AN HISTORICAL STUDY OF MOTION PICTURE MUSIC
DURING THE FIRST TEN YEARS OF THE SOUND FILM, 1926-1935

A thesis submitted in partial satisfaction of the requirements for the degree of Master of Arts in Mass Communication
by
James Edward Parker

June, 1976
The thesis of James Edward Parker is approved:

California State University, Northridge
May, 1976
"Hollywood music is very nearly a public communication, like radio. If you are a movie fan (and who isn't?) you may sit in a movie theater three times a week listening to the symphonic background scores which Hollywood composers concoct. What Happens? Your musical tastes become molded by these scores, heard without knowing it. You see love, and you hear it. Simultaneously. It makes sense. Music suddenly becomes a language for you without your knowing it. You cannot see and hear such stuff week in and year out without forming some kind of taste for it. You do not have to listen to a radio program . . . but you cannot see your movies without being compelled to listen."

George Antheil, 1945.
To my parents, who taught me the importance of a good education,

To Don Wood, who has showed me the way,

And to my wife, Lynn, who has been so helpful these past two years.
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ABSTRACT

AN HISTORICAL STUDY OF MOTION PICTURE MUSIC
DURING THE FIRST TEN YEARS OF THE SOUND FILM, 1926-1935

by

James Edward Parker

Master of Arts in Mass Communication

June, 1976

It was during the first ten years of the sound film (1926-1935) that a form of music accompaniment for silent films was changed to become the sound score. Not much has been written about this period to explain what happened to the silent score and how the sound score was developed.

A study of silent film music was made first, to better understand the music product. Next, a study of the technical development of sound synchronization was made so that the effects of the equipment on the music score could be seen.

An historical chronology of the first sound years was given to show the impact that sound equipment had on the film and its music. A slow maturing of the sound
score was seen by concentrating on milestone individual efforts, the opinions of people connected with the industry, and the contributions of several of the more important musicians of the period.

It was found that a sophisticated score existed before the introduction of sound, and that the popular film music of the later years was the result of a reworking of this music on symphonic lines. For a few years less music was written, and film art was discarded temporarily because the introduction of dialogue and sound effects was the primary consideration.

An artistic attitude returned to the medium about the same time that the sound recording equipment was being perfected. Also, due to political events in Europe in the early 1930's, many fine musicians came to America, thus providing the talent that was then being sought. By 1935 the film score had matured and was growing in importance and popularity.
INTRODUCTION

Research Problem

There has been a great deal of interest in motion picture history in the last few years. Books about Hollywood and its glamorous people have increased in number, and are selling well. One area of interest is the music that accompanied the films in the so-called "golden age" of Hollywood, roughly the years 1935-1950. There have been many books written on the subject, the popular classical music of the period is being recorded and released to the general public on many record labels, and film music clubs have sprung up with the intention of promoting the further study and enjoyment of this music.

Also, current motion picture music is following a pattern which has caused its form to resemble the music of thirty and forty years ago. In the 1960's, film music was simple - musicians tended to use few instruments, and avoided the full orchestral sound that was so prevalent in the preceding decades. But, music in the 1970's is returning to a "big" sound with composers like Jerry Goldsmith, John Williams, and Nino Rota becoming more popular than
ever.

It is this recent interest in motion picture music of the past that makes a study of the period relevant to our time. The popularity of the music from the late 1930's and the 1940's is the subject of many books currently in publication. But, the problem is that very little information exists on the period leading into this golden age. From the study of these works very little can be learned about the development of the scores that are not the subject of this interest.

Most people know that the silent film had music to support the pictures, and some people are familiar with the orchestras that were supplied for the more important films. But, the transition of the silent film score to the music of the 1930's and 1940's is a subject that no singular volume has attempted to detail. How this silent score later became the music that is now considered classical is a question that this researcher wanted to find the answer to. Why there is so little written about the music of the early sound period (1926-1935) is another question that needs answering. There seems to be a hole in the chronology of the music score's history that needs filling.

A review of current and past literature on the subject was undertaken in order to find information on that ten year period. The following is a summary of the review.
Review of Past Literature

In 1970 Charles Hofmann wrote a short book about the silent film score entitled, Sounds for Silents. It is an interesting, almost personal view, of the development of the early film scores, but it is too short to be a comprehensive study, and is only on the silent film.

Tony Thomas, a recognized authority on motion picture music history, wrote a book in 1973 entitled, Music for the Movies. It too is a very personal view, and does a good job of describing many of the more popular film composers of the past and present. But, its weakness is that it concentrates too much on the popular aspects of film music history: the silent days, and the glamorous years of the 1930's and 1940's. Mr. Thomas has very little to say about the early sound period.

James L. Limbacher is credited with a large volume entitled, Film Music: From Violins to Video, which was printed in 1974. It is an interesting volume, but consists primarily of listings of films, their composers, and the years of release. It is a good reference text, cross-indexed so that composers and films can be matched easily. But, aside from the inclusion of several articles written by musicians, there is very little detail given to a chronology of events.

There have been other publications in recent years that have followed the same formats as those listed here.
Either the author has written a book for the masses, concentrating on the popular, better-known composers and their works; or a general listing of films has been compiled for reference use. These books seem incomplete from an historical perspective since there is very little text, and again, they do very little to explain the changes that the score went through from the silent to the sound era.

There have been some good accounts of this transitional period written in the past, but they have been included in volumes not unlike those listed above. Two of the best of these earlier publications are: Kurt London’s *Film Music*, and Roger Manvell and John Huntley’s *The Technique of Film Music*. The first was written in Germany in 1936. It is a good technical history of the film score up to that time, but lacks a complete understanding of the changes that the score went through in the late 1920’s. Also, it is a personal view of film music, filled with opinions that cause the reader to regard this book as a point of view instead of an objective history. Manvell and Huntley’s book is an excellent work detailing a history of the subject up to 1957, the year of its publication, but, even this volume merely sketches the 1920’s and 1930’s.

There are other publications describing film music in various ways. But, the works listed here seem to be the best available. As complete as some of them are, there is still a very definite hole in the chronology of
the period 1926-1935. Either an author has concentrated on only silent films, or on all sound films.

**Statement of Purpose**

It is the purpose of this paper to study this ten year period in an attempt to answer the questions that were previously posed. This is an historical study of motion picture music during those first ten years of the sound film. There is very little statistical analysis included, only enough to illustrate and support the trends which are herein described.

For the purposes of this paper the terms, "film music," and "film score" will be defined as the music that was composed or arranged to be an element supporting the film's storyline in mood or atmosphere, except where otherwise noted. The musicals will be omitted except in a few places where their development affected the background score music.

Researching this period is important because it was the time when the modern motion picture score developed. In 1926 *Don Juan* was released. This was the first feature film to be shown with a pre-recorded synchronized music score. In 1935 the first Academy Award given to a Hollywood musician was presented to Louis Silvers for his musical direction of *One Night of Love*. It was during the years 1926-1935 that the motion picture score achieved
a position of importance in the film world. It became a recognized factor in the art of the cinema.

This study is important to the students of film music and film history because it fills in the gaps left by other writers and researchers. As mentioned above, the number of film music devotees is increasing as evidenced by the popularity of the commercial recordings which duplicate these classical scores. There are articles appearing from time to time in journals that include information on this topic. But, a concise, single volume that concentrates on just this transitional period of 1926-1935 is needed by the serious fans of the music, and the scholars of film history.

Organizational Structure

This paper is divided into two parts. The first is a description of the silent film score and the attempts to create a talking film. The second discusses the evolution of a sound score. Chapter 1 details the growth of the silent score, its variations, uses, and final development. This will set a basis for the study of the transitional period, 1926-1935. Chapter 2 is about the early experiments to equip the film with synchronized sound. This is the technical development which later affected the music score.

Chapter 3 begins the second part of the paper with a
continuation of the technical developments that created a sound film. In the fourth chapter a detailed description of what these technical developments meant to the musician will be given. Chapter 5 describes the slow re-birth of the film score explaining the changes in philosophy and technique that were needed to combine music with a talking film. In Chapter 6 is the statistical data which was collected to support the conclusions made in Chapters 4 and 5.

Part I is based on material obtained mostly from secondary sources, primarily books. Part II is based on both secondary and primary sources. These include journal articles, magazine articles, indexes, catalogs which have been compiled by other researchers, and interviews conducted by this researcher. It is in these last four chapters that the main body of the paper exists. This is the information that has been sought. The first two chapters provide a basis to support the information presented in Part II.
PART I

DEVELOPMENTS IN MUSIC SCORING
AND SYNCHRONIZATION PRIOR TO 1927
CHAPTER 1

SCORING THE SILENT FILM

Introduction
This chapter will trace the development of the motion picture score as it grew with the silent film. The purpose of this is to show the reader that an artistic, well-organized music score was not a product of the sound era. Sophisticated music scoring was practiced long before the introduction of sound. Also, it will be interesting to see the development of this silent score, and how musical thought had to be changed with the sound film.

A Need for Music
The earliest films were shown in cafes, restaurants, and other places of social gathering. Music, in the form of singing, gramaphones, and live musicians, was needed to:

1) Distract the audience from the noise of the projector.

2) Create the sound of movement. The early films were full of motion, which appeared odd if no accompanying sound was heard.
This need for some sort of sound, especially in America, was described by Harry Alan Potamkin in an article of his which appeared in *The Musical Quarterly*, April, 1929: "(Americans) have always been afraid to let the movie carry itself by its own intrinsic devices."

Even though films portray movement visually, it is human nature to hear something when movement is perceived. There was a need for audio rhythm in the film, especially when most of these early films emphasized the duplication of life. They were mostly just the recording of movement by the camera.

It is an interesting psychological phenomenon that an audience will listen in silence (such as at a concert), but will not watch in silence.² Pantomime in the early films was not enough. Something else was needed. It was natural for music to become the speech for film. This satisfied the need for ear movement that was so necessary for the reproduction of life in the absence of speech and the noises of everyday life.

**Different Kinds of Music**

To explore this psychological need for music in the silent film we can recognize two philosophies of scoring which emerged. An impressionistic, descriptive form of music was used to highlight instances on the screen by adding color and character. Rather than rely on the
audience to create its own idea about a mood or character, this kind of music "impressed" a specific feeling through its style. A state of mind was defined by the organizer of the music, with the sole purpose of presenting a highly personalized account of the meaning of the images on the screen. The meaning being that of the musician during one fleeting moment. It was a subjective interpretation of a mood, and not a representation of life as it is. Another name for this form of music might be programmatic. It was purely illustrative, a function which was so important in the silent film.

There was also an expressionistic form of musical thought which was unconcerned with specifics. It avoided descriptive features, primarily supporting the pace of the film rhythmically. As a form of music it was based on the rhythm and psychology of the film itself, the idea that the visual shots and their moods change much too quickly for program music to develop. Therefore, an overall general mood, devoid of specifics, was created. Rather than single out a mood, or a character, and musically define them, this expressionistic style followed the pace of the film, on a parallel course, and supported the visual elements while, at the same time, maintaining a wholeness itself. In classical programmatic music, and in operas, the entrances of the actors, and their movement on the stage gave time for the music to develop. In
Because of these needs, music has been a part of the film from its earliest days. In the beginning it bore little relationship to the action on the screen. It was just there. Usually the house musicians played what they knew, the same music from film to film. Only when the motion picture became serious did this incongruity become so apparent that attempts were made to match music mood with film mood.

**Early Musical Accompaniment**

Thomas Edison saw the natural linkage possible between film and music. His experiments with synchronized sound will be detailed in Chapter 2, but it can be mentioned here that he saw no commercial feasibility in a purely silent film.

Other inventors, specifically the Lumière brothers, were instrumental in introducing motion pictures with musical accompaniment. On December 28th, 1895, they presented a program of films in a basement cafe on the Boulevard des Capucines in Paris with piano accompaniment. This was an early test of their film projector, and they had the foresight to provide music as part of the program. They knew the importance of an audio source. This was the earliest known performance of music as part of a film.
showing. The music itself was a selection of popular tunes of the day.  

The following year they traveled to England to present a program of their films at the Regent Street Polytechnic in London. This was on February 20th, 1896. The program must have caused quite a bit of excitement, because, within two months, films were being shown at the Empire and Alhambra Music Halls with full musical accompaniment provided by the music hall orchestras. It must be remembered that an "orchestra" in those old music halls consisted of only a handful of musicians, but nevertheless, this type of presentation was way ahead of its time, and its like was then unknown in America.

Another form of musical accompaniment widely used in the 1890's was a narrator who stood behind the screen and sang songs which would fit the mood of the film. At other times the narrator would stand beside the screen to present a combination recital and film accompaniment.

To emphasize this early need for sound and methods of distracting the audience from a "silent" screen, musician Harry Potamkin wrote of a job he once had as a small boy working for a film exhibitor. Potamkin was hired to stand behind the screen and pound on it during fight sequences to give the impression of physical combat.

Percival Mackey, an early piano accompanist for films, told of a job he held at the age of fourteen,
playing for a program which included a ventriloquist, a conjurer, a slapstick comedy act, and a short film. Four years later he joined the Royal Irish Animated Picture Company Grand Orchestra. This orchestra consisted of a seventy-two year-old trumpeter, a forty-five year-old drunken Irish fiddler, and Mackey. They played tunes for films with no rehearsal time available.  

During this turn-of-the-century period the practices were pretty much the same in many areas around the world. England, France, Germany, and the United States had film exhibitions with live musicians providing music, usually consisting of popular melodies. Even films shown in Japan had music played for them. But the music was not Japanese music. They used American popular tunes of the period.  

The first serious film music  

In the early 1900's films regularly had music played for them. But this was still not original music. The first instance of serious original composition came in 1908. Up to that time occasional improvisations were made by musicians, but no serious music had been written specifically for one film.  

Charles Pathé, in France, helped in the founding of a company called Le Film d'Art. This company tried to encourage famous stage actors to appear in films based on
famous plays. Their first production was L'Assassination du Duc de Guise. Camile Saint-Saëns was asked to write a score. This became his Opus 128 for strings, piano, and harmonium. This music was an important step, for a recognized serious composer had written it for the sole purpose of accompanying a film.

This use of "good" music was instantly recognized as beneficial for films by film makers in America. Biograph Studio used classical music to score A Fool's Revenge, released in 1909. This score was comprised of excerpts from Schumann's Träumerei, and Beethoven's Moonlight Sonata.12

Occasional attempts were made to improve this early use of music by incorporating more and more instruments into the orchestra. One of these early uses of an orchestra was at the Loew's Broadway Theater in 1911. Ernest Luz arranged the accompaniment and conducted the orchestra in a program of pre-selected music based on classical themes and popular tunes.13

The period 1908-1911 saw music used in a variety of ways. Also, the cinema orchestra was developing its own characteristic instruments. Various automatic musical instruments began to arrive on the scene between 1906 and 1910. These included the Cinforium, Clavitist-Violina, Cinechordone, Biokestra, and the Orchestrion. In addition to these new instruments, the use of organs, zithers, and
bells became more common. Also, large sound effects machines attracted more showmen into the presentation of films. One such machine, the Allefex, which was used in England, simulated the sounds of running water, breaking china, and puffing engines, among other effects. Some of these sound effects machines were reputed to have had the capability of reproducing over one hundred sounds.

**Early compiled music**

The music itself was also taking on a form of its own. It was going through a stage of compilation. This was a period of development which was to precede the later stage of original composition.

The practice of compiling music for illustrative purposes had begun in churches over two hundred years ago. Adapted operatic arias were used in the choir. Conversely, church cantatas were interpolated into operas.

The music that was compiled for film screenings began as well-known pieces that seemed to fit the mood of the filmed action. The selections were played one after another, with no modulation or variation. They were just filling a void.

This early illustrative program music which was used during the first decade of the century was different from the illustrative music which had been used in the theater for hundreds of years. It was existing music which was
adapted to the scenario of the film. This was quite a trick, to transform existing material into the new role of servant. Somehow the musicians of the period were able to accomplish this while maintaining the melody, and at the same time, construct a new sound.

Cue Sheets

This compilation of existing music for use in the film was a practice which resulted in the development of the cue sheet. Although, as time went on, this element of film music took on various forms, it could best be described as a list containing moods and suggested selections to be played for those moods.

Origins and early uses

There was a need for an organized system of music during the end of the first decade of the century. By that time films had become a widespread attraction, and were being shown on a regular basis in most major cities throughout central Europe and the United States. Theater musicians often did not have time to view them ahead of the scheduled screenings, but were still required to supply them with music.

The films would arrive at the theater the morning of exhibition, thus allowing only a few hours before the first screening. The low pay that the musicians earned
forced many of them to work mornings at other jobs, arriving at the theater around midday. There they worked a shift which lasted from 2:00 to 11:00 P.M. In addition to the need for a second job, the low pay prevented them from buying published commercial music themselves. For the musician who could improvise at the piano there was more money. The demand for this special skill was high among theater owners. The unskilled musician would play his repertoire of popular melodies, causing many theater owners to complain that the audience became too engrossed in the music, and was not watching the films. Therefore, the musician who could improvise non-melodic music was highly sought after.

Still, with the increased numbers of films made by 1910, even an improvisor had trouble making music fit all the films that came his way. So, the practice of publishing cue sheets began. First only general moods were assigned a suggested tune, later, specific cues for each film were to be developed. This practice was thought to add "class" to a film.

The origin of the cue sheet cannot be pinpointed, although several claims have been made by individuals seeking the recognition as its inventor. Bert Ennis claims that it originated at the Vitagraph Studio in Brooklyn, New York, sometime during the early part of 1910.

According to Mr. Thomas, Winkler did invent the cue sheet. Not only did he invent it, but he did so without knowing how to read musical notation. Winkler was a clerk in the music publishing house of Carl Fischer in New York, so he knew a great deal about how various compositions sounded. He drew up a sheet which looked like the following:

```
MUSIC CUE SHEET

for
THE MAGIC VALLEY

Selected and Compiled by M. Winkler

Cue 1. Opening - play Minuet No. 2 in G by Beethoven for ninety seconds until title on screen, "Follow me, Dear."

Cue 2. Play Dramatic Andante by Vely for two minutes and ten seconds. Note: play soft during the scene where mother enters. Play Cue No. 2 until scene of hero leaving room.

Cue 3. Play Love Theme by Lorenz for one minute and twenty seconds. Note: play soft and slow during conversations until title on screen, "There they go."

Cue 4. Play Stampede by Simon for fifty-five seconds. Note: play fast and decrease or increase speed of gallop in accordance with action on the screen.

As impressive as this sheet looks, it was the product
of Winkler's imagination. There was no such film. Mr. Winkler drew up this sheet to show film makers that he could help to supply their products with music. He took this sheet to the Universal Film Company in New York claiming that he could write sheets like it for all their films. Doubting his ability and knowledge of music, they tested him by subjecting him to a screening of sixteen films. Supplied with a stopwatch, a pencil, and a pad of paper, and seated at a desk, Winkler wrote down cues as fast as the films were shown. They hired him.

Later Winkler formed his own company and hired composers to write original music for various moods. A victim of the sound film, he later sold seventy tons of printed music to a paper mill for fifteen cents per hundred pounds.19

Despite Winkler's claim to be the first to draw up a cue sheet, the earliest known use of cue sheets, on a regular basis, was made by the Edison Company in 1909. This was before Ennis' claim for Vitagraph, and Winkler's. Edison supplied sheets as part of his booking service to get exhibitors to run his films. They were called "Suggestions for Music," and accompanied many of the Edison films. A typical example of the kind of cuing used can be seen in a sheet released with Frankenstein in 1910. It contained both general mood suggestions and specific selections:
At opening
   Andante - "Then You'll Remember Me"

Till Frankenstein's laboratory
   Moderato - "Melody in F"

Till monster is forming
   Increasing agitato

Till monster appears over bed
   Dramatic music from "Der Freischütz"

Till father and girl in sitting room
   Moderato

Till Frankenstein returns home
   Andante - "Annie Laurie"

Till monster enters Frankenstein's sitting room
   Dramatic - "Der Freischütz"

Till girl enters with teapot
   Andante - "Annie Laurie"

Till monster comes from behind curtain
   Dramatic - "Der Freischütz"

Till wedding guests are leaving
   Bridal Chorus from "Lohengrin"

Till monster appears
   Dramatic - "Der Freischütz"

Till Frankenstein enters
   Agitato

Till monster appears
   Dramatic - "Der Freischütz"

Till monster vanishes in mirror
   Diminishing Agitato 20

Note that a single selection was used several times for a specific mood. Although crude, and appearing to be an almost haphazard list of cues, these "suggestions for music" distributed by the Edison Company seem to be the earliest form of music cuing, and therefore were quite
The music selected for each film was simple since the films were only one or two reels (ten to twenty minutes), and the emotions expressed were extreme and exaggerated. To write the cues, a musician would view the entire film once, then view it a second time using a stopwatch to time the scenes, and finally select the music. These early illustrators tried to generalize moods to simplify the many visual shots in a single scene, as the above example shows. The more skillful cuers made some attempt to create a single sound throughout a film. This was accomplished by using music from one composer for each film. Debussy and Tchaikowsky seemed to be popular favorites, and were used often.21

**Repertoires and early collections**

During the period 1909 to 1912, when suggestion sheets were developing for specific films, individual musicians began compiling generalized listings of moods and selections for the theater pianists. A sample repertoire of moods and suggested music selections would look something like this one drawn up by Harry Potamkin:

<table>
<thead>
<tr>
<th>Nature</th>
<th>Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grieg</td>
<td>Morning-Wood</td>
</tr>
<tr>
<td>Nevin</td>
<td>Country Dance</td>
</tr>
<tr>
<td>Saint-Saëns</td>
<td>The Swan</td>
</tr>
<tr>
<td>Helm</td>
<td>Sylvan Sketches</td>
</tr>
<tr>
<td>Friml</td>
<td>Iris</td>
</tr>
<tr>
<td>Bohm</td>
<td>Marmuring Brook</td>
</tr>
</tbody>
</table>
A few of the more talented musicians, such as those working for large movie houses, and with possibly more time than the average accompanist, would develop their own cuing for the more important films. Will H. Bryant was one of those more fortunate than most. He was both manager and orchestra leader for a movie house in the city of Terre Haute, Indiana, in 1912. He drew up a cue sheet for Sarah Bernhardt's Camille which became so popular that the distributor of the film asked for a copy of it. It looked, in part, like this:

1. "Waltz Lento" until Camille and Armand alone, then,
2. "The Flatterer" (Chaminade) twice through.
3. "Scarf Dance."
4. "Serenade" (Puerner) or "Spring Song" (Mendelssohn).
5. "Confidence" (Mendelssohn) Twice.
6. "Berceuse" (Godard) or "Waltz Lento" until Camille's Home in the Country.
7. "Evening Star" (Tannhäuser), until Armand's father leaves Camille.
8. "Calm as the Night" (Bohm), until next title.
9. "Song without Words" (Tchaikovsky). To end of act. Tempo according to action.

10. "La Bohème Fantasie" (Puccini), until Camille out of bed.

11. "Barcarolle" (Tales of Hoffmann), until Camille's arm drops to her side.

12. "Ase's Death" (Peer Gynt Suite), until the end.

Soon the individual selections of music for films grew. By 1913 and 1914 most major movie houses had not only a musical director, but a growing collection of numbers to play. One such musician was George P. Montgomery who worked in a theater in Albany, Georgia. He claimed to have used over twenty separate pieces of music for one day's screening in 1914 - a program which consisted of only three reels of film.

But these fortunate few who had the time to write their own cue sheets were in the minority. The average theater musicians during the years 1909-1926 were under the burdens described earlier, lack of time and funds to do the job.

Arthur Kleiner, who was the Music Director of the Film Department at the Museum of Modern Art in New York for many years, summed it up during an interview in 1949: "It's much easier to make up themes than to spend hours trying to find standard works that fit the mood of a movie."

This was another reason for the demand for musicians
who could improvise. They were ready to play without any advance notice. If such a thing as a job description existed for a theater musician in those days it might have read something like:

a musical interpreter of screen emotions. Must be able to feel the emotions on the screen and quickly respond to changes. Also, must be able to size up the audience and anticipate feelings, then "sell" them.26

Published catalogs

Still, the vast majority of theater musicians had, a) no time to prepare scores, and, b) little talent for total improvisation. For these individuals, an aid was developed in 1913 in the form of volumes of prepared mood music. These were published compilations of selected numbers for various moods. One such publication to gain wide recognition was the Sam Fox Moving Picture Music catalog by J. S. Zamecnik, which was circulated in the year 1913.27

One of the best known of the silent movie cue publications was Giuseppe Becce's Kinobibliothek. For short, it is usually referred to as the Kinothek. Published in Berlin in 1919, the title translates as, Cinema Library. Becce has been called the "first man to give film music its own characteristics."28 It seems that he found the proper form and musical formula for motion pictures.

Becce participated in other film music publications
as well. One, entitled, *Handbook of Film Music*, by Erdmann, Becce, and Brav, shows the way that categories of music were associated with categories of emotion. In this later publication a sample mood categorization ran like this:

**Dramatic Expression (Main Concept)**

1. **Climax** *(Subordinate Concept)*
   a) Catastrophe; *(Subdivisions)*;
   b) Highly Dramatic - Agitato;
   c) Solemn Atmosphere; Mysteriousness of nature.

2. **Tension - Misterioso**
   a) Night: Sinister mood;
   b) Night: Threatening mood;
   c) Uncanny - Agitato;
   d) Magic: Apparition;
   e) Impending Doom: "Something is going to happen."

3. **Tension - Agitato**
   a) Pursuit, Flight, Hurry;
   b) Fight;
   c) Heroic Combat;
   d) Battle;
   e) Disturbance, Unrest, Terror;
   f) Disturbed Masses: Tumult;
   g) Disturbed Nature: Storm, Fire.

4. **Climax - Appassionato**
   a) Despair;
   b) Passionate Lament;
   c) Passionate Excitement;
   d) Jubilant;
   e) Victorious;
   f) Bacchantic.29

This listing, although appearing to be well organized and consisting of a logical progression of concepts, still has its flaws. Musical and dramatic terminology are intermixed in an awkward fashion. Despite its seeming detail, this list is only good for a generalized breakdown of moods.

Another musician who compiled music for the silent
film musician was Erno Rapee. In 1924 he published a volume entitled, *Motion Picture Moods for Pianists and Organists, A Rapid Reference Collection of Selected Pieces Adapted to Fifty-Two Moods and Situations.* This one volume comprised of 674 pages was, nevertheless, an easily used manual, and the most up-to-date one of the time. In Mr. Rapee's own words: "... This collection is meant to do away with the . . . haphazard collection of music and its use for synchronizing pictures." His philosophy was to, a) determine the geographical and national atmosphere of the picture, and, b) embody every one of its important characters in a theme.  

Blending original music with cue sheets

This practice of cuing had become so much a part of motion pictures by the early 1920's that it was incorporated into original scores that were arriving on the scene by that time. With the growth of the Hollywood film, both in scope and length, musicians were hired to compose original music for the more important films, while complete cue sheets were supplied with those films of less epic proportions. Because the music was live, with no technical synchronization perfected as yet, the complete scores sent out with such films as *The Covered Wagon* (1923) and *The Thief of Bagdad* (1924) bore the familiar cues synchronizing music passages with the
specific shots. A description of the action was often hand-written onto the musician's score.  

The art of cuing rose to a very sophisticated state by the time the "sound" film was introduced. One example of the state of the art in 1926 also serves to bridge the gap to future methods of scoring for the talkies. This later method was to associate the picture with the music. It is well represented in the German film, Die Geschichte des Prinzen Achmed (The Adventures of Prince Achmed). Wolfgang Zeller wrote the score for this film and inserted frames from the picture into the margins of the score sheets. This was easily accomplished because the film was animated with silhouette figures. Each frame was a high-contrast image which reproduced well on the score pages. A feature-length picture (called the first feature-length animated film by film historian Charles Hofmann) the score contained no less than ninety-three individual frames which acted as cues for the music.

Collections and modern uses

With the introduction of the talking picture the need for cue sheets disappeared. Today some archives and libraries maintain collections of these original sheets, both the general type such as Becc's and Raper's and original scores written for specific films. Among those libraries that have these collections are: The
Museum of Modern Art; The Library of Congress, Division of Music; and the George Eastman House in Rochester, New York.35

In concluding this section on cue sheets it would seem appropriate to describe how the cue sheets are used, since their use has changed but little over the years. The Museum of Modern Art circulates scores with rental films, and early in its years of preserving film equipment adopted certain "Suggestions for the Musical Accompaniment" of films that it loans out. These suggestions follow the methods used by the musician in the silent days:

It is best to procure someone who has had theatrical experience to play this score. If such a person is not available, the accompanist should thoroughly familiarize himself with the music (which is usually sent out a week or so before the date of showing for this purpose) - so that on the night of the performance he may watch the screen as much as possible.

The music is not difficult; it is made up of the familiar classics, popular songs and special "movie music" such as was played in the silent days. However, it is difficult for one who has never done it before to play as well as watch for and catch the cues. The pianist must be alert at all times with one eye literally on the screen.

The music is tailored to the films as closely as possible, considering that projectors are run at different speeds. In other words, when one has finished a piece and there are no repeat marks, it is usually time for the next number. At other times, the pianists will have to skip a few lines or "stall" a bit, until the next cue, depending on the tempo of the playing and the speed of the projector. If the player hesitates and gets behind, turn over several pages in order to get in step again.

In any case, the pianist while playing one piece should look ahead for the next cue (it is usually marked at the bottom of the page) and bear this in
mind all the time in order to be ready for the change. Be careful not to change too abruptly (except in special cases). It is best to change during titles, if possible, blending the two numbers together without a long pause in between.

It is hoped that the pianist will follow the score as closely as possible, playing the printed music which has been very carefully fitted to the period, action and moods of the films.36

Orchestra Scoring Practices 1911-1914

To continue a chronology of the music itself, and its development, it might be helpful to go back to that transitional period of approximately 1910 to 1914, when the cue sheets were being developed. An abbreviated chronology of the beginnings of the original score will be of help.

A need for better music

It is known that by 1914 very careful attention was given to the scoring of motion pictures. In 1912, when the Motion Picture Patents Company lifted its ban on the maximum length of films, and allowed them to be in excess of two reels, both the quality and quantity of films increased. More subtle approaches to storytelling were made, and this called for a more sophisticated kind of music. Movie houses grew, and the exhibition of films became a more important business. With this popularity came the idea that the music of the cinema had to be improved. There was a need for better music.
It was mentioned earlier that an orchestra was used in 1911 for a film showing. But it was not until 1913 that an orchestra was used to score a major feature film. *The Last Days of Pompeii* was screened at the Regent Theatre in New York in that year with S. L. Rothafel conducting an orchestra.37

The composition of these early orchestras consisted of the same kinds of instruments as concert orchestras. The strings were especially useful, because with them, borrowing from the classics was easier. Classical music of the late nineteenth century was dominated by string sections. A musical director would begin with a few violins and celli to form a chamber orchestra. Later, if the budget allowed it, brass and woodwind instruments were added. By the mid-1920's orchestras of between fifty and one hundred pieces were used.

**Orchestras at the studio level**

It might also be noted that orchestras were not limited to the theater. Most people are familiar with the image of a musician playing in the studio, on the set, for the actors so that a mood might be created for their benefit. Often a small orchestra was used for this purpose. Piano, portable organ, violin, and cello comprised the normal complement.

Contrary to popular belief, setting a mood was not
the chief reason for their presence - at least not while the cameras were rolling. Most of the music was played between takes, to relax the crew and boost morale of cast and crew alike. Mood music was used, especially in cases where two films were being shot on the same stage, to keep the attention of the crew on their own set.38

By the year 1920 the rule was to use an orchestra on the set, the exception was not to. On the bigger pictures, a complement of ten or twelve musicians was not unusual.

One of the few major directors of the period never did use live music on the set. David Wark Griffith objected to its use and stated that he never wanted actors who needed this extra stimulus. Blanche Sweet, Lillian Gish, and Neil Hamilton have all vouched for Griffith's dislike of set musicians.39

Cecil B. DeMille stated in his autobiography that he also never wanted to use music on the set because it interfered with his mood while he was trying to direct. He did use it though, when certain performers demanded it. In these instances he would walk around the set with his hands over his ears.40

A Rapidly Growing Art

This use of familiar, concert-hall instrumentation coincided with the score music being used for the
screening of the films. Classical works were used during the period 1915-1919 because, a) they were available and could be played by the average musician, and, b) contemporary audiences were not familiar with the classics as audiences are today. Therefore, they did not know it was borrowed music. The story behind the scoring and subsequent success of The Birth of a Nation is a good example of this practice.

The Birth of a Nation

A more precise examination of the status of the art is in order. In 1915 there were not as many concerts that performed the classics as there are today. Most people did not own gramaphones. Radio, as a practical communication medium, was still several years in the future. The year 1915 saw the first public performance of Beethoven's Ninth Symphony west of the Mississippi.41 The audiences which heard classical music played for a film probably thought it was music written for that film.

The music compiled for The Birth of a Nation was not only one of the first examples of a specially-prepared score for a film, but Roger Manvell and John Huntley have said of the picture itself: "(it) has been called the first film to be accompanied by a 'full orchestral score' built on symphonic lines."42 Griffith, the director, had studied composition prior to the production. He then
collaborated with composer/conductor Joseph Carl Briel to create a score which was a combination of original music and excerpts from Grieg, Wagner, Tchaikowsky, Rossini, Beethoven, Lizst, and Verdi. Also used were well-known traditional and popular American tunes such as, "Dixie," and, "The Star-Spangled Banner." They even had a love theme which was later to be re-orchestrated and used as the theme for the Amos and Andy radio program.

Cuing for the picture was very detailed. One series of scenes included the following cues:

Lynch's second time with Colonel.
As Lynch's arm crosses chest.
Offers hand second time.
Lynch exits.
Title: "Lynch the Traitor."
Lynch Swearing.
The Union League Rally.
Eye in door.
Wait for door close.
Lynch at speaker's table second time.
First time: "If I don't."
Picture.

The use of the tunes might seem a bit corny and full of cliches if heard today with the film. For moments of stormy excitement, such pieces as Wagner's "Ride of the Valkyries" was used; for mystery and intrigue, Grieg's "Peer Gynt;" and for the rapid rescue, Rossini's "William Tell Overture." But it must be remembered that these were early uses of this sort of music, uses which were to create the cliches we have today.

Roger Manvell and John Huntley aptly summed up the importance of this early serious score in their book,
The Technique of Film Music, when they stated that it:

... set standards of orchestration and technique that were to remain in force throughout the silent period or until such time as the serious contemporary composer was willing to recognize the possibilities for sound in the new art that Griffith had so firmly established on the visual plane.45

Better quality music on a wide front

In 1915 Mabel Bishop Wilson began a campaign to raise the standards of movie music in *Movie Pictorial*, a periodical of the time. Two years later, Carl Van Vechten published an article entitled, "Music and the Electrical Theater," in *The Seven Arts* magazine. He congratulated the film impresarios on their promotion of the musical art, and suggested an extension into Wagner, Beethoven, Debussy, and Schoenberg.46

Music had quickly become linked with the film, and not merely as a subordinate member to the visual image. It was being recognized for its own artistic merits. Lewis Jacobs wrote in his book, *The Rise of the American Film:* "... by 1916 only the very cheapest of movie houses did not have an orchestra instead of a piano ... ."47 An article which appeared in *Moving Picture World* magazine in the year 1916 stated: "... Music, while it may escape the attention of the spectator, has the strange and subtle influence of creating moods, and that is why it is so important in the presentation of the moving picture ... ."48
The Cabinet of Dr. Caligari

By 1919 the status of the score had risen to the point where experimentation with original sounds was noticed. One of the best-known features of the period to have an experimental music score devised for it was The Cabinet of Dr. Caligari, which was released in that year. S. L. Rothafel and Erno Rapee arranged a score from the works of Debussy, Richard Strauss, Stravinsky, Schoenberg, and Prokofieff. The arrangement emphasized the odd and eerie. For example, they used muted brass instruments to create a sinister mood. 49

This isolated example serves to illustrate the philosophy, and the emerging practice, of imparting more importance to the art of scoring, by creating different arrangements. Louis Levy, an experienced silent film musician, wrote in his autobiography, Music for the Movies:

The first real step taken towards the development of a true technique of music for the movies was started by film being given a preview to the conductor, with the object of making some attempt at fitting the music to the mood of the film . . .. Music publishers began to notice the new field of development open to them and some of the more enterprising publishers soon engaged composers to specialize in incidental music for the film, and to compose numbers to fit all cinema moods . . .. With the aid of the classics, popular music of the day and special stock incidental music supplied by publishers, the music to silent films around the 1920's became a recognized adaptation of art. 50
Theme Songs

The theme song was quickly popular. By about 1926 the theme song was an established trait of the silent film. Not only did these original tunes see varied orchestration in the score, but many were published apart from the film, either in print form, or pressed on commercial recordings. Dolores Del Rio recorded the theme song that was written for her film, Ramona, which was released in 1927. Other major films of the period which had their theme songs published were What Price Glory? (1926), Don Juan (1926), and Seventh Heaven (1927). The motivation for these commercial releases was primarily the promotion of the film. This is the same reasoning behind the soundtrack recordings of today.

Original Music in the 1920's

During the 1920's there was an increasing need for original music in the film. Radio, that new form of entertainment and information, was emphasizing live music. Although the time of the disc jockey was still two decades in the future, radio was broadcasting live bands and concerts. Also, film plots in the decade were becoming more involved, and more carefully planned. The music had to follow suit, and "borrowed" classics were not enough. 51

The quality and expressiveness of film music soon
increased to such a degree, that in 1924 D. W. Griffith made reference to music as being the voice for the film when he discussed the experiments being carried out to equip the film with recorded sound. He was sure there would never be talking pictures: "There will never be speaking pictures. Why should there be when no voice can speak so beautifully as music?"52

The Big Parade

One film that had good success in underscoring the well-developed emotions and complicated visual images of the maturing cinema was The Big Parade, released in 1925. David Mendoza and William Axt jointly provided a rich and complicated score. Herman G. Weinberg, writing in the New York Herald Tribune in 1928, spoke of it in these words:

The accompanying score . . . was more than a mere accompaniment . . . it so completely transcended everything that has preceded it, that its power to stir us to the point of pain was accepted without surprise - so engrossed were we in the cinema - bewitchment, so completely had we forgotten the presence of the camera, of a specially prepared orchestra and the artificialities of a theater . . . 53

Potemkin and October

Although The Big Parade achieved this recognition, yet another film of that year has won even more acclaim from critics in both its visual artistry, and its musical achievements. That film is Sergei Eisenstein's Potemkin.
Dr. Edmund Meisel was hired to provide a score for it which would create an "audio-visual image." This is what Eisenstein wanted. He stressed the concepts of a total "sound-film" instead of just musical illustration. The job of the instruments was to punctuate the action on the screen, instead of merely providing an emotional mood. This music was said to be of the expressionistic style based on rhythm, just as the film itself was.

Although Meisel's score for Potemkin, as well as his later one for October (also known as Ten Days That Shook the World) had been lost for many years, some of his notes have recently been found by Arthur Kleiner. Kleiner, an expert in the restoration of silent film music, pieced together a score for Potemkin, which was recorded for use by KCET television, Channel 28 in Los Angeles. KCET ran the film during its "Film Odyssey" series, complete with the restored score, in the early 1970's.

It seems that this score was too powerful for the exhibitors of 1925. Its forcefulness caused the music to be banned in some cities. The film was shown in silence. Ernest Borneman, writing in 1934, had this to say about Dr. Meisel's music:

Meisel analysed the montage of some famous silent films in regard to rhythm, emphasis, emotional climax, and mood. To each separate shot he assigned a certain musical theme. Then he directly combined the separate themes, using the rhythm, emphasis, and climaxes of the visual montage for the organization of his music.
Music status by 1926

By 1926 no important film was released without a specially prepared music score. David Mendoza, a prominent composer of the period has explained it in these words: "As long as six months has been spent on certain of the more important scores."58

An Abundance of Music

At this point it might help to show the increase in composed scores year by year. Table 1 lists the number of films that had a score either partially, or fully, written for that film, by year.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of films</th>
<th>Year</th>
<th>No. of films</th>
</tr>
</thead>
<tbody>
<tr>
<td>1908</td>
<td>2</td>
<td>1919</td>
<td>11</td>
</tr>
<tr>
<td>1909</td>
<td>1</td>
<td>1920</td>
<td>5</td>
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<td>1910</td>
<td>0</td>
<td>1921</td>
<td>3</td>
</tr>
<tr>
<td>1911</td>
<td>1</td>
<td>1922</td>
<td>7</td>
</tr>
<tr>
<td>1912</td>
<td>1</td>
<td>1923</td>
<td>10</td>
</tr>
<tr>
<td>1913</td>
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<td>1914</td>
<td>4</td>
<td>1925</td>
<td>16</td>
</tr>
<tr>
<td>1915</td>
<td>10</td>
<td>1926</td>
<td>25</td>
</tr>
<tr>
<td>1916</td>
<td>14</td>
<td>1927</td>
<td>16</td>
</tr>
<tr>
<td>1917</td>
<td>4</td>
<td>1928</td>
<td>36</td>
</tr>
<tr>
<td>1918</td>
<td>4</td>
<td>1929</td>
<td>24</td>
</tr>
</tbody>
</table>


This list includes all known international scores,
not just those written for American films. Note the quantities listed for the years 1915 and 1916. Except for these, and the year 1919, there was very little progress until the early 1920's. This was the time when films were developing more complicated plots. Beginning in those years, and lasting through the middle 1920's, a general increase in the number of scores can be seen. With the exception of the year 1927 (possibly because of the experiments with sound recording) the peak can be seen in the year 1928 - twice the number of original scores than three years before.

Compare this table with Table 2. Table 2 lists the number of important early music scores as listed by Charles Hofmann in his book *Sounds for Silents*.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of scores</th>
</tr>
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<tbody>
<tr>
<td>1908</td>
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</tr>
<tr>
<td>1911</td>
<td>1</td>
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<td>1915</td>
<td>1</td>
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<td>1916</td>
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<tr>
<td>1918</td>
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<td>1919</td>
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<td>1922</td>
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<tr>
<td>1923</td>
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<td>1924</td>
<td>7</td>
</tr>
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<td>1925</td>
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<td>1926</td>
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</tr>
<tr>
<td>1927</td>
<td>3</td>
</tr>
<tr>
<td>1928</td>
<td>3</td>
</tr>
<tr>
<td>1931</td>
<td>2</td>
</tr>
</tbody>
</table>
This information in Table 2 is a personal view of the number of important silent film scores to be written for films. Notice the sudden increase in the early 1920's. It is similar to that shown in Table 1. Also note the drop in 1927 and 1928, when sound pictures were making their appearance. 60

Summary

Original composition, although making a strong appearance by the middle of the 1920's, was late in coming to the film. Several reasons for this can be mentioned, some of which apply also to the development of the cue sheet which was discussed earlier. Few theaters could afford a full orchestra, therefore a fully orchestrated score was of no advantage. Most film companies and publishing houses found it unprofitable to publish music for only one film. This would have necessitated several arrangements for various kinds and sizes of orchestras. Film companies considered music a luxury in the early years. It was the impresario who introduced this music to the film. Local conductors often boycotted prepared music - they wanted to perform their own arrangements. Finally, rehearsals were often impossible to arrange due to the time restrictions. 61

When the sound films arrived on the scene in the late 1920's, it was the musician who was hurt the most, even
more than actors. Not only were the pit orchestras eliminated, but also the studio musicians. This second group consisted of a small army by 1927. All major studios had their musicians on salary. Very few found their way into studio orchestras, and these few only after a waiting period of eight or ten years. It was in the middle and late 1930's that the studios began to form their studio orchestras.

In this chapter it has been the intent to point out that films never really were silent. We began with an understanding of the need for music. Then the earliest uses of music were described to illustrate the method of adapting existing material to the new medium of film. The origins of composed music in 1908 were mentioned, and also the reasons why the idea of original music was discarded in favor of compiled mood music, in order to show the practices which were then carried out. The cue sheet was described in order to show the development of organizational thought - first, to apply existing music to film in an orderly manner, then, to use this format to incorporate original music.

The chronology was then interrupted to trace the growth of the cinema orchestra, and its various uses, with the growth of the film itself. The important concept of serious, original music, and its development with the serious film, was then outlined. Experimentation and
innovation characterized the 1920's, so that by the time
the talkie appeared, the artistic knowledge existed, and
was being put to use on the silent film.

In the next chapter a parallel study will be made to
show what was happening in the attempts to mechanically
synchronize music with the silent film. An understanding
of the state of the art, both of film music development,
and of scientific technology, is important to the under-
standing of what happened to the music score during the
first years of the sound era.
NOTES TO CHAPTER 1


3. Ibid., p. 74-75. Mr. London gives a lengthy discussion on the psychology of the silent film and its musical needs.


6. Several Good reference texts cite this performance in their sections on the history of film music. One of the best descriptions can be found in Manvell and Huntley's *The Technique of Film Music*.

7. Manvell and Huntley, *Film Music*, p. 211.


10. Manvell and Huntley, *Film Music*, p. 16.


19. Ibid., p. 38.


27. See Appendix I for an example of the volume's cover page and breakdown of categories. Note also the two full pages in the book's listing devoted to European Army Maneuvers in the year 1913.

28. London, *Film Music*, p. 79. It is also interesting to note the German location for publication in this year of 1919. It was about this time that the German Expressionism was developing with films like *The Cabinet of Dr. Caligari*. The Germans, then, would appear to have been leaders in both film stylization and film music development.

29. Ibid., pp. 55-56.


32. A good example of this technique can be examined in Appendix I where a page from the score of *The Thief of Bagdad* has been reproduced. It is the first page of the prologue for 1st violin.


34. The final page of the piano part, complete with frame cuing, is reproduced in Appendix I.

35. A partial listing of scores available from the Museum of Modern Art is located in Appendix I.
36. Hofmann, Sounds, p. 60.
39. Ibid.
40. Ibid., p. 39.
41. Ibid., pp. 54-56.
42. Manvell and Huntley, Film Music, p. 20. It is not known from the material in this book who they are quoting to say "full orchestral score." It must be noted that "orchestras" were used several years earlier, but it seems that the orchestra used for this film was of substantial size.
43. Ibid., p. 21.
44. Ibid.
45. Ibid., p. 22.
49. Hofmann, Sounds, pp. 27-28. The selection of music by Stravinsky was in itself very unusual for that date. It was only six years earlier that a performance of his Le Sacre du Printemps created a riot in Paris.
50. Manvell and Huntley, Film Music, pp. 22-23.
51. London, Film Music, p. 44.
56. Mark Waxman, telephone conversation about this score, April 12, 1976.

57. Manvell and Huntley, *Film Music*, p. 23.


60. The complete list has been reproduced in Appendix I.

CHAPTER 2

TECHNICAL HISTORY OF
SYNCHRONIZED RECORDINGS 1887-1925

Introduction

This chapter will trace the details of various experiments that were made in an attempt to provide the medium of film with synchronized, pre-recorded sound. The time period covered is approximately the same as that in Chapter 1. It is the purpose here to show the parallels between the music development and the technical achievements which were being made at the same time.

There were two forms of synchronized sound. First, the sound-on-disc system attempted to link a film projector with a record player. The recording would be appropriate music, fitting the mood; actual voice reproduction of the actor on the screen; or, the sounds of the locale that was photographed. This philosophy of recorded sound began with Thomas Edison.

The other form of synchronized sound, called a sound-on-film type, consisted of various methods of having the
film itself reproduce sound. This was a later perfected idea because it depended on much more complicated electronic and mechanical developments. Both of these forms of music synchronization will be discussed in detail below.

It was mentioned in Chapter 1 that film was never intended to be silent. In even the earliest experimental screenings an actor or singer was often stationed behind the screen to emit sounds to be heard with the picture. It was also true that, beginning with the very first successful experiments to produce a moving picture, attempts to provide some form of mechanically synchronized sound were made to go along with that picture.

Thomas Edison, The Founding Father

A philosophy for sound pictures

The early philosophy was quite the reversal from what most people think. Film was meant to complement the early sound recordings. The story goes like this: the phonograph was invented about two years before the moving picture - both by Thomas Edison. His motivation for the moving picture was to create a visual product that would do for the eye what his phonograph had done for the ear. As early as 1887 he and his assistant William Dickson experimented with combinations of film projector and
gramaphone. They recorded many film and cylinder pairings, and reproduced sound and picture simultaneously in several screening sessions.¹

This desire to have audiences both see and hear a reproduction of life added another credit to Edison's name: the father of the talking picture. Sometime during these experimental years of the late 1880's he wrote:

I can believe that in coming years . . . grand opera can be given at the Metropolitan Opera House . . . without any material change from the original, and with artists and musicians long since dead.²

Early commercial success

The date of October 6, 1889 is given for Edison's first commercial sound-film device.³ It was called the Cinetophonograph, and had an earphone through which the viewer could listen to the cylinder playing music, or reproducing a voice, while at the same time watching a film of the action. The whole apparatus looked much like his Kinetoscope. It was a tall box which had a peep hole in the top. The viewer looked through this hole to watch the film after putting the ear plug on. This Cinetophonograph was exhibited at the Chicago World Exposition in 1893.

When Edison began distributing his silent Kinetoscopes to fun houses and penny arcades in 1894, he included some of these sound versions of the same invention. Although a popular attraction, its limitation was that it
could be viewed by only one person at a time.

Later developments

In 1899 Edison introduced his Cinetophone. This was not actually a new machine, but merely a new use of existing machinery. A silent film was run through a standard Edison projector. Behind the screen, which was transparent, sat an operator who started and stopped gramophones when given a lamp signal from the projectionist. Three phonographs were used, playing the same music on each of three cylinders. The reason for this multiplicity of machines was to create volume. Electronic amplifiers were unknown at this time. These screenings were short films, limited to only a minute or two because of the problems with synchronization. Since at least two machines were required, one projector and one phonograph, each run by a separate motor or spring device, the longer the film, the easier it was to lose synchronization.

The development of the disc record was an improvement over the cylinder which helped to make it easier for sound to be synchronized. The disc provided for longer playing time, which allowed for a sound film to run for three or four minutes. In 1913 Edison was able to connect his perfected phonograph machine to an advanced projector by means of a system of cords and pulleys. His goal was to run both machines from a single source, using cords to
connect the turntable of the phonograph to the sprocket gears of the projector. The combination was called the Kinetophone, and it did achieve a certain amount of success.

Edison was active in 1914 when a fire gutted his laboratories on December 9th of that year. It destroyed his whole movie department including records, experiments, and machinery. He was sixty-seven at the time, a possible cause for his abandonment of film and recording experimentation after the fire. He might have been too old to start again. Also, by 1914 the cue sheet for live music accompaniment was such a popular method of applying music to a film that it seems unlikely that audiences would have accepted a sound-on-disc device with sound quality as poor as it was in that year. Whatever the reason, Thomas Edison made no more contributions to the fields of recording and photography after that date.

Other Early Experimentation

Pathé, Messter, and Méliès

Thomas Edison was not the only inventor experimenting with mechanical means of synchronizing recorded music with film. In 1896 Charles Pathé and Oskar Messter made an attempt to combine moving pictures with a German-made talking machine. This machine was called the Berliner
Gramaphone, and seemed to have a capacity for longer recordings than the conventional gramaphone of the day. It still used the conventional cylinder, though.5

During the remaining four years of the century, about six French inventors and showmen, including George Méliès, succeeded in synchronizing sound and picture in exhibitions.6

1900 and widespread success

In the year 1900 some success was achieved by the German, Messter, and a Frenchman named Leon Gaumont, who was working in Germany. They developed a crude mechanical synchronization apparatus linking a projector and gramaphone. The same year a film was released in England entitled Little Tich and his Big Boots. Not much is known about this short film except that it received widespread distribution accompanied by a special gramaphone disc.7

The year 1900 saw a number of other advancements in the history of synchronized recorded sound. Certain films by Berthon, Dussaud, and Jaubert so impressed a French steamship company that they were made part of its display at the Paris Exposition of 1900. Clément Maurice opened the Phono-Cinéma-Théâtre in Paris. It was a movie house devoted entirely to talking pictures. Henri Joly presented an original comedy entitled Lolotte at the Théâtre de la Grand Roue. This film was the first to have originally
written dialogue supplied on record. Previous talkies had been comprised of either songs or famous play excerpts. Certainly, the new century was well supplied with ideas and precedent for a talking picture.

A variety of inventions in the early 1900's

The early years of the new century saw England competing with America and France for a position in this race of inventions. In 1904 the Chronophone was first demonstrated at the London Hippodrome. In 1907 Cecil Hepworth introduced the Vivaphone. Both of these inventions were based on the same principle - linkage of a projector with a gramaphone. They were crude mechanical hook-ups and easily lost sync.

All of these various inventions, some meeting with success, some not, were crude by today's standards. But, they showed that the mechanic had an early interest in a sound cinema. Remember, it wasn't until 1908 that the first original score was written for a film. This was twenty-one years after Edison's first experiment with synchronized recorded sound. For twenty-one years exhibitors and inventors were experimenting before the first serious music was composed for a film.

Considering the widespread interest, in Europe and in the United States, in synchronized sound by 1908, and the interest in good music for the cinema, it would seem to
be natural for the two fields to come together creating a good, synchronized music score. But, this is not what happened. There were several reasons why not.

**Difficulties and Obstacles in 1910**

The aesthetic development of film as a medium for story-telling advanced much more rapidly than did sound recording techniques. With longer, more detailed films being released by 1909, the limitations of the recording equipment were made apparent. The limited length of the recorded disc was not able to last through a one-reel (fifteen minute) story. The recording equipment was so insensitive that the microphone had to be placed close to the actor before his voice could be recorded. Therefore, a close-up was needed so that the mike was not seen. On medium, and longer shots, there was no place that the big, cumbersome recording equipment could be set without being seen on camera.

Providing that these problems could be solved, the quality of playback was so poor that a single live pianist was preferred by an audience over a low-fidelity recording of a full orchestra. Even if the inferior sound could be accepted, there was still the problem of synchronization.

It is true that there were some rope and pulley systems, but these were not always reliable. Those systems that were not linked in some manner had an even greater
problem. Gramaphones were operated by a spring that was wound by hand. A code had to be arranged so that the projectionist in the booth could signal the sound man behind the screen to slow down or speed up his hand-cranked gramaphone.10

Other Mechanical Synchronization

There was another form of mechanically synchronizing music other than the recorded cylinder or disc. This was an effort to combine a live orchestra with film through the use of a machine. There were several of these attempts made, some worked very well, others never got out of the experimental stage.

Carl Blum and his Rhythmonome

Carl Robert Blum experimented in 1919 with a system that he finally exhibited in 1926. It included a device called the Rhythmonome which was used in public for the first time in 1926, in Berlin. The machine ran a paper tape, sprocketed on both edges, at a constant speed, through a box called a Rhythmoscope. On this paper tape was printed the musical notation of the score. As the tape was passed through the box, a conductor could see the notation as it appeared in a small window. In the center of the window was a fixed needle called the Sight Index, which acted like a pointer. The note of music that
passed the sight index was to be played the precise moment that it went by. In theory, this would give the conductor an exact timing for his music.

Other methods for synchronized music

Similar experiments were conducted in France by a man named Pierre de la Commune. He had a device called the Cinépupitre which operated on the same principle as Blum's Rhythmonome. Arthur Honegger used it in 1922 for a French film entitled La Roue.

One of the most unusual forms of live synchronization was the use of the projected image of a conductor on a small screen located in front of the live conductor. The projector for this film was located in the pit near the conductor. This was an awkward system due to the problem of synchronization between this projector and the main one showing the program from the projectionist's booth.

Yet another attempt to achieve the same result was the use of printed musical notation on a strip which appeared along the bottom edge of the film as it was being shown to the audience. It was placed in the same general spot as sub-titles on foreign language films that are shown today. Use of this device was curtailed when audiences complained that it annoyed them.11
A Sound-On-Film Philosophy

We have seen the sound-on-disc systems, both the projector and gramaphone formats, and the mechanically synchronized live orchestra. There were also methods of creating sound by employing the film itself as the source. The earliest were forms of physical pressure, the later ones were photographic, utilizing electricity.

Physical methods

In 1905 a Frenchman by the name of Pineaud tried a "relief" process. The edge of the film was indented with cuts, the sizes corresponding to various pitches of sound. When run through a projector, the film edge passed along a style, or needle, which was flexible and made the sound as the notches passed it. This operation was similar to music boxes, except that only the one tone was heard in variations instead of different tones. The result being more of a rhythm than a melody.

There was another process, similar to the relief method. A "phonogram" strip, attached to the film, was scraped to provide it with degrees of roughness. This would create various pressures upon a needle when played back, again creating a sound. This was again, more of a sound effect than music.

A German by the name of Pfannhauser experimented with a "resistance" film at about the same time (1905). A
series of different widths of an electrically resistant material were used to change sound vibrations when an electric current was sent through it.\textsuperscript{14}

These inventions were more of an experimental nature of machine than practical on a commercial basis. In the first place, no real music was provided, merely sound effects. Second, there were no such instruments as amplifiers or efficient speakers to project these sounds to an audience of any great size. These machines were more along the line of laboratory novelties than anything else. But, their existence points out that there was a great deal of thought put forth to develop some form of a sound-on-film philosophy at an early date.

Early experiments with light

The use of light for initiating sound can be traced back to 1900 when a couple of inventors were working in Germany. A man named Duddel discovered that an electric current could be influenced by other, refractive currents. Another gentleman, by the name of Ruhmer, used this theory to construct a device which he called the Photographon. This machine enabled him to project an arc-light, which is light caused by an electric current jumping from one point to another. He vibrated this light by using sound currents picked up by a microphone, and recorded this refracted light on film.\textsuperscript{15} It was this
process, the photographing of different intensities of light, that seemed to solve the problem of how to transfer sound into electrical currents, and then back into sound again.

Lee de Forest's experiments

Sound recording in the film medium was a collective effort. No one man can be given credit for its development. But, it was Lee de Forest's invention of the vacuum tube that gave the needed technical advancement that helped the growth of both a sound film and radio. With his three-element tube, which he called the audion, he was able to amplify electronic impulses. He first developed it in 1907, and later perfected it in 1912. His tube was an important achievement because, although sound could be put onto film by 1912 through a variety of methods, both mechanical and electrical, projecting that sound to a theater full of people was the desired result.

The condenser microphone

Another element that was needed was a reliable microphone, one that could pick up sounds from out of camera range. In 1916 E. C. Wente perfected a sensitive condenser microphone that could do the job.

There followed a break of several years in scientific advancement due to World War I. Materials and men
were needed elsewhere. But, following the war, achievements were made at a rapid pace.

State of the art in the 1920's

Beginning in 1920 there was a series of demonstrations which combined the elements perfected up to that time, and which advanced the state of the art further. In 1920 Dr. Charles A. Hoxie, working for General Electric, demonstrated a sound-on-film device in his laboratory. It was a photographic process, and the forerunner of the Photophone system which saw commercial use beginning in 1928.

In 1921 Lee de Forest demonstrated his own technique which was soon to be called Phonofilm. It too was a sound-on-film process.

In 1921 and 1922 Wente developed a small instrument called the light valve for better recording of sound onto the film base. This valve was more sensitive than previous ones, and enabled a more exact amount of light to be photographed. In playback, a light source was interrupted by this image, reversing the procedure, and reproducing the sound.

In December of 1922 Theodore W. Case and Earl I. Sponable invented the AEO light for recording sound. This light photographed better, giving a sharper, more distinct image.
Lee de Forest's early commercial success

Lee de Forest gained early success in public exhibition of his equipment beginning in 1923. Between April 15th and May 6th of that year he ran a series of short sound films at the Rivoli Theater in New York. A total of some twenty-five films were shown that year using his new Phonofilm system. In 1924 he recorded speeches by President Coolidge, Senator Robert La Follette and other public figures. He even produced a two-reel comedy entitled Love's Old Sweet Song, which starred Una Merkel. This was the first all-talkie to be made with a fictional plot. The same year he recorded Hugo Riesenfeld's score for The Covered Wagon, and ran it with the film at the Rivoli during evening performances (5:00 to 7:00 P.M.) when the orchestra was having its dinner break. In 1925 he showed films in a theater built just for talking pictures at the British Empire Exhibition in England. By the end of 1925 Phonofilm equipment had been installed in thirty-four American movie houses.

Lee de Forest made attempts to sell his system to William Fox of Fox Studios, but failed. Fox was later to adopt the Case-Sponable Movietone system, which he felt was in a higher state of perfection, although not as widely known as de Forest's Phonofilm. This was unfortunate for de Forest since he not only invented the amplifying tube which made radio, television, and sound film possible,
but he worked so hard to promote the sound film itself.

Western Electric and Others

During the years 1923-1925 Western Electric and their parent company Bell Telephone experimented with both the sound-on-film systems, like Phonofilm and Photophone, as well as sound-on-disc systems. By 1925 they had developed a reliable synchronization motor which could run both a film projector and phonograph. Their success with this invention will be detailed in the next chapter. It is mentioned here to provide a conclusion to the developmental stage of synchronized sound systems.

The major achievements in the development of both synchronized sound systems have been outlined in this chapter, but those experiments that were mentioned do not provide a summation of the total effort put forth during those years to equip the film with sound. Both in Europe, and in the United States, similar experiments were being conducted duplicating, in many cases, those few inventions described in this chapter.

Work was being done by Pathe Freres, Leon Gaumont, Eugene A. Lauste, Tri-Ergon Corporations, R. and E. Singing Picture Co., and Webb Talking Pictures (both using the J. R. Muselaphone system), Cartella Talking Picture Machine Company (using Western Electric receivers and transmitters), C. H. Verity Talking Moving Picture system
(called the Veritiphone), and Orlando E. Kellum. Doubtless, there were others, but the listing of these few will serve to point out that quite a bit of work was done in the field to provide the film with a voice.

Summary

In summary, there were two major types of sound synchronization being developed simultaneously, beginning around the turn of the century. There was the synchronized mechanical method, employing a phonograph recording and motors, or machines to synchronize a printed score; and there was a series of photographic methods using an intermittent light source, activated by electrical impulses which were controlled by the sound source. The first form resulted in the popular sound-on-disc method used in the middle 1920's which provided a higher quality sound than the photographic sound-on-film methods. This was because the disc recording techniques were superior to the photographic systems until later in the decade.

Experiments with both kinds of systems were detailed in order to better understand the developments that took place later in the decade of the 1920's which affected the motion picture score. Chapter 3 will continue from this point on in the chronology, and will detail the application of both the sound-on-disc and sound-on-film systems in their perfected states from 1926 to 1932.
NOTES TO CHAPTER 2


2. Ibid., p. 2.


4. Ibid., p. 100.

5. Ibid., p. 28.


9. A forty-six minute version of Faust was made with a synchronized sound score sometime between 1901 and 1906. The exact date is unknown.

10. The information presented here is based on material in both Manvell and Huntley's The Technique of Film Music, p. 17, and MacGowan's "The Coming of Sound to the Screen," p. 137.

11. London, Film Music, pp. 66-68. These various inventions seem to be of European origin since their descriptions are found in Mr. London's book and have not been found in the other sources used as reference material for this paper.

12. Ibid., pp. 100-101.

13. Ibid.

14. Ibid.

15. Ibid., p. 102.

17. Joel Swensen, "The Entrepreneur's Role in Introducing the Sound Motion Picture," Political Science Quarterly, LXIII (September, 1948), 408.

18. Ibid.

19. This information is based on material found in both Swensen, "The Entrepreneur's Role in Introducing the Sound Motion Picture," 408, and MacGowan, "The Coming of Sound to the Screen," p. 140. Only brief descriptions of these achievements are given in these texts. This is sufficient for this chapter since its purpose is not to give a technical description of each item, but rather to summarize the events leading up to the perfection of the sound-on-film process in order to study its effect on the film composers.

20. MacGowan, "Coming of Sound," pp. 140-142. This summary of de Forest's activities during the middle 1920's serves to point out the leadership that this inventor showed to get public attention tuned for sound films. Details of the Fox Movietone development will be outlined in Chapter 3.

PART II

DEVELOPMENTS IN MUSIC SCORING

TECHNIQUES FROM 1926 TO 1935
INTRODUCTION TO PART II

In Part I of this paper the development of audio for the silent motion picture was described in two chapters. First, the development of the music itself, then the achievements with mechanical devices - both being perfected on parallel courses by the middle 1920's.

In Part II, the application of these artistic and technical achievements will be detailed. Chapter 3 continues the chronology of the technical perfection of both sound-on-disc and sound-on-film systems, and their application. This is done to provide a continuity with Chapter 2. Chapter 4 explains the increased scarcity of film music between the years 1926 and 1931. The reasons for this decrease in the amount of music are described, as well as the internal re-organization that began within the field of film music. In Chapter 5 the re-birth of the film score is described, including the growth of the state of the art in the early 1930's. It concludes with the maturing of a symphonic, yet original, form of music. This has become the standard up to the present. Short biographies of several musicians are included in this.
chapter in order to present a background of their work, and to show the leadership that they provided in the growth of the score during the 1930's and 1940's. Chapter 6 will detail the statistical information regarding quantities of scores, types of recording processes, and other data important to the first few years of the sound film. This is done to support the conclusions made in Chapters 4 and 5.
CHAPTER 3

APPLICATION OF SYNCHRONIZED SOUND SYSTEMS BETWEEN 1926 AND 1935

Introduction

It is the purpose of this chapter to explain the uses and further developments of the sound systems that were described in Chapter 2. This is done to keep a chronological order and continuity with the last chapter. The sound-on-disc system of providing synchronized music and dialogue will be detailed first because of its earlier success. A description of this system, followed by its operation, and final abandonment, will comprise the first part of the chapter. The next part will describe the sound-on-film technique, its variations, and uses. Lastly, other technical achievements that were important to the industry will be mentioned.

Perfection of the Sound-On-Disc

The technical process of the sound-disc was much the same as that of the standard phonograph record of the
1920's. Sound impulses were picked up by a microphone, amplified, and sent through an electric "sound cutter" which would make impressions on a wax disc. This master recording would then be used to mass-produce the records. It was at this production stage that the sound-disc differed from the standard commercial record. The disc used in the theaters for sound was sixteen inches in diameter, as opposed to ten or twelve inches on the standard commercial records. They were recorded at a speed of thirty-three and one-third revolutions per minute, instead of seventy-eight. Also, in playback the needle of the player traveled from the inside of the disc to the outside edge.¹

**Advantages over sound-on-film**

Technically, the sound-disc quality was much better in the mid-1920's than the sound-on-film designs. Although this latter design was being used by Lee de Forest from 1923 on through the decade, the quality of his system was very poor compared to the disc. Theater managers were not about to risk box office receipts on an unperfected system. Actually, the quality did not match the discs until about 1929.² Unfortunately for de Forest, William Fox, the leader of the movement for a quality sound-on-film system, bought the Case-Sponable design.

Another advantage that the disc had, and a reason for the easy applicability to the movie house, was that
most of these houses had phonograph players already installed in them. Music was played as overtures, or between films during the intermission. The projectionists were familiar with their operation and readily accepted the new synchronized sound systems that used the disc.³

With the perfection of a belt and pulley system incorporating a single motor to run both projector and turntable, the sync was very good. A perfect performance soon became the rule, and the awkward, out-of-sync screenings did not happen too often.⁴

Application of the discs

This linkage between projector and turntable was accomplished by the use of one special synchronizing motor which was connected to both machines. It repeated the recording process which consisted of both camera and recording machine run by a similar motor. A flexible coupling system made the connection, hooking up the motor to both machines. In early experiments standard commercial records were used in the theater to provide a cheap musical score for the films. This set a precedent for the use of two or more turntables to provide continuous music.

These turntables had an overlapping control system, much like a standard audio console used for radio. A separate gain control was available for each turntable allowing the operator to segue from one disc to the next.
In some later applications of this system a third turntable was used for sound effects and/or bits of dialogue. The control board enabled the operator to mix whatever sound sources he needed for the performance. The dialogue or effects record could be played while a music disc was running. All he had to do was lower the volume of the music and play the third disc.⁵

There was one method of changing records which didn't rely too much on the skills of the operator. It was almost automatic. At a pre-determined point of the show, a metal cell, which was attached to the edge of the film, caused an electric connection which switched on an electromagnetic coupling, beginning the second turntable. This metal cell was at a spot on the film which enabled the second table to get up to the proper speed before the sound was turned on.⁶ Operators became very proficient with the equipment, so that, barring accidents, the segues often went unnoticed.

Combining cue sheets with discs

Cue sheets were soon provided with the records and were called "illustrative scores." They contained details of the exact length of film to be used for each record. A device was developed which was attached to the projector and counted the feet of film that passed through it. By means of this counter, called a Cinometer, and the cue
sheet, the operator had no trouble knowing when to begin or stop a particular record. It even became so exact an art that the cue sheet often indicated footage markings telling when the volume should be lowered or raised.

The music for an average length feature using this system would require some thirty or forty records, each with the same music (or dialogue) on both sides of the disc. This was done in order to insure a "soundtrack" even if the records were to become damaged. 7

Use of commercial recordings

Commercial records were used during the early application of this system in much the same way that prepared music in the form of scores was circulated for live musicians. An example of this kind of cuing, using commercial records with a major feature film, can be seen in a page from the circulated cue sheet for The Adventures of Prince Achmed:

<table>
<thead>
<tr>
<th>Cue</th>
<th>Start Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Title</td>
<td>Beginning</td>
<td>Daphnis and Chloe, Pt. 1 (Ravel)</td>
</tr>
<tr>
<td>Title: &quot;Great was the might of the African Sorcerer . . .&quot;</td>
<td>Beginning</td>
<td>L'Apprenti Sorcier, Pt. 1 (Dukas)</td>
</tr>
<tr>
<td>Title: &quot;Far and wide . . .&quot;</td>
<td>1 in. from beginning</td>
<td>Love for Three Oranges, Pt. 1 (Prokofieff)</td>
</tr>
<tr>
<td>Scene: Magic horse followed by Sorcerer</td>
<td>Beginning</td>
<td>L'Apprenti Sorcier, Pt. 1</td>
</tr>
<tr>
<td>Cue</td>
<td>Start Position</td>
<td>Name</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>----------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Scene: Birds in air (yellow) - just after 2nd scene of Sorcerer bowed down before Caliph</td>
<td>About Center</td>
<td>The Fire Bird, Pt. 3 (Stravinsky)</td>
</tr>
<tr>
<td>Title: &quot;East of the sun . . .&quot;</td>
<td>Beginning</td>
<td>Beno Mora, Pt. 1 (Holst)</td>
</tr>
<tr>
<td>Title: &quot;On a neighboring island . . .&quot;</td>
<td>1 in. from beginning</td>
<td>The Fire Bird, Pt. 4</td>
</tr>
<tr>
<td>Scene: Achmed beginning to chase Peri Banu</td>
<td>Beginning</td>
<td>L'Isle Joyeuse (Debussy)</td>
</tr>
<tr>
<td>Title: &quot;After journeying many miles the horse descended&quot;</td>
<td>1 in. from beginning</td>
<td>The Fire Bird, Pt. 4</td>
</tr>
<tr>
<td>etc. 8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The part numbers listed with the records indicate which disc from the album is to be used.

The original score for this film, and its application with a live orchestra, was described in Chapter 1. The Adventures of Prince Achmed is one example of the practice followed by some studios with their major films. Remember that the middle 1920's was a time of change for the films. This particular picture was released with both an original score for live musicians, and cue sheets for the use of commercial records.

Special film music discs

By 1928, with expertly synchronized original music and dialogue tracks, the practice of using commercial releases was abandoned. Records containing special movie
music was the next step. It began in the late 1920's and continued until the adoption of sound-on-film formats by all the major studios in the early 1930's. It was the practice of using specially-prepared discs that were not available to the general public.

These discs were either original, or adapted music, and were designed to fit various moods. They were called Kinothek records, which was the short version of the German Kinobibliothek (meaning "cinema library"). This was the title of Giuseppe Becce's book that detailed specific emotions and situations, and which suggested certain music for each. That was the purpose of these discs - to supply certain moods with an appropriate sound, without the use of live musicians. During the brief time that they were used the average theater would budget itself for a library of about three hundred of them.9

Reasons for abandoning sound-on-disc

The system of using pre-recorded discs disappeared by 1930. There were three primary reasons why. The inherent weaknesses in the two machine design caused its downfall. It was too easy for either the turntable or the projector to get out of sync. Second, even with one motor, there were still two separate items being played at the same time - the film and the record. Should sync be lost, it was almost impossible to obtain it again.
Third, records were damaged easily through handling, and they also wore out quickly.\(^\text{10}\)

Warner Brothers Studios, which developed the disc system with Western Electric, finally abandoned the use of discs in 1930. Part of the reason was these problems, and part was the improved quality of the sound-on-film formats. Warners adopted a sound-on-film system that year.\(^\text{11}\)

**Sound-On-Film**

**Two basic formats**

This sound-on-film process that was being developed during the 1920's, and which had been perfected by 1930, actually included two processes. Basically similar in design, the two forms were called optical sound reproduction, and consisted of variable density and variable width approaches.

The first controlled the amount of light that hit a sound drum in the projector by a series of horizontal lines which, when separated, allowed more light, and when packed together allowed very little. The amount of light striking the drum at any one moment controlled the tone.

Variable width operated in the fashion of two long bars running the length of the film, the distance between them governing the tone which was reproduced. Again, the
amount of light that fell upon a sound drum governed the tone.

Recording and playback

The method of recording was simple enough. A microphone picked up the sound, which was amplified, and fed into a circuit which included a gas discharge lamp. This lamp extinguished itself many times a second, depending on the frequency of the current generated by the sound sent to it. The lamp was located in the camera, within a box that had a thin slit in it. Just in front of the slit ran an unexposed film, at the same speed as the film that was recording the image. When developed, the two strips of film were married to form one print containing both images, the soundtrack and the picture. In projection, the soundtrack passed through a sound head, was illuminated, and a photo-electric cell in the sound drum picked up the light transmitting it to an amplifier by way of an electric current.12

The mechanics of this whole system of recording and playing back is basically what is still used today. Dialogue was recorded with the picture, music score done later, and for musicals and dance sequences, the music was recorded first so that the picture could be matched to it.
Post-picture synchronization

There were two types of post-picture synchronization that were used to add music scores. One was based on Carl Blum's Rhythmography. By means of a rhythmoscope, the rhythmogram was produced on the basis of text, or rhythm, and recorded by a rhythmograph. In simple terms, a paper tape with the imprinted music notation was run through a box at the same speed as the photographed film, so that it could be synchronized with the picture. Sometimes this tape was run through the box to be viewed only by the conductor, and sometimes it was projected onto the screen. This last method was used for singers so that they could easily match lyrics with the picture.

The second system was called the Topoly system. This used a rotating dial, or reel, about three feet in diameter. The text of music was set onto circular staves that were mounted on the reel so that the notation was arranged in squares. Each square was identical in time lapsed with ten frames of the film. These boxes were viewed through a window which remained in one position, the reel moving behind it at the same speed as the camera and projector. One complete circuit of the reel was equivalent to 1,000 frames of film.¹³

A Late Form of Physical Sync

Now that detailed accounts of both sound-on-disc and sound-on-film systems have been given, yet other attempts
were made to synchronize sound with picture. Experiments which were different than the developing systems thus far mentioned. Edwin Evans, writing in the journal, Music and Letters, in the year 1929, spoke of a certain film which he viewed the summer before containing a score of original music by Paul Hindemith which was reproduced in an unusual manner:

(The score was) performed by means of a perforated roll synchronized with the projector, upon an instrument of the piano-player type. The pneumatic mechanism operated by the perforated roll is also capable of being installed in organs, a recent type of which has become an almost indispensable adjunct to the cinema.14

**Technical Reasons For A Decline In Film Music**

During these formative years (1926-1930), when the novel thing was the talking picture, there was less and less music being written and recorded for films. The details of this decline will be outlined in Chapter 4, but it will serve a purpose to explain some of the technical reasons for this decline in music output in this chapter.

The ribbon microphone was not developed until 1931 and was first demonstrated in that year. Dialogue could be picked up satisfactorily on a condenser mike, but one of higher quality, like the ribbon, was needed for music. When music was added to a film in the late 1920's, the quality was often so poor, that live musicians were preferred.
Also, during the years 1931 and 1932, RCA and General Electric were developing methods of obtaining uniform speed in film movement through camera and projector. Before this time a "wow" or flutter was common in sound reproduction if the speed changed, which was quite disturbing to the audience. It was not too noticeable with dialogue, but the sustained sound of a musical note was destroyed when this happened. Dialogue came in quick, short bursts, but variations in film speed really broke up a sustained note or combinations of tones.

The solution was to increase the film speed from the standard sixteen frames per second to twenty-four. This increase of fifty percent resulted in two improvements. Any slowing of the film would not cause as much of a disturbance to the soundtrack, therefore causing attention to be drawn to its interruption. Also, the increased speed aided in the recording's fidelity. The faster the unexposed film traveled when it was being recorded upon by the light source, the better the frequency response.15

Summary

It has been the intent of this chapter to explain the various major sound systems, their recording procedures, operation, and advantages and disadvantages during the late 1920's. The sound-on-disc system came to commercial use before any sound-on-film system because it adapted
existing techniques from the recording industry and radio. But, the sound-on-film process, something unique to the time, proved to be the more capable system because it was designed specifically for film.

It is important to understand these systems for a more complete understanding of their effect on the motion picture score during those years. This effect on the music will be the subject of Chapter 4.
NOTES TO CHAPTER 3


5. London, Film Music, p. 87. Not so surprising a usage considering the widespread growth of radio by 1926. This use was simply an adaptation of existing practices.

6. Ibid., p. 106.

7. Ibid., p. 89.


10. Ibid., p. 107.


13. Ibid., pp. 115-116. The explanation given by Mr. London is sketchy at best, either due to his lack of complete description, or the incomplete translation from the German.


CHAPTER 4

THE ABANDONMENT OF MUSIC
FOR A "TALKING" FILM, 1926 TO 1931

Introduction

In this chapter it will be explained how the technical developments made during the silent years, with regard to sound synchronization, affected the whole film industry. Beginning with the Warner Brothers experiments, and eventual success, and the introduction of Fox's Movietone, the immediate impact on the Cinema will be described. This impact was felt by musicians, audiences, theater owners, producers, critics, and the artistic quality of the film itself was changed. Also, the effect on the music score itself will be detailed.

Warner Brothers and Vitaphone

An account of the Warner Brothers experiments and successes will serve two purposes. The first is to give an historical account of the major steps taken by this studio to introduce the sound film. The second is to
show that it was not the artist or the inventor who took these steps, but the businessman.¹

An agreement with Western Electric

In 1925 Western Electric, and their parent company Bell Telephone, were ready with their version of a reliable sound-on-disc system. One thing held them back. This was pressure from two very influential groups, the motion picture producers, and the exhibitors. The producing organizations were content to keep going with a proven product rather than risk capital in experiments with a new process. All their money was tied up in equipment and feature players. Pretty much the same could be said for the exhibitors. They were enjoying prosperity with a silent product. Remember, there was economic prosperity, and social optimism in the middle 1920's. Also, these exhibitors had commitments with performers, both musicians to play music for films, and live acts that ran between shows. For the larger movie houses this live entertainment kept their seats filled even on the second or third run of a film. The acts were changed regularly. A sound picture would have given their competition the same product, and would enable them to show it with a lower overhead.

So, until 1925 no progress was made against these pressures. It was in that year that an engineer working
at Western Electric went to see Sam Warner. He told Warner about their success, and invited him to attend a demonstration at the Bell laboratories. Sam liked what he saw, and told his brothers, Harry, Albert, and Jack, about the demonstration. Together they agreed to try the equipment.

Their reasoning was sound business speculation. They were a successful studio, but one of the smaller ones in Hollywood. If there was any way to compete with the larger ones it would have to be with a better product.

They began experiments in New York with a crew of cameramen, actors, writers, directors, and musicians from the studio, and a crew of technicians from Western Electric. They knew that the addition of sound to a film was not enough to make the combination work. It had to be sound coming from a good film. This is why the writers were called in to work with the engineers. The competition in town, and in Europe, was turning out very sophisticated fare by 1925.

This experimental crew met with many early problems. The microphones were picking up the sounds of the camera, no matter how they were placed; passing subway trains could be heard; and the cooing of doves that were in the roof supports of the studio was also heard.

But, after a lot of work, in the spring of 1926 the Warner brothers were convinced that they had a product
that could be released to theaters with a good chance for success. They formed the Vitaphone Corporation in April, which consisted of the Warner Brothers Studios and Western Electric. The two of them then entered into a formal license agreement.

**Don Juan**

Instead of trying to take too large a step at once, they decided to use their apparatus to add music to an already-produced film. Don Juan had been completed in December of 1925 with popular favorite John Barrymore in the title role, and with Jack Warner as producer. The release of this film was held up so that it could be part of a special premier performance of the Vitaphone equipment.

The entire program consisted of a speech by Will H. Hays, then president of the Motion Picture Producers and Distributors of America, operatic and concert stars who were recorded on a special short film, and the feature, Don Juan. The opera stars included Metropolitan Opera tenor Giovanni Martinelli, Metropolitan Opera sopranos Marion Talley and Anna Case, violinists Mischa Elman and Efrem Zimbalist, and pianist Harold Bauer. Henry Hadley conducted the Philharmonic Orchestra.

The premier was held on August 6, 1926, at the Warner Theater in New York. Audience and critics alike enjoyed
the performance and hailed it as quite an achievement. A statement by science professor Michael I. Pupin from Columbia University typified the audience's reaction: "No closer approach to resurrection has ever been made by science."

A struggle for acceptance

Despite the talk stirred up by this presentation, the theater owners were not quick to wire for sound. Depending on the size theater, and the equipment needed, costs ranged from about $16,000 to $25,000. The problem was that Warners was a minor studio. Until the major ones began to provide talking pictures the popular slogan was, "talking pictures are just a fad. They won't last."

This is understandable. Consider the variety of sound synchronizers that had been used prior to 1926, and that many of them were not too successful.

This didn't deter the four brothers. To support their production they had sound equipment installed in theaters in Atlantic City, Chicago, Boston, St. Louis, Philadelphia, Hollywood, Detroit, and other cities, at the expense of the studio itself. Meanwhile, they added two more short talkies to the program and went out trying to talk owners into having equipment installed in their theaters.

There is one story that is told about Harry Warner
and his conversation with a theater man who refused the sound apparatus on the basis of its cost. When Warner asked him how much he had made in the preceding six weeks, the exhibitor replied that he had made about $1500. Harry asked: "If I can put in a Vitaphone that will cost you only $18,000, and give you a picture to play that will pay for the machine in one run, what do you care about the cost?" The equipment was installed, and on a six-week run the receipts totaled $108,000.

The Jazz Singer

In the summer of 1927, still maintaining a philosophy of quality sound films, the studio bought the talking picture rights to The Jazz Singer, a play by Samson Raphaelson. They hired Al Jolson to play the lead. It was planned to have several singing numbers in the film, but the remainder was to be silent, using the standard titles for dialogue and narration.

But, during a sequence when Jolson was singing in a cafe, the sound recording equipment was kept running in order to pick up the audience applause, and Jolson called out his famous lines: "Wait a minute! Wait a minute! You ain't heard nothin' yet." It was habit. A natural thing for a stage performer to do - talk to the audience. When Sam and Jack Warner, and the picture's director, Alan Crosland, heard this in the dailies, they liked it. In
fact, they liked it so much that, not only did they keep it in the picture, but they decided to incorporate a special talking scene into a later sequence. This was the scene in which Jolson talked to his mother while playing the piano.

The film opened on October 6, 1927, to a very enthusiastic audience. This popularity helped very much to convince theater owners to install sound equipment, and the demand for it increased before the year was out.

Widespread success

The following year a more elaborate film was produced by Warners entitled, The Lights of New York. The one major change in this film was the incorporation of all the scripted dialogue onto the Vitaphone sound equipment. This film then became the first all-talking feature. With its release, and subsequent success - the third in two years, the major theater owners in the country discarded their inhibitions about sound equipment, and had their theaters wired.

This was in the year 1928. In order for the Warner Brothers to get sufficient support to have a widespread demand for their Vitaphone equipment, they must have been the number one choice on everybody's list. This was not an easy thing to accomplish. Other, bigger studios were experimenting with rival designs, and their progress was
being followed by the exhibitors. But, as can be seen in Table 3, there was sufficient faith in the Vitaphone process to have an effect in the latter part of 1928.

**TABLE 3**

**NUMBER OF THEATERS TO HAVE VITAPHONE EQUIPMENT, 1927-1928**

<table>
<thead>
<tr>
<th>Approximate date</th>
<th>Number of theaters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall, 1927</td>
<td>100</td>
</tr>
<tr>
<td>June, 1928</td>
<td>220</td>
</tr>
<tr>
<td>Dec., 1928</td>
<td>1046</td>
</tr>
</tbody>
</table>

Source: Joel Swensen, "The Entrepreneur's Role in Introducing the Sound Motion Picture," *Political Science Quarterly*, LXIII (September, 1948), 414.

This introduction of the sound film by Warner Brothers, although glamorous, and setting several "firsts," was really just an interim period in the history of the talking film. It is true that the studio helped to set the pace for the introduction of sound on a speculative basis. Warner Brothers Studio made a big gamble using this equipment, and it seemed to pay off for them. But, they were soon to drop Vitaphone. Remember that this system was a sound-on-disc design that Warners finally abandoned in 1930. But, between 1926 and 1930 it helped to raise the studio to the status that its owners had wanted. Financially, at least, the studio had increased its size many times in just a few years.

In order to analyze the results of this gamble on
their part, note Table 4. It illustrates the financial success that the studio had during a ten year period.

TABLE 4
ECONOMIC STATUS OF WARNER BROTHERS STUDIO, 1925–1936

<table>
<thead>
<tr>
<th>Fiscal year ending</th>
<th>Total assets</th>
<th>Net profit</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar. 31, 1925</td>
<td>5,186,000</td>
<td>1,102,000</td>
<td>1,338,000</td>
</tr>
<tr>
<td>Mar. 27, 1926</td>
<td>10,683,000</td>
<td></td>
<td>279,000</td>
</tr>
<tr>
<td>Aug. 28, 1926</td>
<td>10,754,000</td>
<td></td>
<td>30,000</td>
</tr>
<tr>
<td>Aug. 27, 1927</td>
<td>15,913,000</td>
<td>2,045,000</td>
<td></td>
</tr>
<tr>
<td>Aug. 31, 1928</td>
<td>15,785,000</td>
<td>14,514,000</td>
<td>7,075,000</td>
</tr>
<tr>
<td>Aug. 31, 1929</td>
<td>167,189,000</td>
<td>7,919,000</td>
<td></td>
</tr>
<tr>
<td>Aug. 30, 1930</td>
<td>230,185,000</td>
<td></td>
<td>14,095,000</td>
</tr>
<tr>
<td>Aug. 29, 1931</td>
<td>213,857,000</td>
<td></td>
<td>6,292,000</td>
</tr>
<tr>
<td>Aug. 27, 1932</td>
<td>182,728,000</td>
<td></td>
<td>2,531,000</td>
</tr>
<tr>
<td>Aug. 26, 1933</td>
<td>169,791,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 25, 1934</td>
<td>168,314,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 31, 1935</td>
<td>168,472,000</td>
<td>674,000</td>
<td></td>
</tr>
<tr>
<td>Aug. 29, 1936</td>
<td>173,009,000</td>
<td>3,177,000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Swensen, "The Entrepreneur’s Role in Introducing the Sound Motion Picture," 417.

After the experimental years of 1925 and 1926 the studio changed their fiscal year to correspond with the theater season. Note the profit gains in 1927, 1928, and 1929. But, also note that their profits were cut in half in 1930, the year that they changed to a sound-on-film system. It took a few years to return to a profit status. The popularity of their Busby Berkeley musicals, which began to see distribution in 1933, helped the company too.

Even with setbacks during the early 1930's, the total assets of the company leveled off at about 168 million dollars. This was more than a 1,000 percent increase
during a five or six year period.

William Fox and Movietone

Although Warners began early, they went ahead very slowly. Don Juan, The Jazz Singer, and The Lights of New York were important films, but they each appeared in a different year. This pace allowed Warner's chief competition, Fox Studios, to develop and quickly pass them up.4

Early organization

In July of 1926 William Fox signed an agreement with Theodore W. Case and E. I. Sponable to form the Fox-Case Corporation.5 Case and Sponable were the inventors of the Movietone sound-on-film system. Six months later they were ready to exhibit their product. On January 21, 1927, their first program was presented at the Sam Harris Theater in New York. It consisted of several Movietone shorts and a silent feature, What Price Glory? The presentation was for the shorts since the feature was already in circulation, having been released two months earlier on the 26th of November, 1926.

On February 24, 1927, Fox presented a more elaborate program to newspapermen, emphasizing the advantage that Movietone had, which was the recording of sound directly on the film eliminating the need for synchronization. It is ironic that the amplifiers, microphones, and speakers
used for this exhibition were supplied by Western Electric. Only the AEO light recording apparatus was a product of Fox-Case.

**Fox Movietone newsreels**

On April 28, 1927, Fox presented a preview of his forthcoming series of newsreels which were entitled the Fox Movietone News. This exhibition took place at the Roxy Theater in New York. Primarily it consisted of shots of West Point cadets marching on a parade ground. This helped to point out the mobility of the equipment, by shooting and recording outdoors. This series of newsreels helped more than anything else to promote the Movietone system. Beginning in the summer of 1927, Fox went ahead with the release of these shorts, increasing their number, so that by the summer of 1929 four newsreels were released each week.

Fox was enough of a businessman to realize the box office draw of popular news items. His second newsreel, released in June of 1927, showed President Coolidge greeting Charles Lindbergh on his return to America following his trans-Atlantic flight.

**Movietone features**

Not to ignore features, Fox presented F. W. Murnau's silent feature, *Sunrise*, with a complete music score on
September 23, 1927. Although this silent film with its added score was released a full thirteen months after *Don Juan*, the potential for a single system, sound-on-film process was recognized. Details of how many films were made with each system will be found in Chapter 6.

Fox didn't release an all-talking feature until early in 1929. On January 20th of that year he premiered the film *In Old Arizona*. This picture was not only Fox's first all-talkie, but it was the first sound feature to be shot outdoors, again emphasizing the advantages of the more mobile Movietone system. By March of that year Fox announced that his studio was all-sound, and had ceased making silent films.

**Many Sound Experiments**

There were other studios which followed the lead of Warners and Fox, first releasing recorded scores with silent films, then partial talkies, and finally all-talking pictures. But, these other studios were either uncommitted, unlike both Warners and Fox, or they lacked the technical product. Therefore, history singles out only these two studios as being the industry leaders. It took a few years for sound to be accepted. Even as late as 1929, three years after *Don Juan*, some critics were very skeptical: "sound," they wrote, "only added confusion." 6

Yet, advances were made by the enterprising business-
men and inventors. The Eastman Kodak Company established a sound-on-film department. Under Dr. Otto Sandvik this division began to experiment with the idea of photographic sound recording, processing, and reproducing. During the next several years they made several contributions to the field.7

David Sarnoff, vice-president of the Radio Corporation of America, and Joseph P. Kennedy, president of Film Booking Offices, announced that film recording equipment that was developed by General Electric and Westinghouse was ready. This was on January 6th, 1928. The commercial product was the RCA-Photophone process, one of the several sound-on-film processes to be widely used in the next few years. They had their first theater equipped, and released FBO's The Perfect Crime with this system on August 4, in the year 1928.8 This picture was the first non-Warner talking feature.

Specific Uses of Sound

All but a few of the films released in the years 1927 and 1928 were silent films that had some sort of live musical accompaniment. The methods used were pretty much the same wherever the film was shown. They were fitted with appropriate music moods. But, with the introduction of synchronized sound in the form of music or dialogue and effects, there emerged two different kinds of films: those
that had a continuous, pre-recorded score either on a disc or on the film's soundtrack, a score exactly like the kind used in the silent theater; and those that omitted music altogether, using sound only for dialogue and effects.9

This split in philosophies and uses began with the very novelty of sound. During those early sound years every "noise" was a cause for rejoicing. Noise was something new, music had always been with the film, coming from either a pianist or an orchestra. This source of music was visible, an accepted part of the silent film. It was something that had always been separate from the picture, merely working alongside the film to present total experiences for the audience. But, sound effects and dialogue were something different. Since the speakers were located behind the screen, or built into a wall out of sight, the source of the sounds seemed to be the projected image. Also, the illusion was completed when the actions of the photographed actors resulted in a sound.

In this new sound picture, music was controversial because of its prior use and tradition. It had always been continuously played through a scene. The result was that now a conflict with other sounds was apparent. This caused sound scores to go through various stages of development. The progression of the sound film itself consisted of a period of purely noise films that was followed by dialogue films and sound-film operettas.10 Roger Manvell and
John Huntley described the situation in their book, *The
Technique of Film Music*:

The first immediate gain in the sound film was the human voice; the second was the addition of natural sounds. It was inevitable that the film had to pass through a phase in which human speech and natural sounds were introduced for their own sakes. These were the novelty; music as such was not. Singing, however, merely because it combined words and music, exploited the new sound film for the public... But most straight dramatic films, after the first relatively brief phase of a continuous synchronized musical background, tended to dispense with music as far as possible in favour of continuous dialogue.11

**Loss of Film Art**

On a wider scale it can be said that with the coming of sound motion pictures suffered a loss of artistic quality that not only included music, but many of the other elements that go into making a good film. Many silent actors were out of a job due to their inappropriate voices. Camerawork had to be sacrificed for placement of the microphone. Scripts tended to be reworkings of stage products with plenty of words thrown in. Theatrical presentation was paramount.

Just as the silent film had taken years to develop into a blending of camera shots, editing, acting and storyline, so did it take years for the introduction of sound to blend with the photographic art. Music, along with the other elements of production, had to learn how to be restructured, so that a continuity and blend of all the sounds with picture could be achieved.12
This period of several years, approximately 1928 to 1931, when the use of sound interrupted the aesthetic development of the film, was not solely a condition of the American film. It was noticed in Europe as well as in the United States. Kurt London, a German, wrote in 1936 that: "European film production had completely lost its nerve in face of the assault made by the sound film."13

The situation was a result of the continuation of the attempts made in the 1890's to add sound, in fact the subject matter was much the same: talking faces and musical numbers. Technology finally had, in the late 1920's, what it had lacked at the turn of the century: the loudspeaker, amplifiers, microphones, and other machinery. Edison, Lumière, and Messter all had synchronized sound. But, it was the addition of these later refinements that caused this renewed interest in sound films.14

The Music Score in Trouble

The result of these achievements was a period of cheap films that lacked taste. Kurt London wrote about the problem from the musician's viewpoint: "... film music had a hard struggle in this age of formlessness, mental shallowness, and complete artistic chaos."15 The music score was very much in trouble. Harry Alan Potamkin, writing in 1929, pointed out the commercial motivation of using music in the sound film, which was just then starting
to reappear:

Music in the sound-film is being thought of solely as an experience as yet novel. It is thought of solely as a commercial reduction in costs, as a commercial advantage to the small house, as a commercial attraction to the audience.16

But, before music was to achieve a status as high as it had prior to 1927, those people who created the music were to be in financial trouble. It is widely known that many actors lost jobs with the coming of sound, but the profession that was hardest hit was that of musician. Remember, that not only did most large theaters maintain a complement of from three to thirty musicians for an orchestra, but the studios themselves hired many. One of the reasons for the firing of musicians in the late 1920's was the excuse that the cost of sound equipment hurt their budget. Therefore, they did not invest in recording equipment to provide a full orchestral score. The studios merely released dialogue-only films.17

Edwin Evans, writing in 1928, spoke of the employment situation:

It is estimated, on the basis of union statistics, that picture theaters, great and small, are now providing between three-quarters and four-fifths of the paid musical employment in the country.18

Continuing, Mr. Evans discussed the argument that cinema music was cheapening the musical profession, and that there was an "undeclared policy" of placing the cinema "out of bounds" for reputable musicians. This was a movement from within the profession to keep musicians from
writing or performing music for films. Mr. Evans spoke of an opposite movement by some musicians to increase the artistic quality of the film medium:

... that the struggle need not have been a hopeless one is proved by the remarkable amount of good music that has, in spite of all, found its way into the cinema.\textsuperscript{19}

To support the belief that cinema music was not a bastard offshoot of accepted serious music, and that it was indeed an art form, Mr. Evans described its peculiar characteristics:

... in the music of the cinema, the stage of adaptation was similarly primitive, and that a new form corresponding to music drama was the goal towards which, however remote it may have seemed, the efforts of pioneers must tend. But, in the absence of musical pioneers, adaptation has developed a technique of its own which, crude as it may seem to its outside critics, nevertheless demands no inconsiderable skill on the part of those who exercise it.\textsuperscript{20}

Thus, with these figures on the number of musicians who were hired to provide music in the theater, and their apparent skill, which provided an art form, the film lost a very important artistic element during the first few years of the sound era.

Yet, it seems that the individual musicians were not too antagonistic towards the machines that caused them to lose their jobs. Harry Alan Potamkin looked at the situation objectively, and again from the point of view of the artist versus the businessman: "There is no quarrel between the mechanical and the non-mechanical, the quarrel is between the artistic and the non-artistic."\textsuperscript{21}
Regardless of how certain individuals felt, the musicians' unions, obviously hurting from the unemployment of their members, adopted anti-recording policies in 1929. This was the year that approximately half of the features released in this country were of the sound/no music variety.22

Groups Antagonistic to Sound Films

Aside from the musicians and their unions there were other groups that were against the use of sound during the first few years of the talking film. These included both filmmakers and audiences alike.

Film Producers

Most producers were not happy with this new dimension of sound. Many of them had films in production, or awaiting release when Warners and Fox were experimenting with their systems. To have to compete with this new type of film was not something the average producer was eager to do. In Europe there was a movement to try to postpone the coming of the sound film. The lack of funds needed to equip for it, together with the time needed for the technicians to learn how to use the equipment even if the funds were available, prompted this movement.23 Germany, which had been a world leader in the growth of film art during the 1920's, was experiencing severe economic problems.
Restrictions made upon that country following World War I, together with general economic problems, had caused them to enter into a depression several years before the United States entered one. Increased overhead for the filmmakers was not welcomed.

Film Critics

Certain members of the film audience also disliked some of the early uses of sound. The following is part of the review for White Shadows of the South Seas which appeared in the New York Times in 1928:

White Shadows is Metro-Goldwyn's first "sound" film and it deserves nothing on that score save the word "average." (Monte Blue) trying to attract attention, once calls "Hello," but not being much above a whisper, the result is a bit ridiculous. A group of male voices heard every now and then is also unfortunate.24

One of the early problems with sound films was the problem of mixing music to provide a proper balance. An early film which had a synchronized music score added to a silent visual picture was The Patriot. Released in 1928, the reviewer from the New York Times had this to say about its score composed by Gerard Carbonara and Domenico Savino: "The synchronized music score is, however well arranged, although a little too loud during certain periods."25

Music Critics

Harry Alan Potamkin spoke out against another use of sound and picture in 1929. He wrote about a German
innovation called the Kino-Oper, or Film Opera. This was an early filmed series of operas. Potamkin specifically mentioned the author of the stories, Hans Heinz Ewers, and the composer, Joseph Weiss:

(they) have joined to create what to me is not an art, but a monster . . . to have shadow-forms sing, well, isn't that the contraption of the Vitaphone, the Movietone, etc? Why not attach a phonograph to the Mona Lisa?26

**Technical Imperfections**

It was noted earlier that one of the primary reasons for the abandonment of the music score in favor of the noise and dialogue tracks was the novelty of the idea. The tradition of a constant surge of music conflicted with the new sounds that were now present. This was only one of the reasons for the decline in music output during the late twenties. The other was technical.

To cut the film, for any reason, was to damage the score. There was a growing problem of censorship in Hollywood during those years, and a cut scene would ruin the score, whichever form of recording was used. If it was a sound-on-film process, a loud noise was heard. If a disc method was used, the records became completely useless. At the very least a continuity problem existed.

Then, there was the technical inadequacy of the original recording itself. Remember, the ribbon microphone was not developed until 1931. For the recording of music
new aesthetics of sound had to be developed. The microphone reproduced sounds dependent not only on instrument selection, but on room acoustics and the positioning of the mike in relation to the instruments.27

Once these logistics were arranged there still remained the five stages of tone mutilation as listed by Kurt London in 1936:

1) The sound is photographed.
2) It is printed from the negative onto the positive.
3) Mixing music with other sounds, noises and speech. Consider the noises of three spools on the recording and mixing machines.
4) The result is then printed on a synchronized copy, including pictures.
5) The sound-picture strip which is thus made runs through the projection unit and reaches, after amplification, its final goal, the loudspeaker.28

Although the process is pretty much the same today as it was in 1936, the technical quality of the machines is much better. Considering these five stages, after the use of an inferior microphone, weaker amplifiers, and inefficient speakers, it is no wonder that music was generally omitted from the soundtrack. It sounded poor.

A Return of Film Art

Now that all the problems of music have been outlined, it is time to explain how the score re-emerged. Beginning in 1929 and continuing into 1930 there was a slow movement to regain the dramatic potential of film with this new dimension of sound. Artistic value was considered. The actors were learning how to be heard without obviously
Fox's film of early 1929, *In Old Arizona*, despite the problems with outdoor shooting, was a good dramatic film. *Disraeli*, released in October of 1929 by Warners, was also a superior artistic achievement. *Laughter*, a film by Harry d'Abbadie D'Arrast that was released in 1930, received the following complement from John Gilbert: "The first thing that strikes one about *Laughter* is its awareness of the importance of good, speakable dialogue as an integral part of the scheme."  

By the end of the 1920's dialogue usage was beginning to improve, although music was still being ignored. But, this return of the well-made film, the artistic achievement which subordinated sound to a production element, was a beginning. It provided a philosophy of quality that was to set the stage for the re-emergence of the score. And this philosophy, as well as its practice, was not found in just a few studios. It was widespread by 1931. Some of the milestone pictures of that period were: *All Quiet on the Western Front*, a Universal picture of 1930; *Cimarron*, an RKO product of 1931; *Street Scene*, from United Artists in 1931; *Anna Christie*, an MGM picture of 1930; and *Holiday*, from Pathé, also 1930. These pictures all demonstrated a skillful use of dialogue.  

Some of these pictures had scores that aided in their popularity, but it was the wise use of perfected sound.
equipment that was to, first, provide sophisticated scripting, and then provide the capability for sophisticated music scoring.

Before concluding this section, it might be interesting to describe the actions of one great film director when he saw the inevitability of the coming of sound. Alfred Hitchcock had shot his film, Blackmail, as a silent film in 1929. But, before release, he re-shot a great deal of footage, and took the score (which had been written for the film for pit orchestras) and had it recorded on a soundtrack.32

Summary

The late 1920's was truly a transitional period for the motion picture. Various sound devices were being used. Although Warner Brothers first introduced the sound film with their Vitaphone equipment, Fox Studio soon had matched them in quality, then took control with a more efficient and practical Movietone process.

Films were silent, silent with score, silent with effects, part-talking, all-talking, all-music-and-dialogue, and all-singing. There was truly a variety as the emergence of sound changed the motion picture industry. This change was not welcomed by all: musicians were out of work, producers were against these new inventions, critics were skeptical of their worth, and all of the fears were
supported by the newness of the equipment and its unreliability.

Although film, as an artistic medium of expression seemed to weaken in the late 1920's, by 1931 the art was improving once again, setting the stage for the emergence of good music in the cinema. Chapter 5 will detail this slow growth and maturing of film music, following its development until it became an important component of the film once again by 1935.
NOTES TO CHAPTER 4

1. The details of the Warners experiments, including their release of Don Juan, The Jazz Singer, and The Lights of New York is based on information obtained from Joel Swensen's "The Entrepreneur's Role in Introducing the Sound Motion Picture," Political Science Quarterly, LXIII (September, 1948), 404-423.

2. A short production but especially tricky due to the lip sync that was needed.


5. The details of the Movietone development were obtained from Swensen, "The Entrepreneur's Role," 414-415.

6. Ibid., 415.

7. Ibid.

8. Ibid.

9. Manvell and Huntley, Film Music, p. 29.


11. Manvell and Huntley, Film Music, p. 31.

12. Ibid.

13. From his book, Film Music, p. 85, which was originally published in that year.

14. Ibid., p. 86.

15. Ibid., p. 121.


18. Edwin Evans, "Music and the Cinema," *Music and Letters*, X (January, 1929), 65-69. Actually these statistics were for the year 1928 since this journal article was published for the January, 1929, issue.

19. Ibid., 66.


23. London, *Film Music*, p. 84.

24. The New York Times Company, *The New York Times Directory of the Film* (New York: Arno Press, 1971), p. 29. Those "Male Voices" indicate a very indiscreet crew on the set. The microphones used in 1928 were not very sensitive, so they must have been making quite a disturbance to have been picked up.

25. Ibid., p. 28.

26. Potamkin, "Music," 287. Mr. Potamkin, it seems, favored a silent cinema since he also preferred to see the medium of film provide the characteristic art that it was so famous for, with "no outside help." But, this example serves to point out the awkward early attempts to combine music with picture.


28. Ibid.


32. Manvell and Huntley, *Film Music*, p. 27.
CHAPTER 5

THE MATURING AND REDEVELOPMENT
OF THE FILM SCORE, 1931 TO 1935

Introduction

Although quality was returning to the motion picture by 1931, it was restricted to production elements other than music. Music scoring for film had to develop even after the technical apparatus was perfected. This chapter begins with this development, then proceeds to explain the precise uses of the music. These new uses of music in film were slow in emerging, but once they caught on, a sudden increase can be seen in both the quantity and quality of the music.

It is the purpose of this chapter to describe this new score, its emergence, and final recognition as an important production element. This will be done in two ways. First, a chronological study of the achievements and improvements during those years will be made. Second, the presentation of several short biographies of some musicians who were instrumental in the development of this
A Slow Beginning for Film Music

Leonid Sabaneev, writing in 1934, noted the historical significance of technical achievements and the advancement of music:

... the perfection of the instruments is proportionate to the technical level of the age. In writing his music the composer has definite instruments in mind. But the advance in technical knowledge is now a matter of days and hours, and not of centuries.¹

He explained that individual artists rise to the occasion and become products of their age. Free-style composition, for example, owes its existence to the mobile keyed instruments:

... Chopin and Liszt were the product of the new type of grand piano, and Wagner of chromatic trumpets and enlarged concert-rooms.²

Yet, with the revolutionary new equipment available in 1931 (the electronic recording machinery), Mr. Sabaneev noted very little change in the apparent style of music by 1934:

The reason is that, through inertia, musical creation continues to flow in its old channels; it shuts its eyes, as it were, to what is happening around it... The musician still writes for orchestras, for instruments of the old type, regardless of the fact that an entirely new world of sound production has come into being... The cinematograph musician is the only one interested, and he belongs to a special category.³

One can understand his frustration when you remember the history of the fine arts. Russian artists have been leaders in both the fields of music and filmmaking for over
100 years. Recall the innovative use of music in Potemkin. Although Edmund Meisel wrote that score, much of the credit has been given to Eisenstein for inspiring him. So, Mr. Sabaneev was calling out for a continuation of this trend, and had in fact noticed it among certain composers in 1934.

The New Uses of Music

Before describing these specific achievements more information is needed about the philosophy of film music as held by musicians and critics of the early 1930's. Kurt London, writing in 1936, spoke of the turbid maturing period that the film was going through during this first decade of sound:

The sound-film has already, despite its youth, passed through several stylistic periods, without coming any nearer to the discovery of its own real appropriate style . . . We have . . . seen the lowering of musical standards in a short transitional period of mechanical experiment. When finally the technical character of the sound-film began to crystallise, after the sound-on-disc film was abandoned and the sound-on-film method . . . became the rule, then very gradually the artistic form of the sound-film began to follow in the train of a technique that had outstripped it by far.4

Although Mr. London noted the return of art to the film in general, he expected much more from the field of film music:

If it is true that the film, even in its purely commercial products, is supposed to be a form of art with a function to perform . . . then it is at least time to put a stop to these barbarous habits. Background music, in the sense in which it has hitherto mostly been employed, is nothing else but a return to the primitive film . . . We must not forget that the functions of music with the sound-film are of a fundamen-
tally different character from its functions with the silent film.  

A new philosophy

Mr. London continued to describe these differences. In the silent film the music was descriptive, it illustrated continually. But, in the sound film, music must connect scenes of dialogue without friction - it cannot be continuous. He called for a new kind of music which could both illustrate and interpret moods, a music that must not cause friction while uniting individual scenes consisting of dialogue. Of this music he wrote:

It has to establish associations of ideas and carry on developments of thought; . . . it has to intensify the incidence of climax and prepare for further dramatic action.  

This new type of score was much more difficult to write than the silent score. This was the reason why, even with perfected sound equipment, and a philosophy that encouraged a return to the arts, in 1931 no significant advancement in the quality of music was apparent.

Two separate uses

There were early attempts at providing some kind of music for the dramatic film. This developed into two philosophies of use. First, as part of the action, a "realistic" form developed. A typical use of this kind can be seen in Josef von Sternberg's The Blue Angel, made
in 1930. The score, prepared by Friedrich Hollaender, consisted of songs. Roger Manvell and John Huntley have described it in their book, The Technique of Film Music: "There is no 'background' music as such, although the film has an Overture for the opening titles . . . from then the music is used naturalistically."7

The second way of incorporating music into the film was in a "non-realistic manner. This was to use music for effects and for atmosphere. Together, or separately, these two forms slowly superseded the use of continuous background scoring as had been the practice of the silent musicians. It took time to invent a new form of composition.8

A radical view

With the prompting of artists and critics alike the beginnings of the new form of music slowly began to make itself known. It is not known how influential these music spokesmen were, but they were vocal. Paul Rotha, in his book, Celluloid, written in 1931, called for more use of music in a dramatic manner, and not so much emphasis on dialogue9:

It is imperative that experiment and study should be pursued . . . until a film is produced in which a story is told purely in terms of moving screen images, set to a mechanically-recorded score of real or distorted sounds interwoven with creative music.10

Possibly this is a bit radical, excluding the spoken
word altogether, but it shows that there was this outspoken movement to incorporate more serious music into the film.

1933 - An Important Year

The Russians lead the way

Pudovkin's *The Deserter*, which was released in 1933, had an experimental score that was important. The picture was Pudovkin's first sound film, and for it he selected Y. Shaporin to write the music. Speaking of this music for his film, Pudovkin wrote in 1933:

Music must in sound film never be the accompaniment. It must retain its own line . . . (for one specific scene) I suggested to the composer (Shaporin) the creation of a music the dominating emotional theme of which should throughout be courage and the certainty of ultimate victory. From the beginning to end the music must develop in a gradual growth of power.11

Alfred Hitchcock

Another noted director, in England, was speaking of the importance of a well-developed film score the same year. Alfred Hitchcock claimed that films should have their musical scores completed before going into production. This showed his belief in the importance of the score as an integral part of a film's total structure:

In the silent days, when the villain was coming, you always had the orchestra playing quickening music. You felt the menace. Well, you can still have that and keep the sense of the talk-scene going as well. The feeling of approaching climax can be suggested by the music . . . it is that psychological use of music,
which, you will observe, they knew something about before the talkies, that the great possibilities lie.\textsuperscript{12}

**German philosophy**

Yet another view from 1933, and from another country, Germany, was that of Rudolf Arnheim in his book, *Film*:

Music has been very cleverly used in some sound films... (there have been) attempts to create a closer union between sound film and music, to admit music as an integral part of the production instead of leaving it as an external appendage.\textsuperscript{13}

Another German, Kurt London, wrote about the achievements being made in England during the year 1933. He said that this was the year that the beginning of an era of successful work by the British film industry began\textsuperscript{14}:

One of the first original scores for British sound-films was composed in 1933 by Clarence Raybould\textsuperscript{15}... The more important works by British film composers only begin shortly after that date.\textsuperscript{16}

**An increase in quantity**

Quantity increased in the year 1933, which seems to have been a year of rapid advancement for the film score. Not only do the above quotations point out that film music was being talked about and written about, but that it was being considered as an individual entity, and that quality in general was quickly becoming a permanent characteristic of the cinema.

There was such a promotion of the score in that year that a substantial increase in the number of films that had
enough music to be credited with a scorer can be seen. In the table below this is pointed out.

**TABLE 5**

**NUMBER OF FILMS TO HAVE SCORES, 1928-1935**

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of films</th>
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<tr>
<td>1928</td>
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<td>1929</td>
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<td>1934</td>
<td>92</td>
</tr>
<tr>
<td>1935</td>
<td>86</td>
</tr>
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Keeping in mind that most of the films in 1928 were silent with score, and that many of the sound films of 1929 and 1930 were musicals with partial scores, the dramatic increase in 1933 really stands out. Either due to a continuation of the trend, or the volume of words written about film music in 1933, or both, 1934 shows a significant increase of even a higher percentage. No doubt that 1933 was the turning point.

**More Improvement in 1934**

Documentary films, in the 1930's and now, have a singular characteristic that the dramatic films lack. They are "allowed" to be shot silent, with narration and music
added later. This is a convention that the audience will accept, and the practice of allowing a continuous score to be run throughout was an accepted holdover from the silent pictures. But an exception to this practice appeared in 1934.

The Song of Ceylon

In 1934 Basil Wright's *Song of Ceylon* was released. It won the first prize for documentary films at the Brussels International Film Competition in 1935. Kurt London wrote that: "(this showed) that here some exemplary work on behalf of this very important branch of film production was being done by independently-minded young artists and engineers . . ."17

Walter Leigh, the composer of the score, said that a writer of film music must: "approach this new problem of film-sound as a fresh art with many unexplored possibilities, which is only now (1935) starting to make its own conventions."18 Speaking of the film, Leigh described his work:

The film has . . . been cut throughout with an eye to the sound-score. Its form is musically conceived . . . Two kinds of music have been used: the native singing and drumming for realistic purposes, and the western orchestra . . . for atmosphere and emotional purposes.19
The symphonic score emerges

In 1934 the movement began that was to signify the end of the experimental period for the development of a symphonic film score. Two European films helped lead the way to an acceptance of this style of scoring. John Greenwood supplied a beautifully arranged score for the English documentary *Man of Aran*, and Sergei Prokofiev wrote a serious score for the Russian *Lieutenant Kije* (also called *The Czar Wants to Sleep*).\(^{20}\)

1935 and Final Recognition

Roger Manvell and John Huntley described the times and the artistic revolution in the film world in their book, *The Technique of Film Music*:

It was about the year 1935 that certain standards in relation to film music had begun to take root in the sound film. René Clair's freshness had established a tradition for the French ... (Arthur) Honegger's score for *L'Idée* put the case simultaneously for electronics and the simple sound, Walter Leigh determined the approach of British documentary to music ... and an Academy Award to the Columbia Music Department for the score in *One Night of Love* ... By 1936 Benjamin Britten, Erich Wolfgang Korngold, George Antheil, Virgil Thomson, William Alwyn, and Arthur Benjamin had all written film scores.\(^{21}\) In short, the symphonist had entered the motion picture business, and the contemporary style of composition for films had begun.\(^{22}\)

The Informer and Things to Come

There are two outstanding film scores that were written in 1935 that seem to be singled out by many critics
of film music history. One was Max Steiner's music for *The Informer*, the other was Arthur Bliss for *Things to Come*. Roger Manvell and John Huntley described both scores as having: "'heavenly choir' finales, and both (were) soon to be adapted for concert-hall performances and recorded for the gramophone."23

*The Informer*, a picture by John Ford, was awarded four Academy Awards, including one for Steiner. Both he and Bliss were educated in the formal tradition of classical style. Max Steiner's background and film beginnings will be detailed later in this chapter.

Arthru Bliss entered the production unit of *Things to Come* early in the production stages, and worked closely with the musical arranger, Muir Matheson. H. G. Wells, producer of the film that was based on his novelette, wrote:

> The music is a part of the constructive scheme of the film, and the composer, Mr. Arthur Bliss, was practically a collaborator in its production... Sound sequences and picture sequences were made to be closely interwoven. This Bliss music is not intended to be tacked on; it is part of the design.24

For recording the score, fourteen sessions were needed to do the job. In addition to a full symphony orchestra, an extra percussion orchestra and a choir were used.
An Optimistic Future

Electronics

The future was beginning to look good for film music. Symphonic scoring of music was the direction most of the film composers of the next two decades were to take. But, there were others, such as Leonid Sabaneev, who were to become so engrossed with the possibility of electronic sound recording that they were predicting very radical uses of equipment. Mr. Sabaneev, writing in 1934, predicted a future in which:

••• the art of expressing in the symbols of the sound track the most complicated and fantastic timbres, which can be tested then and there, without collecting an orchestra or summoning a conductor. ••• musical grammar ••• will be practically supplanted by the conventional, phonetic writing of vibrations.25

He felt that the future held no place for the performing musician, that he would be essentially unnecessary. Only a composer would be needed.26 As radical as this sounds, many of his comments were not so fantastic. For example, he called for a time when new generations of musicians would compose; people who would not be tied to the strict tradition of the composer in the 1930's. This brings to mind musicians like Gil Melié, whose electronic scores for films like The Andromeda Strain, are more than electronic instruments performing formal notation. There is no melody, and very little recognizable rhythm. Also, Quincy Jones incorporated the Don Elliott Voices into his
scores for $6$ and *The Hot Rock*, where an unrecognized vocal tone, or combination of tones with whispered words adds new "instruments" to the orchestra rather than a chorus.

These predictions and the recent experimentation form one side of today's music composition. On the other you have figures like Jerry Goldsmith, considered one of the premier film composers of today by his peers (he has received eight Academy nominations to date). Mr. Goldsmith was asked, during an interview, which of the leading film composers of the past or present should a young ambitious musician study in order to learn film music composition. He replied, "... you study the masters." His success in the past twenty years would seem to give strong support to the belief that this is good advice.

**Combining formalism with experimentation**

The combination of formal classical style and modern experimentation seem to have formed the bulk of film music over the last four decades. Kurt London probably made one of the most accurate predictions, when, in 1936 he wrote:

... present-day condition is nothing but intensive preparation for the time when it (film music) will be able to free itself from the restraining influences of musical tradition, and attain its own individuality.28

**A Biographical Growth of a Symphonic Score**

The growth of the symphonic score was a result of more than critics and musicians speaking out for more
quality music. As described above, the symphonic score had arrived by 1934, and was being recognized by 1935. But, to understand this status in the mid-1930's, its beginnings must be traced. Critics and musicians could have cried out for better music for years, but without two important events, and the help of history, quality music in the American film might have been delayed for years.

One of the events was the practice instigated by the Warner Brothers studio beginning in 1929, the other was the influx of European musicians into Hollywood during the early and middle 1930's. The rise to power of despots like Hitler, Stalin, and Mussolini caused many fine musicians to immigrate to the United States.

Warners establishes a music department

Warner Brothers Studio, with their early sound successes, signed contracts with three music publishing houses in 1929. These were Witmark, Harms, and Remick. Other studios did the same, but did not follow through like Warners did. Jack Warner was quoted as saying: "films are fantasy - and fantasy needs music." Warners set up a music department early, one that was years ahead of the other studios in a very short time. They were in full production prior to 1934.

Chronologically, the story goes like this: William Axt, who had co-written the score for Don Juan, and had
also been responsible for the music to *Ben Hur*, and *The Big Parade*, was somehow overlooked by Warners for a permanent contract. Whatever might have been the reason, William Axt did become the first composer to be signed to a contract by a major studio - Metro-Goldwyn-Mayer. It seems that Warners was looking for one man to head their music department, so that they could build from the top down. Their decision was Leo F. Forbstein, who was then (late 1928) conducting the orchestra at the Grauman's Metropolitan Theater in Hollywood.\(^{31}\)

Forbstein was one of the best-known of all movie theater conductors during the twenties. He had had his own orchestra at the age of sixteen, and was a good organizer. This was probably the chief reason for his selection by Warners. Forbstein was the man who later signed Max Steiner to a Warners contract in 1936; also he was responsible for hiring Erich Wolfgang Korngold, the first composer of international reputation to be contracted to a studio.

Both Steiner and Korngold were Viennese, trained in the traditional classical styles. A short biography of each of these men will serve to illustrate the influence that history had in helping the symphonic score to develop in America at the time that it did. Also, these two musicians were, in the opinion of many critics, not only two of the earliest of the serious composers to work in the
sound film, but two of the best the film has ever known.

Max Steiner

Max Steiner was named after his grandfather, the famous impresario of the Theater an der Wien in Austria, Maximilian Steiner. It was he who had persuaded Johann Strauss Jr. to write music for the theater. Max, the younger, attended the Vienna School of Technology, and the Imperial Academy of Music, where he studied under Robert Fuchs and Gustav Mahler. In 1900, at the age of twelve, he conducted an American operetta, The Belle of New York. At the age of sixteen, he wrote his own operetta.

In 1906 he went to England where he spent eight years conducting various kinds of music, concert and stage. In 1914, because of World War I, he was deported from that country as an enemy alien, and came to New York, where he again conducted various kinds of music. In 1927 he orchestrated and conducted Harry Tierney's Rio Rita. When RKO planned the film version of this popular musical in 1929, they sought out Steiner to arrange the music.

Signed by RKO's head of production, William Le Baron, Steiner was put in charge of the studio's music department. This consisted of a ten-piece orchestra. A music library of pre-written material was used to score films then, with a maximum of three hours allowed for recording sessions per film. This is another reason why, in 1929
Steiner's first work of any consequence was the music for *Cimarron* (1931). Oddly enough, there were only about four composers working in Hollywood at the time, and he was the second choice to do the film. His first really important work was for David O. Selznick, in 1932, for a film called, *Symphony of Six Million*. Selznick, it seems, was not satisfied with the finished film and asked Steiner if he: "could put some music behind this thing? I think it might help it." Steiner was asked to underscore just one scene, but when Selznick heard it, he had Max score the entire film. As Steiner described the situation:

"music until then had not been used very much for underscoring - the producers were afraid the audience would ask, "Where's the music coming from?" unless they saw an orchestra or a radio or phonograph. But with this picture we proved scoring would work."

Tony Thomas, a current film music historian, has written that:

*It was Steiner more than any other composer who pioneered the use of original composition as background scoring for films, although in those early years at RKO, sheer volume of work prevented him from applying the technique to every film to which he was assigned.*

The year 1933 was the one in which Steiner became popular. Most of this attention was due to his scoring of *King Kong*. He enjoyed working on this film: "It was made for music. It was the kind of film that allowed you to do anything and everything, from weird chords and dissonances..."
to pretty melodies. But, the story behind this score is typical of the Hollywood plot itself.

When the film was shot and edited, the RKO studio bosses were afraid the film would flop. They had spent a great deal already, and were hesitant to spend any more to score it. Steiner was told to use old tracks, "library" music to provide a score. But, the film's producer, Merian C. Cooper, told Steiner to do the best job he could, that he (Cooper) would cover the cost himself. Steiner hired an orchestra of eighty musicians at a cost of $50,000. The result was an historic success.

Tony Thomas ascribes much of the film's popularity to the score itself:

... it (the cost) was worth every penny because it was his (Steiner's) score that literally makes that film work. As soon as the audience hears that three-note theme ... it knows it is in for a fantastic experience.

Steiner was an important man by 1934. When RKO previewed a scoreless Of Human Bondage the audience laughed at the wrong moments. Steiner was immediately called to remedy the situation. Remember, it was then not common to provide anything more than title music. Another situation provides an example. When RKO heads screened John Ford's The Lost Patrol (also 1934), they found that more tension was needed to heighten the desert scenes. Steiner was called.

John Ford was a man of innovation. On his next film,
The Informer, Ford brought Steiner in before shooting began, so that the picture and score could be developed together. This was the same situation with Sir Arthur Bliss and Things to Come, the composer was being considered during production planning.

This year, 1935, was the one in which success was achieved with the recognition of good music. An indication of the change: Steiner was credited with seventy-two scores in 1933 and 1934. In 1935 he was credited with only ten pictures, in three of which he was listed as only the musical director. This meant that for the remaining seven, he put forth more effort, and more complete scores than he had had time to do in the preceding two years.

Erich Wolfgang Korngold

Erich Wolfgang Korngold was born in Vienna in 1897. At the age of ten, he was called a genius by Gustav Mahler, and was admired by Richard Strauss and Puccini. At the age of eleven he was composing a ballet-pantomime. After studying under Alexander Zemlinsky, he wrote his first opera at age sixteen. During his twenties he was composing chamber music, and parts for the theater, and guest conducting throughout Europe.

In 1929 Korngold met Max Reinhardt, the German impresario, and staged a number of musical plays for him. In 1934, Max Reinhardt had agreed with Warners to film his
stage version of Shakespeare's A Midsummer Night's Dream. Reinhardt wanted Korngold to arrange the famous Mendelssohn stage score for the film. Coming to Hollywood with his reputation, he was hailed as a second Mozart. In fact, Mozart had been the source of Korngold's middle name.

Completing his work at Warners, Korngold returned to Vienna to begin work on a new opera. Four months later, Paramount offered him the chance to write a film operetta with lyricist Oscar Hammerstein II. Korngold accepted.

During the filming of this picture, entitled, Give Us This Night, representatives from Warners approached Korngold and asked him to score their newly-produced film, Captain Blood. He refused, but again they came back. After repeated refusals, Korngold succumbed to their persistence, and agreed to see the film.

After a screening he was so pleased with what he saw, that he agreed to score it for them and signed the contract. It was then that he found out that he had only three weeks to complete this score. Working around the clock, he still came up short, so he used part of a Liszt tone poem in the final duel sequence. Because of this passage (only a few bars actually), he insisted on having his credit read: "musical arrangements by Erich Wolfgang Korngold," instead of receiving full credit for composing the score.

Captain Blood was a milestone film for several
reasons. It created a new star, Errol Flynn; it signaled the return of the swashbuckler, a genre which had disappeared with the coming of sound; and it introduced Erich Korngold's popular, adventuresome style to the theater-going public.

Still reluctant to sign any multiple-picture contracts with Warners, Korngold continued working on individual pictures. He traveled from Hollywood to Vienna and back again several times over the next two years. In 1938, with Europe becoming more fearful of the Germans, Korngold realized that he must leave Austria behind, and live in America. Even then, he demanded that he work on his own terms.

These terms of his, which Warners agreed with, were that: 1) Korngold have a carte blanche in scoring, his word ruled, 2) Warners promise that they would not tamper with any of his music, and 3) that Korngold would retain sole ownership of his compositions. The first joint effort under this agreement was The Adventures of Robin Hood, released in 1938, for which Korngold won an Academy Award.

His arrival in Hollywood was perfectly timed. Warner Brothers was entering a phase of well-produced, intelligent, powerfully-directed costume dramas. Korngold's forte was operetta. The blending of his talent with the Warners films is heralded today as the beginning of the golden age of the Hollywood entertainment film.
Franz Waxman

There were other European musicians who were trained in the classical tradition that came to America during the early 1930's. Franz Waxman was one, and is also on the list of film music historians and lovers of music as being one of the great Hollywood composers for many years. His entry into the Hollywood arena is worthy of note because of his training and experience.

Franz was born Franz Wachsmann in Germany in 1906. At a very young age he studied piano at Dresden, and then later composition, harmony, and counterpoint at Berlin. Here Waxman differed from Steiner and Korngold because he went to work composing music for films at a young age. Hired by the German film studio, U.F.A., he began work by scoring the film Liliom in 1933. This picture starred Charles Boyer and was made in Paris.

In 1934 an incident took place which changed Waxman's life. He was beaten by Nazi soldiers in the streets of Berlin because he was Jewish. Now eager to leave Germany, he left for America with his friend, and film producer, Erich Pommer. Pommer had been offered a job at Twentieth Century-Fox and was glad to take Waxman with him. James Whale, working at Universal, had heard Waxman's score for Liliom, and signed him for his latest film, The Bride of Frankenstein. Universal liked the music so much, that they promoted him to head of their music department. The
following year Waxman left Universal to sign a seven year contract with Metro-Goldwyn-Mayer.

Waxman's style of music was similar to that of the two Viennese gentlemen who were described earlier. One description of his style was written by Lawrence Morton, and expressed by the Canadian Broadcast Company on one of their broadcasts in 1950:

In general, it has the grandiloquent expressiveness, the splendor and luxuriousness of texture that are characteristic of the late German romantic music. If one had to ally him with any established school of composition, it would perhaps be that of Richard Strauss.43

Of the other composers to come to the United States during the early and middle 1930's, and who later became important names in film composing, three should be mentioned here. They were Dimitri Tiomkin (from Russia), Bronislau Kaper (from Poland), and Miklos Rozsa (from Hungary).

**Dimitri Tiomkin**

Tiomkin was the only one of the three to actually write music for a film prior to 1935. His earliest credits go back to 1930. These were ballet sequences for MGM musicals of that year. In 1931 he was hired by Universal to score the film *Resurrection*. It was a Russian story, so a Russian composer was sought. In 1933 he wrote music for the fantasy film *Alice in Wonderland*, released by Paramount. Returning to MGM, he worked on various minor
pictures and musicals. Tiomkin finally received recognition in 1937 for his score to Lost Horizon.\textsuperscript{44}

**Bronislau Kaper**

Bronislau Kaper was a musician of the formal tradition, having studied piano in Berlin at an early age. During the 1920's he played in German cabarets. From there he moved to German film work in 1927. With the rise of Nazism in 1933 he left for Paris where he worked for two years and wrote a hit song called "Ninon." Louis B. Mayer, on vacation in Europe that year, heard the song, and liked it so much that he sought out its composer. The first time they met, Mayer hired Kaper. This was in the year 1935.\textsuperscript{45}

**Miklos Rozsa**

Miklos Rozsa had much the same kind of musical background as Korngold. At the age of five, he was studying the violin, at eight, performing in public and composing. Before he was twenty he had had two compositions published, and at twenty-five, he published his first orchestral work. By the time he was approached by director Jacques Feyder to score Knight Without Armour in 1937, he had written numerous serious works including chamber music, choral music, ballets, piano music, and solo works, as well as orchestral music.\textsuperscript{46}
Alfred Newman

It is interesting that of all the composers who began work during the period covered by this paper, and who achieved the status of leaders in the field, only one was a native American. He was Alfred Newman. Newman received much the same kind of experience that Max Steiner did during the 1920's, working with the musical stage. Born and raised on the east coast, Newman came to Hollywood in 1930 to do the musical arrangements on Irving Berlin's Reaching for the Moon. The very next year he scored several dramatic films, the most notable being Street Scene. By 1933 he was working at Twentieth Century-Fox, where he was to become head of the music department and control most of that studio's music for twenty years.

Summary

This chapter has had the purpose of describing the events that detailed the growth of the motion picture score during the early 1930's. Although the technical machinery was available for good reproduction of music by 1931, there was a period of several years before the cinema score came to a position of prominence.

First, a new style of music had to be written, one which illustrated the picture without interrupting the dialogue. Second, a desire for quality music was needed by audiences and filmmakers alike. And third, the right
kind of musician had to be available.

All of these pieces fell into place between 1931 and 1935. Directors promoted the use of music, experimentation continued, and historic events in Europe helped to cause serious musicians to seek a new home - America. By 1935 the foundation existed for the beginning of a period in film history which has been labeled, "the golden age of Hollywood" by many film critics.
NOTES TO CHAPTER 5


2. Ibid.

3. Ibid., 148-149.


5. Ibid., pp. 125-126.

6. Ibid., p. 135.

7. Roger Manvell and John Huntley, *The Technique of Film Music* (London: Focal Press, 1957), pp. 41-42. The term "naturalistically" is a bit confusing used in this manner. One would assume that "realistic" was intended, since music is not a live organism requiring satisfaction of its basic desires, which is the correct literary use of this term being applied to living things only.

8. Ibid.

9. The word "dramatic" is important here. For years the cinema had been flooded with musicals, especially in 1929 and 1930. The serious score was unknown until later.

10. Ibid., p. 45.

11. Ibid., p. 44.


15. The title of that film has not been found in other references, although several have been searched. These are pretty complete listings including international films.


21. All of these gentlemen were composers who had gained their fame and recognition writing serious music based on classical lines prior to their work in films.


26. *Ibid.* This must have created quite a stir considering the periodical in which his remarks were published, and its readership.

27. Jerry Goldsmith, interview conducted for a radio program on KGSN radio, Northridge, California, on December 17, 1973.


30. *Ibid.*, p. 109. This is the same philosophy that Walt Disney practiced. All of the features that Walt supervised were either musicals outright, or mini-musicals, full of songs.

31. *Ibid.*, pp. 109-115. This story about Forbstein, Axt, and the details on Max Steiner are all found in this place.

32. Unfortunately Mr. Thomas does not explain who first choice was, or who the other composers were. Alfred
Newman, David Broekman, Karl Hajos, Herbert Stothart, and Hugo Riesenfeld were all known to have composed film scores that year. Also, arrangers John Green, Hugo Friedhofer, Erno Rapee, Edward Ward, and W. Frank Harling were also active.

33. Ibid., p. 113.
34. Ibid.
35. Ibid. Examples of this kind of work load can be seen by referring to Appendix II. As many as seventy-two films have been credited to Steiner during a two-year period, 1933-1934.
36. Ibid., p. 115.
37. Ibid.
39. The details on the background of Erich Korngold are based on information found in Thomas, Music, pp. 124-133.
40. This source is the only one, it seems, that lists this work of Korngold's. Other listings do not include it. It is possible that the film was shot, but not released.
41. Ibid., p. 125.
42. The details of Franz Waxman's career are based on information found in "Music from the Films, A C.B.C. Broadcast," Hollywood Quarterly, V (Winter, 1950), 132, 137; and Thomas, Music, p. 77.
44. Thomas, Music, p. 64.
45. Ibid., pp. 86-87.
47. Thomas, Music, p. 55.
CHAPTER 6

STATISTICAL ANALYSIS

Introduction

This concluding chapter is included in order to support and clarify some of the general statements and conclusions that were arrived at in the preceding chapters. There will be little analysis since this paper is primarily a history and not a causal study. In most cases the figures speak for themselves, giving quantitative information that helps to explain the trends and activities of the major studios, and the effect these had on the score.

The first few tables consist of data obtained from reviews in the New York Times about the films that the reviewers considered to be the best released each year, from 1926 to 1935.1 This information is included to give an insight into the emphasis the reviewers themselves placed on the film scores.

The other data was obtained by a thorough search of the catalog compiled by the American Film Institute which is entitled, The American Film Institute Catalog of Motion
Pictures Produced in the United States: Feature Films, 1921-1930. Although the cut-off year is 1930, the information supplied does help to give a quantitative summary of events regarding the music scoring. Unfortunately, volumes covering other decades are still in the research stage in Washington, D.C., and are not available at this time.

New York Times Reviews

The information supplied in Table 6 is the result of reading the reviews about the ten (or eleven in some cases) best pictures of the year, as listed by the New York Times.

Table 6

<table>
<thead>
<tr>
<th>Year</th>
<th>Silent</th>
<th>Silent w/score</th>
<th>Sound</th>
<th>Sound w/score</th>
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<tr>
<td>1926</td>
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<td>1928</td>
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<td>1929</td>
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<td>0</td>
<td>7</td>
<td>3</td>
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<td>1935</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>4</td>
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</table>

This data is an objective summation of the information supplied by the reviewers. If no information was given about a film being a talkie, then it is listed in the "silent" category. If a scorer was listed, then it is
included in the "silent with score" category. If it was described as a talkie, but with no indication of music scoring or musicians, then it is placed in the "sound" category. The final category is for talkies where a musician was mentioned as having supplied music for the film. This last section includes a musical in each of the years: 1929, 1931 and 1932.

Table 7 is a summation of the actual categories that each of these films belongs in. This information was obtained by researching the individual films to find out exactly what category they should be placed in. There were several sources researched to obtain this information: James Limbacher's Film Music, Tony Thomas' Music for the Movies, and Clifford McCarthy's Film Composers in America: A Checklist of Their Work.

<table>
<thead>
<tr>
<th>Year</th>
<th>Silent</th>
<th>Silent w/score</th>
<th>Sound</th>
<th>Sound w/score</th>
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</thead>
<tbody>
<tr>
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<td>1935</td>
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One final table consisting of this information will show the regard that the reviewers had for film scores during the period of the talkative-sound films, 1929 to 1933. Table 8 is compiled from the second and fourth categories listed in Tables 6 and 7. The total films with scores, either silent or sound scores, is represented showing their actual number, and the number of them that reviewers recognized as having a score.

<table>
<thead>
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<th>Year</th>
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<th>NY Times reviews</th>
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<tr>
<td>1935</td>
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</tbody>
</table>

Note that in the year 1928 all the ten best that had scores written for them were given this credit by the reviewers. But, in the following years there were more and more of the scored films to be omitted from mention. In 1929 two were ignored; in 1930, three; 1931, there were four; and in 1933 all five of the scored films had no mention of a score. The last two years can see a reversal of this process as there were more and more quality scores.
being written.

American Film Institute

The American Film Institute was the source of data for this section because of their serious, scholarly research being done at the present time. More than just a library, AFI is in the process of compiling information, all production information, on all films made in the United States. Their first volume, which is the only one to date, is *The American Film Institute Catalog of Motion Pictures Produced in the United States: Feature Films, 1921-1930.*

This volume lists all feature films of 4,000 feet or longer (or four reels if exact length is unknown) that were produced in the United States between January 1, 1921 and December 31, 1930. The films themselves are defined as:

Produced or "manufactured" by United States firms, societies or associations, institutions, public (including governmental) agencies, and private individuals that had, or were intended to have, public showings.2

The sources for the data were: 1) archives housing the records of film copyright application maintained by the Copyright Office, 2) archives housing the licensing applications files of the Motion Picture Division (formerly the Motion Picture Commission) of the State of New York, and 3) records of major motion picture studios,
including Warner Brothers, Universal, and Paramount.³

Other minor sources for the data were the periodicals: Exhibitors Trade Review, Film Daily, Film Daily Director's Annual and Production Guide, Film Year Book, Motion Picture Almanac, Motion Picture News, Motion Picture News Booking Guide, Motion Picture News Blue Book, Motion Picture Studio Directory and Trade Annual, Motion Picture Trade Directory, Moving Picture World, National Board of Review Magazine, Photoplay Magazine, and Variety.⁴

For the clarification of details in the following tables the operational definitions are these: dates are those of release. When two or more possible dates for the release of a film were listed, the latest is given here. A "sound" film is one that has synchronized sound but no credited scorer. A "sound with score" category is one in which a synchronized music score of some kind has been added to the film by any one of the processes discussed earlier in other chapters. Table 9 shows the major breakdown of categories found in the catalog.

**TABLE 9**

NUMBER OF AMERICAN-PRODUCED FILMS, 1926-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Silent</th>
<th>Sound</th>
<th>Sound w/score</th>
<th>% of total</th>
<th>Musicals</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926</td>
<td>735</td>
<td>0</td>
<td>1</td>
<td>-</td>
<td>0</td>
<td>736</td>
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<tr>
<td>1927</td>
<td>686</td>
<td>0</td>
<td>4</td>
<td>-</td>
<td>0</td>
<td>690</td>
</tr>
<tr>
<td>1928</td>
<td>547</td>
<td>26</td>
<td>76</td>
<td>12</td>
<td>2</td>
<td>651</td>
</tr>
<tr>
<td>1929</td>
<td>149</td>
<td>113</td>
<td>130</td>
<td>25</td>
<td>136</td>
<td>528</td>
</tr>
<tr>
<td>1930</td>
<td>29</td>
<td>334</td>
<td>65</td>
<td>11</td>
<td>55</td>
<td>483</td>
</tr>
</tbody>
</table>
The films in Table 9 are broken down by type of sound used (no sound, sound only, sound and score). Also, a percentage of the total number each year to have a synchronized score is given. This is to show the amount of interest that was placed on music during the first five years of the sound film. Musicals are added in a separate column to exclude them from the sound w/score pictures, but to include them in the totals. Musicals are included in the sound w/score category if a separate credit for score (other than music and lyrics) was indicated.

It must be remembered that some "sound" films of 1928 and 1929 were added effects, or partial talking sequences. Most of them were not all-talking pictures. Also, many of the silent films of 1930 were travelogs, documentaries, or westerns shot outdoors on a low budget. This is why there are many silent films listed in 1930 - the year that was the first of all-sound for most studios.

The reason for the number of sound with score films in 1929 was that film companies were using the new synchronizing equipment to add music to essentially silent films. In 1930, the year generally regarded to be the first of the all-sound film, and the end of the silent period, there was a significant decrease in the number of scored films, and an increase in the number of sound-only films. This is a phenomenon that seems to be out of place. The number of scored films in 1928 and 1929 so far
outnumbers what should be thought of for those years that a further breakdown is necessary. Table 10 consists of the category of "sound with score" and breaks down the yearly quantities into two distinctive sub-divisions. Of those films credited with a score by the AFI catalog, figures are given for those that actually had a scorer credited. The years 1928 and 1929 have large numbers of scored films listed which might be misleading. This conclusion is substantiated by noticing the amount of these to actually credit a scorer.

TABLE 10

NUMBER OF SOUND WITH SCORE FILMS TO CREDIT SCORER

<table>
<thead>
<tr>
<th>Year</th>
<th>Total films</th>
<th>Scores credited</th>
<th>% of total</th>
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<tr>
<td>1926</td>
<td>1</td>
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<td>1927</td>
<td>4</td>
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<td>1928</td>
<td>77</td>
<td>23</td>
<td>30</td>
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<td>1929</td>
<td>129</td>
<td>59</td>
<td>46</td>
</tr>
<tr>
<td>1930</td>
<td>62</td>
<td>48</td>
<td>77</td>
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</table>

It seems that in these transitional years of 1928 and 1929 it was common to add a few songs to an otherwise silent, or talkative film, and list on the film's title itself a credit for score given to the sound recording company (Vitaphone, Movietone, etc.). This addition of title music and "realistic" music was not a score as we know it today. This practice ceased by the early 1930's, crediting a film with a score only if a musician did in
fact score it. The reversal of the trend can be seen in 1930 on Table 10. Most of the scored films did have a musician listed as the scorer.

Table 11 lists the number of studios and production companies that contributed to this category of synchronized music films. They are listed in rank order showing the number of films that each released with synchronized music. Note the general increase in scores up to 1929, and then a sudden drop in 1930.

**TABLE 11**

| NUMBER OF FILMS EACH PRODUCTION COMPANY AND STUDIO IS CREDITED WITH |
|---------------------------------------------------------------|---|---|---|---|---|
|                                                          | 1926 | 1927 | 1928 | 1929 | 1930 | Total |
| Fox                                                       | 0    | 1    | 15   | 19   | 10   | 45    |
| Metro-Goldwyn-Mayer                                       | 0    | 0    | 9    | 21   | 2    | 32    |
| Warner Brothers                                           | 1    | 2    | 9    | 12   | 3    | 27    |
| Paramount                                                 | 0    | 0    | 11   | 8    | 7    | 26    |
| First National                                            | 0    | 0    | 9    | 15   | 0    | 24    |
| Universal                                                 | 0    | 1    | 2    | 13   | 7    | 23    |
| United Artists                                            | 0    | 0    | 3    | 6    | 6    | 15    |
| Pathé                                                     | 0    | 0    | 4    | 2    | 6    | 12    |
| Tiffany-Stahl                                             | 0    | 0    | 4    | 7    | 1    | 12    |
| Film Booking Office (FBO)                                 | 0    | 0    | 4    | 3    | 0    | 7     |
| Columbia                                                  | 0    | 0    | 1    | 3    | 0    | 4     |
| RKO                                                       | 0    | 0    | 0    | 3    | 1    | 4     |
| Feature Pictures                                          | 0    | 0    | 0    | 2    | 1    | 3     |
| Sono-Art                                                  | 0    | 0    | 0    | 1    | 2    | 3     |
| Rayart                                                    | 0    | 0    | 1    | 1    | 0    | 2     |

There were other companies that released or produced one film during these years. But, the companies listed above had at least two, and for the purposes of this paper, give sufficient information to detail the events with regard to motion picture scoring.
Except for a few instances, such as with Sono-Art and Pathé, the trend indicates that there was an increase in the number of scored pictures up to 1929, then a drop in 1930.

One final table is included here to show the types of sound equipment that were being used to synchronize sound. The difference between Table 12 and the preceding ones is that it does include the musicals to show the total impact of the sound-on-film methods of Movietone and Photophone (the two primary systems during these years). Their growth and subsequent dominance can be seen.

TABLE 12

<table>
<thead>
<tr>
<th>TYPES OF SOUND EQUIPMENT</th>
<th>1926</th>
<th>1927</th>
<th>1928</th>
<th>1929</th>
<th>1930</th>
<th>Total</th>
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<tr>
<td>Movietone</td>
<td>0</td>
<td>2</td>
<td>50</td>
<td>202</td>
<td>253</td>
<td>507</td>
</tr>
<tr>
<td>Vitaphone</td>
<td>1</td>
<td>2</td>
<td>33</td>
<td>79</td>
<td>76</td>
<td>191</td>
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<tr>
<td>Photophone</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>68</td>
<td>66</td>
<td>148</td>
</tr>
<tr>
<td>Cinephone</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Phonofilm</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Filmtone</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Aurafone</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bristolphone</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<td>Brunswick</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<td>Chromotone</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Phono Kinema</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sonora-Bristolphone</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Western Electric</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
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</tbody>
</table>
Summary

It has been the purpose of this chapter to statistically analyze the uses of film music during the first few years of the sound film. This was done in order to support and emphasize those conclusions made in Chapters 4 and 5. It is this researcher's opinion that even in an historical study of this kind, it is not enough to rely on secondary sources, or even primary ones if these are the opinions or conclusions of someone else. Therefore, research was done to find out: 1) if these conclusions were true, and 2) just what are the details that have led others to these conclusions.

The reviews from the New York Times were used to study the opinions of film critics from the country's most influential newspaper. The data from the American Film Institute was used because it is the result of extensive research and their catalog is the most comprehensive collection of information on feature films that exists.
NOTES TO CHAPTER 6

1. The films represented by these reviews are listed in Appendix III.


3. Ibid.

4. Ibid.
CONCLUSION

This has been an historical account of the development of the motion picture score from 1926 to 1935. The primary purpose was to find out how the silent film score of the 1920's evolved into the popular sound score of the 1930's. It was found that less music was written during the early sound years which explains why this transitional period of 1926-1935 is seldom a topic for writers of film music history.

A New Understanding

There were some popular misconceptions of the subject that were corrected. Information was found that changed some pre-conceived notions about film music history. It was generally believed that silent film music was primarily piano and organ music, with an occasional orchestra supplied for important films. Actually, most of the technical development of arranging and performing film music was done in the silent period, and not after the introduction of sound. Seriously composed scores were written as early as 1908, and the cue sheet, which was the main
organizational skeleton of the film score, was a product of these early days. In general, the art of providing film with either an illustrative, or an expressionistic score, was a sophisticated practice by the time that sound arrived on the scene.

Other beliefs that were changed by this study were in the technical development of the sound systems that were used in the early sound period. First, the sound picture was not a product of the 1920's, but had seen some commercial distribution on a limited scale in the 1890's. Second, it was surprising to note experiments using light as a source to record sound on a film base as early as 1905. Third, there was a variety of sound equipment that was used on an experimental basis in the early 1900's in Europe — to the point that one theater in England was constructed solely for the purpose of showing talkies.

There were many different kinds of sound systems used by the 1920's. Sound-on-disc and sound-on-film systems were not the only ones. Various attempts to synchronize sound by mechanical means were used, including Carl Blum's Rhythmology — an attempt to mechanically synchronize a live orchestra with the film.

When Vitaphone was introduced, it was not something radically new. The early uses of sound synchronization before Vitaphone were recordings that were played as mood music for the silent films. These were, first, commercial
recordings that were later provided with cue sheets for synchronization, then special film music scores were used in much the same manner as printed film scores which had been used for years. The introduction of the Vitaphone sound system was mostly a combination of these existing practices of record playing with the addition of talking sequences. Although Warner Brothers was known to have been made a successful studio by the Vitaphone experimentaiton, an increase in the studio's worth of 1100% was a surprising discovery.

The experiments that were to provide the film with two different kinds of sound designs were developed on parallel courses. The sound-on-disc system, the first to really achieve any widespread popularity, and the sound-on-film systems, which later took over to become the most efficient design, were both developed over a twenty-odd year period. It was the design of the sound-on-film systems that helped them to dominate the industry by 1930. This design needed more time for development, hence causing it to be the second to see widespread use. But, it did not develop after the disc, it was merely perfected later.

**Less Music Output**

Information about film music during the years 1926 to 1935 forms an interesting chronology. Actually, there was less music written during those years, and there were
artistic, economic, and technical reasons why music output declined.

Artistically, the introduction of a novel element to the medium created a change in values. Hearing an actor speak on the screen was a very popular commercial commodity. The decline in film art, because of this innovation, can be compared with other breakthroughs in mass media development. When the film first became a practical commercial medium in the 1890's, anything that moved was photographed. Movement was important. When color was introduced in the late 1920's and early 1930's it was exploited in musicals and costume pictures. This was so that the introduction of color would be noticed. When radio was introduced in the 1920's the live news event was important. In the sound film, the voice was important. Fortunately, this loss of artistic values for the sake of sound lasted only a few years.

Economically, it is understandable that some producers and studios did not want to change over to sound systems. The increased investment was substantial. But, the technical reasons for a decline in music output were varied, and seem to have been a strong reason for preventing the inclusion of music into the early sound films.

The microphones were inferior to those that were used in later years. It wasn't until 1931 that the ribbon microphone was developed so that music could be recorded
with good fidelity. Kurt London outlined the five stages of sound mutilation which affected music, in addition to the quality of the microphones. The speed of the film in projection wasn't increased to twenty-four frames per second until 1931. But, once this change was made, it did improve the fidelity, and decreased the chance for awkward reproduction of sound in the theater.

In addition to the technical problems, it was unnatural to hear music if an orchestra was not seen. This was a psychological phenomenon which was inherent in the audience of the day, and which took years to overcome.

It is interesting that the re-emergence of the music score during the 1930's paralleled a similar trend that was noticed in the years 1915-1919. Music was promoted by critics, producers, directors, and the musicians themselves. The main problem was the incorporation of music into a sound film that was full of dialogue. The technique was perfected, but not by the musicians of the silent days. Stage musicians solved the problem. Men like Erich Korngold, Max Steiner, and Alfred Newman, who were experienced in the use of music for stage presentations of various kinds, were the ones who were able to mix music with speaking actors.

Although 1934 was a year when some important steps were made in the scoring of films (Song of Ceylon, Man of Aran, Lieutenant Kije), it was 1935 that the corner was
turned. This was the year when the score was again an important element in the cinema for several reasons: *The Informer* and *Things to Come* were released and received much praise for their symphonically styled scores; Erich Korngold, Franz Waxman, and Bronislau Kaper were brought to the United States to work in Hollywood; Max Steiner was writing fewer, but more complete scores; and the *New York Times* critics were once again recognizing scorers in their reviews.

In general, the period of 1926-1935 was a time of change for the film score. The score of 1935 was a different product from the one of 1926, and it was composed by a different kind of musician. Historical events in Europe during the early 1930's also helped to create a sound score in America by causing many of the gifted musicians of the continent to come here.

**Further Study**

It has been the purpose of this paper to detail the developments in film music during the early years of the sound film. But, it has been noticed that more study in the area of early film music needs to be done. Composers who contributed much to the early sound films have been ignored by researchers. Men like Hugo Riesenfeld, S. L. Rothafel, William Axt, David Mendoza, David Broekman, Rudolph Kopp, Erno Rapee, William Frederick Peters, Herbert
Stothart, and others, need the recognition that they deserve for being pioneers in developing the film score during the silent and early sound periods.

Also, the published listings of film music and its composers sometimes conflict. During the research for this paper there were many sources of listed works and composers that were studied. Among them was the catalog published by the American Film Institute. Not only does this catalog seem incomplete with regard to musicians credited, but it conflicts with other published works in many instances. Also, the other publications give conflicting listings among themselves. What is needed is a comprehensive volume that gives accurate, complete details about the musicians and their contributions.

These are suggestions for further study that can be made by film music historians. They are areas of study that could help to complete the further advancement of knowledge on the subject.

**Importance of this Study**

This paper is important to the historical chronology of film music because it concentrates on the transitional period of the early sound years. There are books about silent film music, and also ones about the popular later years of the 1930's and 1940's. The information included here serves to 1) explain what happened to the silent
score, how it was adapted and modified by classically trained musicians from Europe as well as America to become the music for the sound film, and 2) detail the beginnings of the film score that was so popular in later decades, and which is still heard in similar form today.

Therefore, this research is beneficial to the student of silent film music as a conclusion, and to the student of sound scores as an introduction. Researching the topic has been a great help to this writer in understanding both periods better, and no doubt will provide the same assistance to any who read it.
SOURCES CONSULTED

Books


----------. *Film As Art*. Berkeley: University of California Press, 1958.


Articles


"When the Talkies Came to Hollywood." The Quarterly of Film Radio and Television, X (Spring, 1956), 288-302.


Swensen, Joel. "The Entrepreneur's Role in Introducing the Sound Motion Picture." Political Science Quarterly, LXIII (September, 1948), 404-423.


______, August 31, 1912, p. 871.


Indexes


Catalogs


Interviews

Waxman, Mark. Interview conducted by telephone on April 12, 1976.
APPENDIXES
APPENDIX I
DATA ON SILENT FILM MUSIC

Title Page From the Sam Fox Film Music Catalog

SAM FOX
MOVING PICTURE
MUSIC

By J. S. ZAMECNIK

VOL. 2                PRICE 50 CENTS

CONTENTS

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<tr>
<td>Indian Love Song</td>
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<td>Indian War Dance</td>
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<td>Part 4 Aeroplane or Regatta Races</td>
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<td>Part 5 Marathon, Horse or Automobile Races</td>
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<td>Part 6 Exhibition—(Flower, etc.)</td>
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<tr>
<td>Part 7 Explosion or Fire Scene</td>
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<td>Burghler or Sneaky Music</td>
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<tr>
<td>Hurry Music (for Combats, Struggles, etc.)</td>
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</table>

Published by Sam Fox Pub. Co. Cleveland, Ohio

First Page of the Violin Part for The Thief of Bagdad

Incidental Music to

THE THIEF OF BAGDAD

MORTIMER WILSON
Opus 74

The Final Page of the Piano Score for The Adventures of Prince Achmed

Source: Manvell and Huntley, The Technique of Film Music, p. 56.
A partial listing of the music scores for silent films that are housed at the Museum of Modern Art in New York, as listed in Hofmann, *Sounds for Silents*, p. 77.

Great Actresses of the Past program
America
Animation program
Arsenal
Birth of a Nation
Black Pirate
Broken Blossoms
Gabinet of Dr. Caligari
Clever Dummy
Crazy Ray
Covered Wagon
Early Edison Shorts
Early Lumière Films
End of St. Petersburg
Enoch Arden
Entr'acte
Fantomas
Father Sergius
A Fool There Was
Gertie the Dinosaur
Great Train Robbery
Intolerance
Iron Mask
Isn't Life Wonderful?
Last Card
Last Laugh
Mark of Zorro
Menilmontant
Metropolis
Mollycoddle
Mother
Mother and the Law
New York Hat
Orphans of the Storm
Potemkin
Assassination of the Duc de Guise and Bernhardt's
Queen Elizabeth
Robin Hood
Thief of Bagdad
Three Musketeers
Tol'able David
Underworld
When the Clouds Roll By
Wild and Wooly
A listing of important music scores for early films, as found in Hofmann, Sounds for Silents, p. 75.

L'assassinet du Duc De Guise, 1908, Camille Saint-Saëns.
Arrah-Na-Pogue, 1911, Walter Cleveland Simon.
The Birth of a Nation, 1915, Joseph Carl Breil.
Hearts of the World, 1918, Carli Densmore Elinor.
Broken Blossoms, 1919, Louis F. Gottschalk.
Foolish Wives, 1922, Sigmund Romberg.
Orphans of the Storm, 1922, Louis F. Gottschalk and William Frederick Peters.
Puritan Passions, 1923, Frederick Shepherd Converse.
Die Nibelungen, 1923/24, Gottfried Huppertz.
The Covered Wagon, 1924, Hugo Riesenfeld.
Le Ballet Mechanique, 1924, George Antheil.
Entr'acte, 1924, Erik Satie.
The Thief of Bagdad, 1924, Mortimer Wilson.
Isn't Life Wonderful?, 1924, Cesare Sodero and Louis Silvers.
The Iron Horse, 1924, Erno Rapee.
Greed, 1924, Leo Kempinski.
Battleship Potemkin, 1925, Edmund Meisel.
The Big Parade, 1925, David Mendoza and William Axt.
The Merry Widow, 1925, Mendoza and Axt, adapted from Lehár.
Don Juan, 1926, David Mendoza and William Axt.
Napoleon, 1926, Arthur Honneger.
Tartuffe, 1926, Giuseppe Becce.
Metropolis, 1926, Gottfried Huppertz.
Ben-Hur, 1926, David Mendoza and William Axt.
Berlin, 1927, Edmund Meisel.
The Italian Straw Hat, 1927, Jacques Ibert.
Sunrise, 1927, Hugo Riesenfeld.
Spies, 1928, Werner Heymann.
The Patriot, 1928, Domenico Savino and Gerard Carbonaro.
City Lights, 1931, Charles Chaplin.
Tabu, 1931, Hugo Riesenfeld.
Modern Times, 1936, Charles Chaplin.
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<thead>
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<th>Composer</th>
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<td>36</td>
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<td>1935</td>
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<td>Erich Korngold</td>
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<td>Franz Waxman</td>
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<td>Dimitri Tiomkin</td>
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<td>1931</td>
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<td>Alfred Newman</td>
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<td>1931</td>
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<td>1932</td>
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<td>1935</td>
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Neither Bronislau Kaper nor Miklos Rozsa are credited with any composing for films prior to 1936.
APPENDIX III

THE TEN BEST FILMS OF EACH YEAR AS SELECTED BY THE NEW YORK TIMES

1926

Beau Geste - Music score arranged by Hugo Riesenfeld.
The Black Pirate.
The Grand Duchess and the Waiter.
A Boheme - Special music score by David Mendoza and William Axt.
Moana.
Old Ironsides - Music score arranged by Hugo Riesenfeld
The Armored Cruiser Potemkin.
So This is Paris.
Variety.
What Price Glory? - Special music score by Erno Rapee.

1927

Chang.
The King of Kings - Music arranged by Hugo Riesenfeld.
Quality Street.
Service for the Ladies.
Seventh Heaven.
Stark Love.
Sunrise.
Underworld.
The Way of All Flesh.
Wings.

1928

The Circus.
Czar Ivan the Terrible.
The End of St. Petersburg - Special music score by Herbert Stothart.
Four Devils - Music score arranged by S. L. Rothafel.
Homecoming.
The Last Command.
The Patriot - Synchronized music score (no name given).
Show People.
Street Angel - Special Movietone Accompaniment (no name given).
White Shadows of the South Seas - Movietone (no name given).

1929

The Broadway Melody - Music score by Nacio Herb Brown.
Bulldog Drummond - (talkie).
Disraeli - (talkie).
Hallelujah - (talkie).
The Love Parade - Music by Victor Schertzinger.
The Passion of Jeanne D'Arc.
Sally - Original music by Jerome Kern.
The Sky Hawk - (talkie).
The Taming of the Shrew - (talkie).
They Had to See Paris - (talkie).
The Virginian - (talkie).

1930 (All the following films are sound pictures)

Abraham Lincoln.
All Quiet on the Western Front.
Anna Christie.
The Devil to Pay.
Holiday.
Journey's End.
Lightnin'.
Outward Bound.
Tom Sawyer - Leo Reisman, orchestra conductor.
With Byrd at the South Pole - Synchronized music score (no name given).

1931

Arrowsmith.
Bad Girl.
Cimarron.
City Lights - Synchronized music score composed by Charles Chaplin, arranged by Arthur Johnston.
A Connecticut Yankee.
The Guardsman.
Frankenstein.
Private Lives.
Skippy.
The Smiling Lieutenant - Oscar Strauss, musical compositions.
Tabu - Synchronized score by Hugo Riesenfeld.

1932

A Bill of Divorcement.
Der Raub Der Mona Lisa.
Dr. Jekyll and Mr. Hyde.
The Doomed Battalion.
Grand Hotel.
Maedchen in Uniform.
The Mouthpiece.
One Hour with You - Music by Oscar Strauss.
Reserved for Ladies.
Trouble in Paradise.

1933

Berkeley Square.
Cavalcade.
Dinner at Eight.
His Double Life.
The Invisible Man.
Little Women.
Morgenrot.
The Private Life of Henry VIII.
Reunion in Vienna.
State Fair.

1934

The Battle.
Catherine the Great.
The First World War - Musical score by John Rochetti.
It Happened One Night.
The House of Rothschild.
The Lost Patrol.
Man of Aran - Musical score by John Greenwood.
One Night of Love - Incidental music by Louis Silvers, Victor Schertzinger, and Gus Kahn.

Our Daily Bread.
The Thin Man.
Tchapayef.
David Copperfield - Musical score by Herbert Stothart.
The Informer.
Les Misérables.
The Lives of a Bengal Lancer.
Love Me Forever - Thematic music by Victor Schertzinger and Gus Kahn.
The Man Who Knew Too Much.
Mutiny on the Bounty - Musical score by Herbert Stothart.
Ruggles of Red Gap - Music and Lyrics by Ralph Rainger and Sam Coslow.
The Scoundrel.
Sequoia.