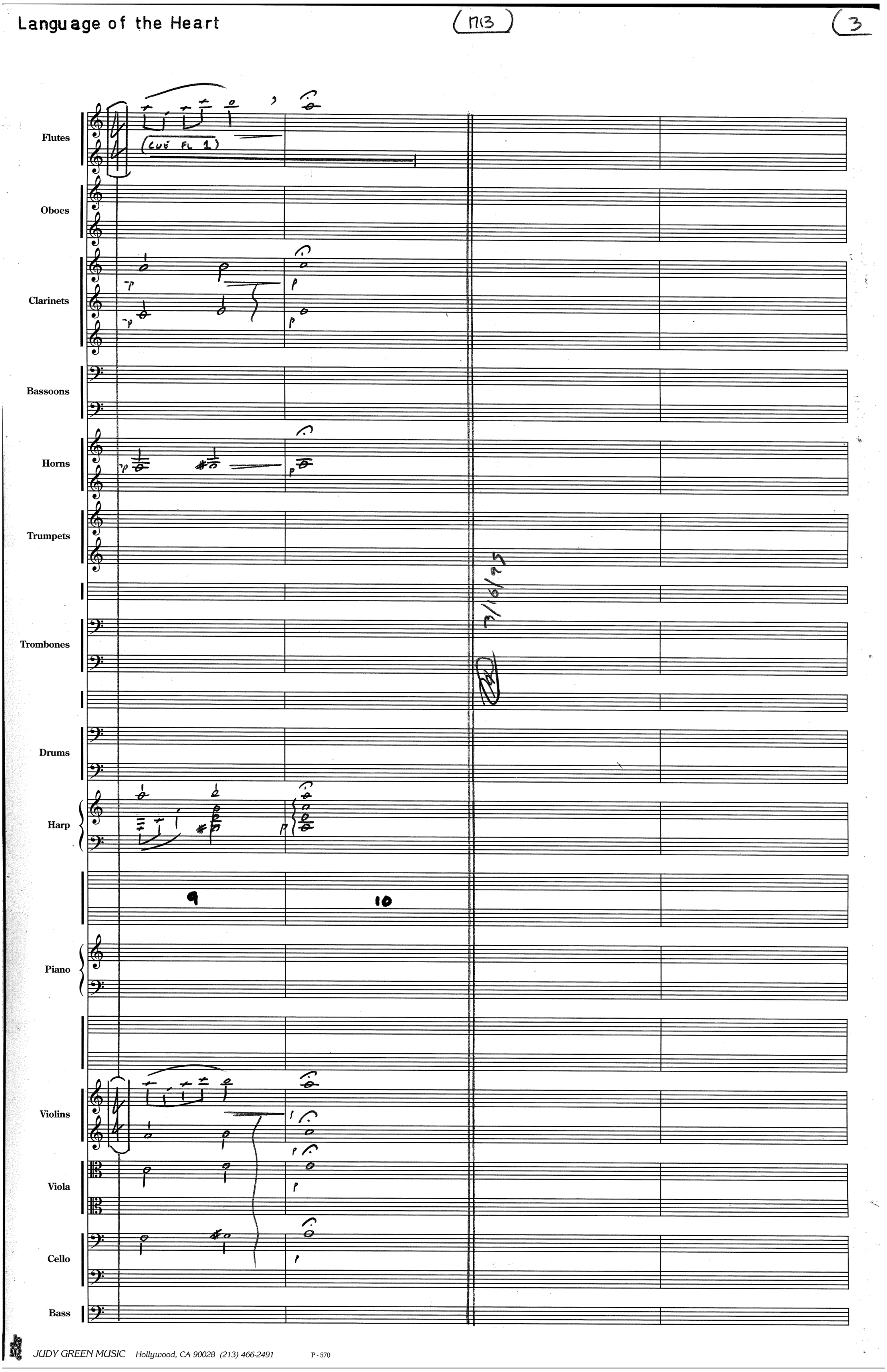
An interesting aspect of working with pre-records is that the musical form of the score and even the way the film is edited is dictated by the original form of the pre-recorded track. In other words, meeting dramatic timing requirements is not done by varying the form of the piece, as I discussed in case study one, but instead is done by varying the accompaniment - when it enters and when it changes context (accompaniment texture).

As an illustration of this, in the first musical example in this chapter (audio track 1), the orchestra enters on the second beat of the 18th measure of the solo violin pre-record whereas in the final version of the piece (audio track 3) the orchestra enters on the 2nd beat of the 9th measure of the pre-record. The entrance of the orchestra was one element dictated by the on-screen drama as are the places in the piece where the orchestration changes texture, volume and instrumentation.

As an example of the use of Mischa's theme as dramatic underscore and not involving the pre-records, I have included a short cue that also appears in the final video track on the CD. Not only is this piece a dramatic variation of the main theme – making use of different instrumentation and accompaniment – but there is also use of a technical variation of the theme – making use of changing time signatures, a 5 measure phrase length and some rhythmic distortion of the melody. This is track 4 on the CD.


Language of the Heart
1:26:15:20
(M13)
MISCHA BETRAYED
COMPOSED & ORCHESTRATED BY
HUMMIE MANN
(1
CLIK = 21-3 / 5 FREE
(CONCERT SCORE)
Flutes
Oboes
pp
p
Clarinets
Bassoons
Horns
(TACET)
Trumpets
Trombones
Drums
Harp
1
2
3
4
(CUE OBOE:)
(LH PLAY)
Piano
Violins
(MUTED)
Viola
Cello
Bass
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


Language of the Heart
(M13)
2
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
Piano
Violins
Viola
Cello
Bass
CUE FL 1
5
6
7
8
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570


Language of the Heart
(M3)
3
Flutes
(cue Fl 1)
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Drums
Harp
9
10
Piano
Violins
Viola
Cello
Bass
2/6/95
JUDY GREEN MUSIC Hollywood, CA 90028 (213) 466-2491
P-570

At this point I would suggest that the reader watch the video (track 5 on the CD) and pay attention to the various elements of the composition as discussed in this chapter.   Note that the opening of the piece, the unaccompanied solo violin, is mixed to give it perspective, as Anna would hear it from inside her apartment.

Conclusion:

Often film composition involves using musical techniques to solve dramatic problems in a film such as adding more humor to a comedic scene that wasn't quite funny enough or adding more sense of tension to a dangerous scene that didn't put viewers on the edge of their seats. Sometimes there are technical problems that require solutions such as adjusting an 8 bar theme fit in to a space that can only accommodate 6 ½ bars or, as in this case, creating a piece of music that could work in a variety of different ways. These are challenges that I have had to deal with in almost every project that I have ever scored. I have even had to deal with issues of actors/actresses having to perform songs on camera where these individuals could not carry a tune, or have them look as realistic as possible when playing an instrument on camera. The goal is to hide these techniques in service of helping tell the story and support the drama of the film.

I find that often these challenges lead to extremely creative and unique musical results. Some of my friends who are concert composers have admitted to me that they could not imagine composing under such constraints, and view it as a handicap to their creativity. I have found that these imposed limitations stretch me as a composer. The requirements of the piece just discussed resulted in me composing one of the most popular works I have ever written and for which I was recognized by the industry in awarding me the Emmy Award for Outstanding Music Composition in a Series (Dramatic Underscore) in 1996. So although film music is an art form in service to another medium, I believe that there is great music that has been and will continue to be written by those who master the craft and techniques required, and elevate this genre of composition to a true art.

In closing:

The topics covered in this thesis are only a handful of the techniques that I believe every student film composer should know. There is still more work to be done organizing and codifiying a full basic set of skills for the craft of film composition. However, once the craft is understood and mastered, then creating great music that works with film can be achieved. In my experience as a teacher, I have seen students learn these skills by practicing and writing very specific assignments. Much as there are different exercises to strengthen different muscles, I have my students work on the individual skill sets required for film scoring. I have them compose 8-bar phases and then do form manipulations: 7 bar, 9 bar and 8½ bar versions of the original phrase, as a way of isolating the method of technical variations. I have them compose a theme and then create different dramatic variations using the tools discussed in the second case study. Eventually, putting all the skills together to score a variety of live action and animated films.

As mentioned earlier, I plan to use this thesis as the launching point to writing a book of dramatic compositional techniques, as I do feel that this type of text is sorely needed. While reviewing the literature for this thesis, I was amazed at how many times the challenges that film composers face were discussed, but how few solutions were offered. The document you have just finished reading has hopefully demonstrated that this codification of techniques can be explained, organized and taught.

12 - Case Study 4

Language of the Heart

Audio and Video Examples

13 - CD Track Lists

CD 1 – Case Study 1 – Audio & Video:

Track #	
1	Comet Altered (.mp3 audio)
2	Comet Regular (.mp3 audio)
3	Comet Altered with Picture (.m4v video)

CD 2 – Case Study 2 – Audio:

1	PTB 1 - Contented (.mp3 audio)
2	PTB 2 - Circus March (.mp3 audio)
3	PTB 3 - Excited (.mp3 audio)
4	PTB 4 - Triumphant (.mp3 audio)
5	PTB 5 – Strong Willed/Defensive (.mp3 audio)
6	PTB 6 - Playful (.mp3 audio)
7	PTB 7 – Sad/Somber (.mp3 audio)
8	PTB 8 – End Credits (.mp3 audio)

CD 3 – Case Study 3 – Audio & Video:

1	Tom and Jerry chase clip Work Print (.mov video)
2	Tom and Jerry chase clip Scored (.mov video)
3	Tom and Jerry chase clip Music Only (.mp3 audio)
4	Krakkens and Jabberwockys Work Print (.mov video)
5	Krakkens and Jabberwockys Scored (.mov video)
6	Krakkens and Jabberwockys Music Only (.mp3 audio)

CD 4 – Case Study 4 – Audio & Video:

1	Extended Solo Violin (.mp3 audio)
2	Pre-record version (.mp3 audio)
3	Finale [M14] (.mp3 audio)
4	Mischa Betrayed [M13] (.mp3 audio)
5	Final Scene Video (.mov video)

14 - References

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Emilio Audissino, *John Williams's Film Music* (Madison, WI: University of Wisconsin Press, 2014)

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Basic Instinct, Special Edition. DVD. directed by Paul Verhoeven. 1992; Santa Monia, CA: Artisan Home Entertainment, 2001.

Cinema Paradiso, original US theatrical version. DVD. directed by Giuseppe Tornatore. 1988; Burbank, CA: Buena Vista Home Entertainment, 1990.

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Philomena. DVD. directed by Stephen Frears. 2013; Los Angeles, CA: 20th Century Fox Home Entertainment, 2014.

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• Texts:

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Cinema Paradiso, original US theatrical version. DVD. directed by Giuseppe Tornatore. 1988; Burbank, CA: Buena Vista Home Entertainment, 1990.

Indiana Jones and the Raiders of the Lost Ark. DVD. directed by Steven Spielberg. 1981; Hollywood, CA: Paramount Pictures, 2003.

Philomena. DVD. directed by Stephen Frears. 2013; Los Angeles, CA: 20th Century Fox Home Entertainment, 2014.

16 - About the Author

Two-time Emmy-award winning Canadian composer/arranger Hummie Mann has collaborated with some of Hollywood's most celebrated directors in both theatrical and television films. His motion pictures projects have ranged from Mel Brooks' “Robin Hood: Men in Tights” to Peter Yates' “Year of the Comet”, the children’s film “Thomas and the Magic Railroad” to “Wooly Boys” directed by Leszek Burzynski starring Peter Fonda, Kris Kristofferson, Keith Carradine and Joe Mazzello.

For television, he has scored projects for Simon Wincer (the miniseries “P.T. Barnum”), Jonathan Kaplan (the miniseries re-make of “In Cold Blood”), Norman Jewison (“Picture Windows – Soir Bleu”), Peter Bogdanovich (“The Rescuers: Tales of Courage - Two Women”), Joe Dante (“Masters of Horror: Homecoming” & “The Screwfly Solution”), Jim Abrahams (“First Do No Harm”), Richard Friedenberg (“Suzanne’s Diary for Nicholas”), William Friedkin, John Milius and Ralph Bakshi (all part of the “Rebel Highway” series of films), among others.

Mann was honored with his second Emmy Award for an episode of Showtime's Picture Windows entitled “Language of the Heart”, a love story about a street musician and an aspiring ballerina. The composer's score so impressed director Jonathan Kaplan that Kaplan hired him to score the CBS mini-series “In Cold Blood” starring Anthony Edwards and Eric Roberts.

The four-hour miniseries, based on the Truman Capote classic about two young drifters and the murder of a Midwestern family, demanded an unorthodox musical approach. Mann took the lyrics actually written by one of the killers (an amateur songwriter) and set them to music; the songs thus became the heart of the score, which was played by a handful of instruments including mandolin, dobro and bottleneck blues guitar supported by electronic textures.

Kaplan says that Oscar-winning movie-music legend Jerry Goldsmith recommended Mann as “a composer with a strong sense of melody and a genuine command of the orchestra.” Adds Kaplan: “It's very rare that you can find someone who is as gifted as Hummie is, and as motivated and easy to work with.”

In the world of Independent films, Mann scored “Falltime” for first time director Paul Warner starring Mickey Rourke, Stephen Baldwin and Sheryl Lee. That film premiered in competition at the Sundance Film Festival. Mann has also scored films by two well-known screenwriters making their initial forays into directing. He composed a contemporary jazz-rock score for the coming-of-age story “Sticks & Stones” by Neil Tolkin, and also scored the short film “The Red Coat” for Memoirs of a Geisha writer Robin Swicord.

Twice Mann has collaborated with legendary comedy director Mel Brooks. The first Brooks score that he composed was for “Robin Hood: Men in Tights”, which NBC-TV critic Gene Shalit singled out for praise, likening it to the legendary Erich Wolfgang Korngold's scores for the classic swashbucklers of the '30s and '40s. He also scored Brooks' last film - “Dracula: Dead & Loving It” which starred Leslie Nielsen.

The grand-scale symphonic music for Brooks' two film parodies contrasts sharply with Mann's acoustic-guitar-based score for the Donald Sutherland-Amy Irving thriller “Benefit of the Doubt”, and the soaring, charming music for Peter Yates' “Year of the Comet”, which combined orchestral sounds with Scottish ethnic elements. Yates, the director of Bullitt and The Deep, found "a freshness and energy" in Mann's music for “Year of the Comet”. The periodical ‘Film Score Monthly‘ named this score as one of the “Ten Most Underrated Scores of the Decade” and it was nominated in the category of Best Score – Drama or Romantic Drama in the 1992 UK Moviemusic Awards.

Among Mann's most provocative projects have been two series for Showtime: “Picture Windows”, which Norman Jewison executive-produced and which enabled the composer to collaborate with Jewison, Kaplan, Dante and Bob Rafelson; and “Rebel Highway”, a series of drive-in-movie remakes by Kaplan, Friedkin, Milius, Dante, Ralph Bakshi, John McNaughton, Mary Lambert and Uli Edel. Mann also composed the main title theme music for both series.

Mann co-produced the Marc Shaiman scores for such hits as “Sleepless in Seattle”, “A Few Good Men” and “Mr. Saturday Night”, and both orchestrated and conducted the Shaiman scores for “City Slickers” and “The Addams Family”. His orchestrations can also heard in such films as “Georgia Rule”, “Mad Money”, “Speechless”, “Addams Family Values”, “Misery”, “Sister Act”, “Dying Young”, and “For the Boys” and he co-arranged the song “*Places That Belong to You*” for Barbra Streisand's best-selling “Prince of Tides” soundtrack album. He also composed the Carl Stalling-style underscore for “Box Office Bunny”, the first theatrical Bugs Bunny cartoon released in 26 years.

For television, Mann composed the main title theme and underscore for Rob Reiner's cult series “Morton & Hayes” (CBS). He received two Emmy nominations for his arrangements on the popular “Moonlighting” series, and received an Emmy Award for arranging Billy Crystal's opening number for the “1992 Academy Awards” telecast.

For the legit theater, Mann arranged new material for Debbie Reynolds' tour of “The Unsinkable Molly Brown”. He created new arrangements for Pia Zadora in the Long Beach Civic Light Opera's production of “Funny Girl”, and has arranged music for several other Southern California stage productions including “Babes in Toyland”, “Kiss Me Kate”, “The Merry Widow” and Cloris Leachman's “Perfectly Frank”. He arranged and orchestrated the score for the large scale musical of “Robin Hood: für liebe und gerechtigkeit”, produced in Germany, and also conducted the London Symphony Orchestra at Abbey Road Studios in London for the cast recording.

His original children’s theater musical adaptation of Prokofiev’s “Peter and the Wolf”, collaborating with playwright Allison Gregory, premiered at the Seattle Children’s Theater in 2006 for an extremely successful run of over 110 performances. It has been produced in 12 other cities across the US and was named the “Best Children’s Show of 2006” by the Seattle Times. It also was produced in New York in late 2008 at the Manhattan Children’s Theater and in the Fall of 2009 had a National 40+ city tour.

Mann’s second Children’s musical was based on “The Brementown Musicians” and had its premiere run at the Seattle Children’s Theater in April 2010. He has also collaborated with playwright John Olive and lyricist/songwriter Sue Ennis on a Christmas black comedy entitled “A Slaying Song Tonight” which had a very successful professional workshop and staged reading in Minneapolis at the Playwright Center in January 2009.

Born in Montreal, Mann began studying music at the age of seven. He learned to play not only the piano, but also recorder, guitar, clarinet and oboe. He graduated magna cum laude in 1976 from Boston's prestigious Berklee College of Music and moved to Los Angeles in 1980, where he began orchestrating and composing for such top-rated series as “Fame”, “Moonlighting”, “Knots Landing”, “ALF” and “The Simpsons”. In early 1998 Berklee Faculty member and world renowned vibraphonist Gary Burton presented Mann with Berklee’s Distinguished Alumnus Award.

Besides his busy composing career, Mann is the creator and lead instructor of the Pacific Northwest Film Scoring Program (recently becoming the music department of the Seattle Film Institute) and has taught film composition courses in Scotland and Denmark. After numerous guest lecture visits to China and being invited to participate as a guest speaker at the 2nd Beijing International Film Festival, he was asked to join the De Tao Masters organization and will begin regular visits to Shanghai to teach and work on film projects there in 2014. In May 2010 he was invited to run a film composition workshop at the Dakhla Film Festival in Morocco and Variety Magazine listed him as a “Leader in Learning” in its 2010 Education Impact Report.

He is a board member and founding president of the Seattle Composers Alliance and for 10 years served as a governor of the Northwest Chapter of the National Academy of Recording Arts and Sciences. From 2009 - 2011 he commuted to Chicago serving as assistant professor of composition and orchestration for Columbia College Chicago’s “Composition for the Screen“ masters degree program. In 2015 he will complete a DMA (Doctor of Music Arts) degree from the University of Salford in Manchester.

Currently he divides his time between Mercer Island, Washington and Santa Monica, CA where he continues to work in the Hollywood film industry.

17 - Credits

FEATURE FILM:	“Wooly Boys” [dir. Leszek Burzynski] (starring Peter Fonda, Kris Kristofferson & Keith Carradine)
composer	“Cyberworld 3D” [animated IMAX] (voices of Jenna Elfman, Dave Foley & Matt Frewer)
	“Thomas and the Magic Railroad” [dir. Britt Allcroft] (Alec Baldwin, Peter Fonda & Mara Wilson)
	“After the Rain” [dir. Ross Kettle] (Paul Bettany, Louise Lombard & Ariyon Bakare)
	“Goodnight, Joseph Parker” [dir. Dennis Brooks] (Paul Sorvino & Steve Tyler)
	“Sticks & Stones” [dir. Neil Tolkin] (Kirstie Alley & Gary Busey)
	“Dracula; Dead & Loving It” [dir. Mel Brooks] (Leslie Neilson & Harvey Korman)
	“Robin Hood: Men in Tights” [dir. Mel Brooks] (Cary Elwes, Richard Lewis & Tracey Ullman)
	“Year of the Comet” [dir. Peter Yates] (Penelope Ann Miller & Tim Daly)
	“Falltime” [dir. Paul Warner] **1995 Sundance Premiere** (Mickey Rourke & Stephen Baldwin)
	“Benefit of the Doubt” [dir. Jonathan Heap] (Donald Sutherland & Amy Irving)
	“Stoogemania” [dir. Chuck Workman] (Josh Mostel & Sid Ceasar)
	“The Engagement Party” [dir. William Azaroff]
	“In Gold We Trust” (Jan-Michael Vincent)
	“#1 with a Bullet” - uncredited composition
	“Smokey and the Bandit, Part 3” - uncredited composition
	“Deadly Eyes” - uncredited composition
conductor	“Drag Me to Hell” (for composer Chris Young)
	“The Grudge 2” (for composer Chris Young)
	“Ghost Rider” (for composer Chris Young)
	“Lucky Number Slevin” (for composer Joshua Ralph)
	“Roll Bounce” (for composer Stanley Clarke)
	“The Grudge” (for composer Chris Young)
	“The Girl Next Door” (for composer Paul Haslinger) - also score consultation
	“Club Dread” (for composer Nathan Barr) - also score facilitation
	“The Devil and Daniel Webster” (for composer Chris Young)
	“A Walk to Remember” (for composer Mervyn Warren)
	“Lewis and Clark” [Imax] (for composer Sam Cardon)
	“Finder’s Fee” (for composer B.C. Smith)
	“Carolina” (for composer Steve Bartek)
	“Juwanna Mann” (for composers Wendy and Lisa)
	“Jack of All Trades” (for composer Lalo Schifrin)
	“The Addams Family” - also co-producer of score & album (for composer Marc Shaiman)
	“City Slickers” - also additional music by (for composer Marc Shaiman)
co-producer of scores	“Sleepless in Seattle” - also orchestration (with composer Marc Shaiman)
	“Mr. Saturday Night” - also music supervisor/co-producer of album [dir. Billy Crystal]
	“A Few Good Men” - also orchestration (with composer Marc Shaiman)
orchestrator	“Mad Money” (for composer Marty Davich)
	“Georgia Rule” (for composer John Debney)
	“The Whole Ten Yards” (for composer John Debney)
	“Speechless” (for composer Marc Shaiman)
	“Addams Family Values” (for composer Marc Shaiman)
	“That’s Entertainment, Part 3” (for composer Marc Shaiman)
	“Sister Act” (for composer Marc Shaiman)
	“Diggstown” (for composer James Newton Howard)
	“Prince of Tides” (for composer James Newton Howard) - co-arranger of title song (album only)
	“For the Boys” (for composer Marc Shaiman)
	“Dying Young” (for composer James Newton Howard)
	“Misery” (for composer Marc Shaiman)
	“Mystery Date” (for composer John Du Prez)
	“Scenes from a Mall” (for composer Marc Shaiman)
	“King Ralph” (for composer James Newton Howard)
	“Jetsons: The Movie” (for composer John Debney)
	“That Magic Moment” - producer/arranger of main title song
TELEVISION:	“Masters of Horror 2: The Screwfly Solution” - Made for TV movie [dir. Joe Dante]
composer	“Masters of Horror: Homecoming” - Made for TV movie [dir. Joe Dante]
	“Suzanne’s Diary for Nicholas” - Made for TV [dir. Richard Friedenberg] (Christina Applegate)
	“P.T. Barnum”-Mini-series [dir. Simon Wincer] Emmy Nomination - best mini-series (Beau Bridges)
	“In Cold Blood” *[remake]* - Mini-series [dir. Jonathan Kaplan] Emmy Nomination - best mini-series (Anthony Edwards, Eric Roberts & Sam Neil)

"Picture Windows" Anthology series - composer: theme and underscore:
    "Soir Bleu" [dir. Norman Jewison] (Alan Arkin & Dan Hedaya)
    "Language of the Heart" [dir. Jonathan Kaplan] **Emmy Award** (1996) (Michael Lerner)
    "Lightning" [dir. Joe Dante] (Ron Perlman, Brian Keith & Kathleen Quinlan)
    "Armed Response" [dir. Bob Rafelson] (Robert Loggia)
"Meatloaf: To Hell and Back" - Made for TV movie [dir. Jim McBride] (W. Earl Brown)
"Naked City: A Killer Christmas" - Made for TV movie [dir. Peter Bogdanovich] (Courtney B. Vance)
"The Second Civil War" - Made for TV movie [dir. Joe Dante]
    (Phil Hartman, Beau Bridges, Ron Perlman, James Earl Jones & Denis Leary)
"...First Do No Harm" - Made for TV movie [dir. Jim Abrahams] (Meryl Streep & Fred Ward)
"The Rescuers: Tales of Courage - Two Women" - Made for TV movie [dir. Peter Bogdanovich]
    Christopher Award Winner 1998 (Elizabeth Perkins & Sela Ward)
"Runaway Daughters" *[remake]* - Made for TV movie [dir. Joe Dante] (Jennifer Lewis & Julie Brown)
"Reform School Girl" *[remake]*- Made for TV [dir. Jonathan Kaplan] (Aimee Graham & Matt LeBlanc)
"Girls in Prison" *[remake]* - Made for TV movie [dir. John McNaughton] (Ann Heche & Iona Skye)
"Motorcycle Gang" *[remake]* - Made for TV movie [dir. John Milius] (Jake Busey & Gerald McRaney)
"Confessions of a Sorority Girl" *[remake]* - Made for TV movie [dir. Uli Edel] (Alyssa Milano)
"Jailbreakers" *[remake]* - Made for TV movie [dir. William Friedkin] (Shannon Doherty)
"The Cool and the Crazy" *[remake]* - Made for TV movie [dir. Ralph Bakshi] (Alicia Silverstone)
"Dragstrip Girl" *[remake]* - Made for TV movie [dir. Mary Lambert] (Natasha Gregson-Wagner)
"I Am Your Child" - TV special [dir. Rob Reiner] (hosted by Tom Hanks)
"Captain Sturdy" [Cartoon Network] - Pilot: theme and underscore [dir. Darrell Van Citters]
"Funny You Don't Look 200!" - TV special [dir. Jim Yukich] (hosted by Richard Dryfuss)
"Canterberry's Tales" [CastleRock] - Pilot: theme and underscore [dir. Peter Bonerz]
"Cousins" [Columbia Pictures Television] - Pilot composer of theme song music
"University Hill" [Ira French Productions] - Pilot: theme & underscore
"Access Hollywood" *(daily entertainment magazine show)* - composer of original main title theme
"Great Scott" *(multiples)* - Series
"Morton & Hayes" *(multiples)* - Series: theme and underscore
"Tiny Toon Adventures" *(multiples)* - Series
"Alfred Hitchcock Presents" *(multiples)* - Series
"General Hospital" - co-composer of 'Sneak Attack' (performed by Jack Wagner)
"Tonight Show" - composition/arranging

uncredited composition
"Christine Cromwell" *(multiples)* - Made for TV movies - also orchestration
"My First Love" - Made for TV movie - also orchestration
"Police Story - Watch Commander" - Made for TV movie - also orchestration
"She Knows Too Much" - Made for TV movie - also orchestration
"Stranded" - Made for TV movie - also orchestration
"Double Agent" - Made for TV movie - also orchestration
"The Simpsons" *(multiples)* - Series - also orchestration
"Moonlighting" *(multiples)* **2 Emmy nominations** - also orchestration/arranging
"ALF" *(multiples)* - also orchestration
"Knots Landing" *(multiples)* - also orchestration
"Limestreet" *(multiples)* - also orchestration
"Seven Brides for Seven Brothers" *(multiples)* - also orchestration

arranger
"Gimme the Mike & Gimme the Mike 2 (Seattle)" – musical director and composer of theme
"Children's T.V Special with Placido Domingo" [Mexico]
"Perfectly Frank" - supervising orchestrator/arranger (Cloris Leechman)
"Chip 'N Dale Rescue Rangers" - co-arranger of theme song
"Academy Awards" 1991, 1992, 1993 arranger of Billy Crystal's opening number
    Emmy Award (1992)

orchestrator
"Once Upon a Time" *(multiples)* - Series
"Voyager" - orchestrator of main title and end credits for composer Jerry Goldsmith
"Lots of Luck" - Made for TV movie
"Rear View Mirror" - Made for TV movie
"The Wickedest Witch" - Made for TV movie
"National Geographic - Centennial" - TV Special
"Higher Ground" [Columbia Pictures Television] - Pilot
"Capitol Critters" - Series
"Tale Spin" *(multiples)* - Series
"Piggsburgh Piggs" *(library)* - Series
"Dink the Dinosaur" *(library)* - Series
"Paradise" *(multiples)* - Series
"Dads" *(multiples)* - Series
"Fame" *(multiples)* - Series

"Boone" *(multiples)* - Series
"Ripley's Believe It or Not" - TV Special

THEATRICAL SHORTS:
composer
"Mr. Bill Goes to Washington" - (released with 'Ernest Rides Again') - [dir. Walter Williams]
"Box Office Bunny" - (released with 'Never Ending Story, Part 2") - [dir. Darrell Van Citters]
"Happy Birthday Bugs" - adaptation (released with 'National Lampoon's Christmas Vacation')
"The Red Coat" - [dir. Robin Swicord] (Teresa Wright & Annabeth Gish)
"A Test of Will" - [dir. Richard Zelniker]
"Who Owns the Sun" Walt Disney Educational Films - [dir. Mark Jean]
[Awards include: 1st Place - New York Film Festival, 1st Place - Black International Film Festival, Gold Awards - Houston and Chicago International Film Festivals]

STAGE:
"The Brementown Musicians" – composer/co-lyricist
Seattle Children's Theater
"Peter and the Wolf" – composer/co-lyricist/adaptation
Seattle Children's Theater/Childsplay (Arizona)/Des Moines Playhouse (Iowa)/ Manhattan Children's Theater
"Robin Hood: Das Musical" – orchestral arrangements *La Belle Musicalproduktions (Bremen & Munich, Germany)*
cast album recorded with the London Philharmonic at Abbey Road – conductor/arranger
"Alfie" – composer/arranger of incidental music *The Met Theater (LA, CA)* **Maddy Award** (2004)
"Funny Girl" - arranger/orchestrator *Long Beach Civic Light Opera*
"Opposite You" - composer *West End Playhouse*
"Unsinkable Molly Brown" - arranger *US Touring Company*
"Babes in Toyland" - arranger *Pasadena Playhouse*
"Growing Pains" - arranger *Westwood Playhouse*
"Kiss Me Kate" - arranger *Old Globe Playhouse [San Diego]*
"Rasputin" - arranger *Ridgecrest Community Theater*
"Federico" - composer *Los Angeles Actor's Theater*
"Unsold Pilots" - arranger/adaptation *Gene Dynarski Theater*
"Perfectly Frank" - arranger/orchestrator *La Mirada Civic Center*
"The Merry Widow" - arranger/orchestrator *Long Beach Civic Light Opera*

LOGO IDs:
composition
Clear Blue Sky / Vulcan Productions
AMC Theaters corporate ID: "Feature Presentation", "Previews", "Silence is Golden" 1991 & 1994
Bedrock Productions [A division of Hanna-Barbera]

RECORDS:
"Lost and Found" & "Here"- arranger >artist: Judith Owen *Century of Progress Productions*
"Saving Up Christmas" – co-songwriter >artist: Captain and Tenille *R2 Entertainment*
"Sneak Attack" - co-composer >artist: Jack Wagner
on 'All I Need' album *Quest Records*
"PBS Greatest Hits" - arranger >artist: London Chamber Orchestra *BMG Records*
"The Tales of Cri-Cri" - arranger
>artist: Placido Domingo & Mireille Mathieu [album] *CBS Records*
"Heard It in a Heartbeat" - producer >artist: Sari Featherstone
[single] *Front Street Records*
"Don't Look Back", "Blessed are the Peacemakers" & "Recession Blues" - producer
>artist: Rosemary [singles] *Independent Canadian Label*
"Hymns Triumphant 2" - orchestration >artist: Amen Choir and London National Philharmonic [album] *Sparrow Records*
"We Are Called" - orchestration >various artists [album] *Sparrow Records*

LIVE PERFORMANCE:
arranging
John Denver
Bonnie Pointer
Young Americans
Von Trapp Children
Placido Domingo
Ann Jillian
Anne Jeffreys
Judith Owens
Aretha Franklin
Terry Lester
Tony Orlando
New American Orchestra

EDUCATIONAL VIDEO: "CTV - Civics Television" [Dreyfuss/James Productions] - composer

JINGLES & AD MUSIC:
partial list
State Roofing Ad Campaign (with Sue Ennis, lyricist) [Soundie Award Winner]
Coca-Cola (dir. Rob Reiner) - arranger/adaptation
Public Service Campaign for FOX Children's Network (dir. Mark Jean)
[George Foster Peabody Award, ACT Award, Parent's Choice Award]
Rose Hills Memorial Park *"Twain, Thoreau, Rodgers, Shaw"*
[2 AAF Awards, Sunny Award & International Radio Award (NY)- Gold Medal]
Lucky Markets - composer of corporate ID logo [1984 to 1991]
Thom McAn Shoes *"Shoe-Wah"* [Clio Nomination]
Levis 501 *"All in the Jeans"* [International Film & TV Awards- Gold Medal]

EDUCATION: Berklee College of Music - Bachelor of Music
Major in Composition - Magna Cum Laude [1976]

AWARDS:
Emmy Awards - 4 nominations / 2 awards
Maddy Award (2004)
Golden Reel Awards - 4 nominations
Clio Awards – 2 nominations
Outstanding Achievement Award [Park City Film Music Festival 2012]
Soundie Award (2004)
Berklee College of Music Distinguished Alumnus Award [1998]
Frederick Loewe Award [Palm Spring Film Festival 1995]

OTHER:
Columbia College Chicago – Assistant Professor of film composition & orchestration (2009 – 2011)
Columbia College Symphony Orchestra – Guest Conductor 2009 – 2010
Dakhla Film Festival, Morocco - Workshop Instructor 2010
Pontiac Bay Symphony Orchestra - Guest Conductor 2004 – 2009 (Seattle, WA)
Microsoft Global Briefing (Atlanta) – Composer of Overture/Opening Production Number
Visiting lecturer at Artlab, Copenhagen, Denmark 2005 - 2008
Visiting lecturer at Napier University, Edinburgh, Scotland 2004, 2005, 2006, 2010
Visiting artist/lecturer to China as a guest of the Chinese Workers Center for
International Exchange 2002, 2003
Founder/Lead Instructor of the "Pacific Northwest Film Scoring Program"
[www.pnwfilmmusic.com] 1998-Present
1995 Palm Springs International Film Festival - Guest Speaker
Composer/Producer of "Songs with Your Name"
[16 minute personalized audio cassette tape for children ages 1-6]
"Voyage of the Little Mermaid" [Attraction at Disney/MGM Theme Park] - adaptation/composition
6 Little Golden Book Read-Along book cassettes featuring Batman, Bugs Bunny and
other Warner Brothers classic animation characters - composer
Superbowl XXV (1991) Half-Time Show - arranger
Disney World "Magic Castle Show 1989" - arranger/orchestrator
GM Transcenter Pavilion at Epcot - arranger/orchestrator
[recorded by London Symphony Orchestra]
Adjudicator - UCLA David Joel Miller Jazz Competition 1983-85, 88-90
Instructor UCLA Extension Film Scoring Program [4 years]
Owner- New England Lady Music [Publishing]

AFFILIATIONS:

Academy of Motion Pictures Arts and Sciences
Academy of Canadian Cinema and Television
Seattle Composer's Alliance
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