

# The Evolution of Music in Film and its Psychological Impact on Audiences

By  
Stuart Fischhoff, Ph.D.

*“I feel that music on the screen can seek out and intensify the inner thoughts of the characters. It can invest a scene with terror, grandeur, gaiety, or misery. It can propel narrative swiftly forward, or slow it down. It often lifts mere dialogue into the realm of poetry. Finally, it is the communicating link between the screen and the audience, reaching out and enveloping all into one single experience.”* Film composer Bernard Herrmann.

## Why Is There Music in Film?

The general feeling about film is that it is singularly a visual experience. It is not. While we certainly experience film through our eyes, we just as surely experience it through our ears. Especially today, particularly with modern home and theater sound systems offering multi-channel sound and high fidelity.

Films are generally fantasies. And fantasies by definition defy logic and reality. They conspire with the imagination. Music works upon the unconscious mind. Consequently, music works well with film because it is an ally of illusion. Music plays upon our emotions. It is generally a non-intellectual communication. The listener does not need to know what the music means, only how it makes him feel. Listeners, then, find the musical experience in film one that is less knowing and more feeling. The onscreen action, of course, provides clues and cues as to how the accompanying music does or is supposed to make us feel.

Let us distinguish between scoring a movie, a movie **score**, and writing songs for a movie, a movie **soundtrack**. Many of us know about a soundtrack, and can sing songs from movies. But, few of us are even aware of the score of a film unless someone produces a breakaway or break-out hit, like Celine Dion’s singing “My Heart Will Go On,” from *Titanic*(1997). Some films combine the two.

*Platoon* (1986) has both scoring and a soundtrack, as does *The Big Chill* (1983), where hit songs of the era are included in the movie to establish time, place, and psychological mood.

Since the 1930s, most orchestrations for movies are composed directly for the screen and, as we'll see, cannot easily exist independent of the movie without much fleshing out. This is in contrast to a film using in its score the hit songs of an era, songs which existed independently, before the movie, and will exist independently after the movie is long gone even though it might be singularly associated with the film henceforth. Think of Roy Orbison's classic hit, "Pretty Woman," from the film *Pretty Woman* (1990). Or all the films with songs by Dean Martin, such as *Moonstruck* (1987), to establish both time and, often, place, such as Las Vegas or New York's Little Italy.

### **Movies Without Music**

How would we like movies without music or soundtracks? Would we miss them? In the 50s a movement toward realism led some directors to exclude music scores from their films because, they contended, in life there is no music which accompanies our day and punctuates the ebbs and flows of our dialogue with the world.

This rebellious movement didn't last long. No music is a problem when the film is flat, or worse, dead. When a director needs the a music score to fill in and enliven a dead script, we may be painfully aware of music being used inappropriately, compensatively.

This no-music, cinematic "purism" resurfaced more recently with the European-inspired **Dogma** style of filmmaking, which also excludes all music scoring. The only music allowed is **source** music, i.e., music, say, from an on-screen radio, that's part of the ambience of the scene. A recent French film, *Va Savoir* (2001), is entirely without music. So is the Danish film, *The Celebration* (2002). Every once in a while you can have a film with **sound effects** but no music [*Grapes of Wrath* (1940), *A Tree Grows in Brooklyn* (1945), *Diabolique* (1955) and, most recently, *The Blair Witch Project* (1999)]; but it's rare.

For the most part, this move to remove music from films because music is unnatural, is frowned upon, naturally, by film composers (and directors). Films need music, they insist. Even silent movies had (live) musical accompaniment. Because of the "work" a musical score does in augmenting a film's aural effects on the visual-emotional experience, eliminating a musical score or musical commentary

accompanying onscreen activity would be hazardous to a movie's impact and, likely, audience engagement and enjoyment.

Further, the argument goes, music is the simplest and most direct way of making a statement, even though it is often registered subconsciously, since a viewer, paying attention to events taking place on screen, hears but ordinarily does not (consciously) listen to the accompanying score. The interplay between the visual and the aural or auditory experience can be fascinating indeed.

To comprehend fully what music does for movies, one should see a picture before and after its scored, first in **rough cut** and then in **final cut**. Not only are dramatic effects heightened by the addition of music and, frequently, sound effects, but in many instances the faces, voices, and even the personalities of the players are experientially altered. Music adds something we might call **heightened realism** or **supra-reality**. It is a form of theatrical, filmic reality, different from our normal reality. That, of course, may be the point entirely. Because films are two-dimensional, extra-ordinary experiences, they may need help, as it were, from music. After all, in real life when you're scared you don't need scary music to tell you. Absent repressions your body, your nervous system, your cognitions, tell you that. So, perhaps heightened realism merely levels the playing field enabling films to draw us in and, as the saying goes, suspend disbelief.

Indeed, according to film composer, Miklos Rozsa [who composed the scores for biblical epics like *King of Kings*(1961), *Sodom and Gomorrah* (1963), and *Ben Hur*,(1959), but also more contemporary films like Steve Martin's *Dead Men Don't Wear Plaid* (1982)], the role of musical background is clear; the music serves the drama and creates in the subconscious an idealistic and sometimes irrational dimension against which the naturalistic components play. One could compare the music's function with the role of a Greek chorus, painting the drama and underlining and psychologically enhancing the action (in Thomas, 1991).

In the end, then, purists who would eliminate music from a film may make the movie more realistic, but it's rare that people come to movies for the experience of realism. Movies, of course, may be over-scored or badly scored, but that is another matter entirely.

## Emergence of Psychological Influence in Film Scoring

In the late 40s, film music was part of the wave of industries that were touched by the impact of Freud and other theories concerning psychological motivation underlying behavior. These became known, in advertising industry, as **hidden persuaders**, i.e., cues in an ad which influenced how a person should or could feel and associate that feeling with the product, *ala* classical conditioning.

In film music it was found that an audience could be influenced into buying the character or mood state of an actor—rather than simply of a scene and its overall mood—if a theme, ballad, or motif was connected to the actor and repeated over and over, with tonal variations, no matter what the context. Examples are the films *Laura* (1944) and its haunting ballad by David Raskin, a theme throughout, which imbued the film with deeper meaning. Other examples are “*As Time Goes By*,” in *Casablanca* (1942) “*Lara’s Theme*” from *Dr. Zhivago* (1965) and, of course, the thrilling Dimitri Tiomkin-Ned Washington theme song from *High Noon* (1952), “Do Not Forsake Me, Oh My Darlin’,” sung by screen (and real life) cowboy Tex Ritter (the father of late TV star John Ritter). This haunting melody, in its orchestral version, runs through the entire film, punctuating, accentuating and underlying the mood of the lead character, a western Sheriff, played by Gary Cooper, dealing with a crisis of conscience and a town gone coward.

Music can be a subtle tool with which to manipulate the audience (e.g., *Laura*, *Casablanca*) or can dominate a film and, for franchise fans, obscure mediocre scripts, uninspired direction and perfunctory acting (e.g., *Star Wars* episodes I, II, and III). A music scores is particularly useful when it helps provide a dimension of meaning that is implicit rather than explicit in the script. The successful composers are those who are inventive, who have an innate sense of drama and who have the curiosity to find new and intriguing ways of adding the commentary that only music can make.

Music creates mood. This is synesthesia of sorts. We learn to connect a piece of music with an emotional event. And, perhaps, as Gestaltists would have it, some connections, are innate. *Jaws* (1975), “*M*” (1931), and *Psycho* (1960) provide the audience with vivid, chilling classically conditioned associations. Respectively, their sheer pitch, melodic line, or atonality, create nervousness in an audience.

Music can be a reminder as well. The use of “*As Time Goes By*” in *Casablanca* as a recurring main theme, in various tempos, octaves and orchestration renditions, keep the romance-drama keenly in the viewer’s auditory mind as they watched the classic drama unfold on the screen.

Finally, on the subject, according to film composer Lawrence Rosenthal,

“Film, unlike theater, is essentially a visual-aural rather than verbal-intellectual medium. Even though film and the stage play obviously share certain properties, such as dramatic action, dialogue, and character, the basic nature of the film is quite different.

“One of the chief differences is that in a film, sound becomes a highly expressive sensory element, whether it be music, sound effect, or speech. Total silence is an unnatural vacuum in a film. The ear seems to insist on filling it—whether with a few harp notes, the rustle of clothing, or a human voice. Of course, a great express train could race by on the screen, accompanied by perfect silence or with its natural sound replaced by that of a plaintive woodwind, and that might be enormously effective, but the point is that SOME SOUND—or silence in relation to preceding and subsequent sounds—seems essential. In principle, dialogue plays a lesser role in the aural complex of a film than it does on the stage, where, of course, it enjoys complete supremacy. Hence, the correspondingly greater importance of music and sound in motion pictures.”  
(quoted in Thomas, 1991)

### **Evolution of Film Music in History of Cinema**

Music in film was first used simply as accompaniment to the action or to enhance mood, as recalled in old silent comedies and melodramas. Music tried to make up for the absence of speech. Music filled the gaps of silence, breathed life into the infant medium of film. Most musical accompaniment was live piano; later, full orchestras shouldered the musical burden.

Music also provided, literally, sound effects and a hedge against audience’s fear of silence. It also sought to mask the sound of the projector. Often it had to be the aural element to accompany long sequences on the silent screen. It had to stand in for the natural sounds of life.

But, the early music accompaniment to silent films frequently had little connection to onscreen action. All it had to do was create an agreeable atmosphere, much like music in a restaurant, and usually it was a solo piano.

When films grew to feature length, the musical accompaniment also grew. First a violin, then a cello, and other instruments, and as movie houses grew, so grew the orchestra in size and quality. Toward the end of the silent era, with the impresario contribution of film exhibition mogul William Fox, movie orchestras attained the size of symphony orchestras, with first rate conductors and musicians supplying the music.

Initially, the formula for musical accompaniment was psychologically quite simple:

a. When the screen presented the villain, the pianist played a diminished minor chord progression.

This was used to convey an eerie feeling.

b. When the screen presented a hero, the pianist played an uplifting anthem.

c. In a fast-paced scene, such as a chase, the pianist accompanied this with a fast-paced tempo piece, giving the audience a running sensation.

d. The pianist played tunes off the top of his head (like organists at sports events), ranging from classics to moderns, so long as they were consistent with what was on the screen.

e. Later, full orchestras in large film emporiums began to replace the sole pianist and exact musical scores began to replace the improvisational style of the pianist.

(Interestingly, a few years ago, some film historians had re-struck an old print of Able France's 1927 silent French epic movie *Napoleon*. In Los Angeles, they brought in Carmine Coppola, Francis Ford's father, to conduct the full orchestra which accompanied the showing. It was quite the Hollywood event! Yet, it wasn't the most careful or smooth conducting and orchestration, because music must serve the pace of the screen story, rather than the integrity of the orchestral work accompanying onscreen action. This accommodation to movie reality usually requires tinkering with tempo and complete musical passages.)

f. Conductors were brought in to orchestrate classics or even compose new scores for films. It was also designed to provide movies with CLASS to produce legitimacy rather than being a vulgar alternative to a vulgar burlesque, vaudeville, low culture reputation the film medium had cultivated early on.

After the introduction of sound, no longer were the actual works of the old European composers played as film scores. Instead, there arose a crop of film composers like Max Steiner (he scored *King Kong* [1933], *Gone With The Wind* [GWTW] [1939], *Casablanca*, [1942]), Wolfgang Korngold (*The Seahawk* [1940], *Captain Blood* [1935], *Adventures of Robin Hood* [1938] ) and Alfred Newman (*The Robe* [1970], *The Greatest Story ever Told* [1965], *Airport* [2004] ). All wrote and were steeped in the nineteenth- and early twentieth-century styles of Tchaikovsky, Rachmaninoff, Wagner, Strauss, and Mahler (Thomas, 1991).

But soon it became apparent that existing music, e.g., William Tell Overture, didn't fit a love scene. Other music, with tempos that were entirely irrelevant to onscreen action, were commonplace. When the music was appropriate, it was a chance occurrence (e.g., Luis Bunuel's documentary *Land Without Bread* in 1932). So, at the request of audiences, critics, and studio heads, conductors began to synchronize the selected music with the onscreen actions and rhythms. Tchaikovsky's Romeo And Juliet, as an example, was mostly used for love themes.

Thus, there was this line of progression of musical accompaniments to all-purpose, classical pieces to existing music selected and, over time, becoming connected to typical scenes or character emotions to, finally, music composed directly for the screen. This occurred at the end of the 1920s.

In 1927, when Warner Bros. using Vitaphone sound, released *The Jazz Singer*, with Al Jolson (remade in 1953 with Danny Thomas and Peggy Lee, and 1980 with Neil Diamond, Lawrence Olivier and Lucy Arnaz), the earth tilted on its cultural axis and the world and the sound of movies changed forever. In one year, WB had their profit margin increase 745% (Barrios, 1995). Live orchestration became less desirable as the live music distracted from or even overwhelmed the screen dialogue.

Later, with recorded music, there was more control over the music's orchestrations. The score became even more sophisticated; editing, volume control and dubbing all contributed to a highly specialized art form of musical soundtracks.

The first sound films were mostly musicals. It was a veritable flood of movie musicals, starting with the first true musical film, *The Broadway Melody* (1929) (not Jolson's 1927, *The Jazz Singer*, as some believe) some good (e.g., *42<sup>nd</sup> Street* [1933]), most derivative and rather awful (e.g., Jolson's *The*

*Singing Fool*). With the exception of there being technical novelties, they didn't bring anything new to the screen. They were merely photographed musical comedies or operettas or operas (Barrios, 1995).

Even in the earliest days, the nickelodeon days, the silent film days, they realized that adding a pianist playing chase music or love music, or music signifying the mystery, or any other feeling or sensation or emotion, helped the picture, highlighted or underlined the visual input, the on-screen action.

It still does. And if it's done well, it is as important as any actor, any Director of Photography, or any writer. It has, in effect, the most lines in many film, albeit lines of music rather than lines of dialogue.

Curiously, though, many moviegoers take the musical accompaniment to a dramatic film so much for granted that five minutes after the movie ends, they can't tell if they heard music or not. But, the music was heard subconsciously.

According to film music composition historian, Tony Thomas (1991), the sentiment of most film composers is that film music is necessarily simpler than music composed for concert. It just serves different masters. Scoring must work quickly and surely. There is no second hearing, unlike concert music. Unlike going to a concert specifically to listen to music, people go to movies, not to listen to music, but to see the action and hear the dialogue. Music enhances, accentuates, completes psychological effects because there is just so much that an actor can express with his face, body, and dialogue. But it's not the reason a person goes to a movie. The music must know its place.

### **What Are the Rules for Music's Place in Film?**

**Spotting the picture** is the term used to describe how the composer, often with the director go through a completed film and determine how much music is needed and where it should be. This is so since no background score is continuous throughout a picture. A picture with music throughout would be a motion-picture opera, a completely different musical product. The score normally consists of separate sequences, each lasting from a few seconds to several minutes in duration. The entire score, made up of perhaps thirty or more such sequences, may add up to from 40-90 minutes of music.

But the music must be appropriate and must accomplish what the director intends; it must play its part as an integral part of the on-screen ensemble. If it's done badly, it draws attention to itself and away

from the events unfolding on screen and in the storyline. Or it unintentionally and unartistically contradicts and undermines the onscreen events. Or it annoys because it is simply wretched in concept and/or execution. It is, in effect, fingernails scraping along a black board.

It's surprising then, that, according to many books on film composers, there are very few rules about the use of music in films, although there are conventions and styles which fade in and out of favor and must be considered or ignored at peril. Whether someone decides to deploy a symphony orchestra or solo instrument or electronic creations, like the *theramin*, (think of Beach Boys song *Good Vibrations* or most 1950s Science Fiction movies (e.g., *The Day the Earth Stood Still*, 1951) with the weird, high pitched, all-vibrato, metallic sound) the only expectation is that the music accompanies and accentuates. In other words, the music must work. Too often, alas, the film score is a consideration near the end of the film rather than it being an equal partner from the beginning. According to most, but not all, film composers, the latter would maximize the synergy between score and visual story.

There are also some rules of thumb which have emerged over the years (without, I might add, the help of psychologists who study music).

For example:

1. If there is intense emotion in a scene, the music can be loud because the emotion will support it. If your music is loud in a scene which contains little dramatic feeling, then it will do more harm than good. Oftentimes, directors ask composers to write music for weak scenes, to strengthen it. Sometimes doing so only points up the weakness of the scene, rather than strengthening it.

2. If music simply tells you what you already know from on-screen action, then it adds nothing to the mix emotionally, produces no additional response from the audience.

3. The use of strings is effective under dialogue because they don't fight the voices.

4. If the sound effects are dominant in the scene (bells, trains, people in action), the music must be subtle enough to enhance, but not interfere.

5. Large images on the screen will often call for louder music (think opening of *Star Wars* [1977] and star-studded, black space). The opposite register to the voice should be used in the music to prevent too muddled a sound track to allow for proper mixing.

According to classical, Broadway and Hollywood composer, Aaron Copland, there are a number of ways in which music serves the screen (Thomas, 1991):

**1. Creating a more convincing atmosphere of time and place.** Here music tells the audience the period in which the action is set. But for the most part, what we identify, e.g., as French music, or Chinese, or American Indian music, is originally arbitrary. Over time and with copycat repetition of one composer's inspiration by those who follow and work with the same genre or time or place, audiences have become conditioned to associate certain music or musical styles with certain backgrounds and peoples, regardless of whether the music is authentic in terms of time, place, ethnicity, etc. For example, in the western, *She Wore a Yellow Ribbon (1949)*, background music suddenly taking on a tympani beat as White men are relaxing over dinner out on the trail, tells us that the Indians are on the warpath, even before the camera pans to the smoke signals on a distant hilltop. Using authentic tribal music would probably have no predictable effect at all. An interesting example is composer, Aaron Copland. His *Billy the Kid* and *Rodeo* ballet compositions, premiering in 1938 and 1942 respectively have become almost synonymous with **Western** theme establishment. Passages from either work, or variations on them, are found in dozens of westerns to establish the period.

**Sci-Fi** is established with techno-synthesized music as heard in *Matrix (1999)* and *TRON (1982)*.

**Middle Eastern** themes similarly established in such films as *The Wind and the Lion (1975)*, *Lawrence of Arabia (1962)*, *Masada (1984)*, *Exodus (1960)*.

**Medieval, Arthurian** period is established with blaring trumpets, as in *First Knight (2001)*.

**2. It Can Underline Psychological Refinements**—the unspoken thoughts of a character or the unseen implications of a situation. Or it can counterpoint what is happening on screen, perhaps to foreshadow some imminent danger. A well-placed dissonant chord can stop an audience cold in the middle of a sentimental scene...a murder is about to happen!!!!, as in the sexual, bedroom scenes in *Basic Instinct (1992)*.

3. **Serve As Neutral Background Filler:** This is the music one isn't supposed to hear, the sort that helps to fill the empty spots between pauses in conversation, it must weave its way underneath dialogue and not cancel out someone's voice.

4. **Build A Sense of Continuity:** Most obvious in a montage of scenes where the use of a unifying musical idea may save the quick flashes of disconnected scenes from seeming merely chaotic.

Music is a kind of binding veneer that holds a film together, and hence is particularly valuable in the use of montage. It's really the only thing that seals a montage into one coherent effect. That's why it was used in the newsreel in its most basic form.

5. **Underpin the Theatrical Build-Up of a Scene, and Round It Off With Sense of Finality,** e.g. as in the *Rocky* (1976) fight finale.

6. **Express the inner feelings of the characters** rather than the character's reactions to the external aspects or action ongoing. The focus is on character and personality, rather than situation, e.g.,

7. **Create a mood:** In *The Rainmaker* (1956) with Burt Lancaster playing a con man offering to bring rain to parched wheat fields, a waltz is used to convey the fantasy of the legend being told to a young woman by a young man in order to charm and romance her. The waltz helps to transport the woman into the fantasy land he is weaving.

8. **Wallpaper:** music used to cover up the deficiencies of the script or film.

But some composers for screen, like Miklos Rozsa, feel that the music should be synchronized more with the dramatic content than with the actual pictures, movements, and irregular happenings. For these composers, music should not illustrate the picture, as in **Mickey Mousing**, but complete its psychological effect. **Mickey Mousing** involves using music to reflect action on screen, e.g., plunk, plunk, plunk, as mouse creeps across the floor in cartoon. Or choo-choo theme for the elevated train King Kong attacks or, in the film's climax, when the attacking airplane engines are pitched to the music as the orchestra imitates the sound of engines and Kong fights off the planes. (Handzo, 1995)

For Rozsa, music should be heard, even if it is heard subconsciously, and it should join the drama and the acting, with everything together creating a work of art.

Today, producers and composers of film music often have very different objectives, at least theoretically. The producer may want the film to have a melody, a song, that can be lifted from the film and commercialized separately or used on its own to promote the film (e.g. the theme song, sung by Barbra Streisand from the film, *The Way We Were* (1973), or end theme from *Titanic* (1997), "My Heart Will Go On."). A composer, on the other hand, would argue that "the score which subliminally enhances the film and helps meld all its elements is really of greater value than a simple melody that can be lifted off the sound track and transferred to a recording."

Interestingly and not surprising, unlike compositions of music which are written to stand on their own, many film scores cannot stand on their own because they are tied to the storyline and to the characters they musically represent. Take away the visual images and storyline and much of the score makes no sense, unless, of course, one eliminates from the movie score all the grammatical music which fills sometimes as much as 90% of screen time. Most sound tracks are really pared down compositions because the entire score, in all its bits and pieces, would make no sense on its own. Thus, some scores are solely part of the flimic gestalt; others, step in and out of the gestalt because of lyrical or melodic virtue (e.g., *Titanic*, *The Big Country*, *Picnic*, *Star Wars*, *Blade Runner*, *Gone With The Wind*, *Dr. Zhivago*). But all scores contribute to the melange of components (writing, acting, directing, editing, cinematography, etc.) comprising the cinematic experience.

### **Film Scoring Composition Concepts**

Over the decades, film scoring has evolved its own set of (flexible) rules and grammar and concepts. What follows is a definition of some of the more experientially and textually relevant concepts culled from a variety of sources I have frankly since forgotten.

**Counterpoint:** Refers to the salient relationship music and film share that interact to create a unitary entity. Analogous to choral music where two voices that possess their own integrity, yet when combined, elicit a far more powerful effect. In the case of film and music, one is visual and one is auditory.

This contrapuntal process is one of alternating figure and ground. There are passages in the film where the score takes emphasis, then the emphasis returns to what's happening on-screen. The music and

the ticking clock in *High Noon* is a good example. The score builds the excitement and tension in the scene which, in its absence, may tend to dissipate as the clock ticks down.

At certain points in a film, such as a dramatic pause between characters' dialogue, we become increasingly aware of the musical accent (often seen in romantic interlude), this is felt in the orchestral swelling of the score, the increased volume. Just as suddenly, the music can drift back into the unconscious and the characters return to the center of attention as their dialogue reasserts itself.

**Supra-reality:** describes how the musical accompaniment amplifies what happens on screen. An interesting facet of this relationship is when the musical score is emotionally/psychologically incongruent with a particular on-screen moment. In a horror movie, for instance, the character may be screaming in terror, yet the musical gesture is in the opposing direction, an accent at a low pitch. Compare, for example, the low pitch in *Jaws* (1975) as the shark is approaching a swimmer vs. the high, screeching sound in *Psycho* (1960), when Norman Bates is stabbing Janet Leigh in the shower. **Both suggest terror, but they are in different octaves.** They are both, of course, extreme sounds in the extreme range, high and low, and we become conditioned to their meanings as we watch the movie, now oblivious to the fact that the notes possess no inherent meaning apart from the on-screen conditioning-- except that they are rare in nature. (Gestaltists like Rudolph Arnheim [1958] take issue with this associationistic statement, arguing, instead, for frequent innate relationships between musical sounds or chords and emotional experiences)

Despite the fact that, in real life, scary music never accompanies a life-threatening situation (or any situation for that matter), we accept this in film. Music has become a player in the plot, pointing out how we should feel -- when we have lush romance accompanying lovers embracing -- and sometimes tricking us, diverting our attention, heightening our sense of expectation--as in a scary scene when the music is menacing, we expect something horrible to happen, and all that comes is a cat jumping out of a box and scampering off, as in the scene in *The Exorcist* (1973), when Ellen Burstyn is searching in the attic for the source of noises which we, the audience, have been led to believe may be the Devil himself.

**Underscoring:** Using the music to punctuate or articulate a mood. For example, in *Pride of the Marines* (1945), the loneliness of a soldier walking in a cavernous Pennsylvania Station railway is

accomplished by using a single, solo trumpet as the camera booms high, giving the vast space of the terminal and the awful sense of loneliness of the man, going to war, without anyone to bid him farewell. The one, single instrument colors the mood blue.

One can also use distortions in music, dischords and the like, to show distortion of normal emotions. The approaching madness of Gloria Swanson's character in *Sunset Boulevard* (1950) when she kills the writer-lover, played by William Holden, a tango theme which had been associated with her throughout the film now is played in a disjointed manner, with a single oboe to do the work to show how she's gone over the edge into madness.

**Realistic Music:** music which is visually sung, dance, or played on the screen as in the wedding singer in *Godfather* (1972).

**Source Music:**; music originating from an on-screen radio or phonograph or off-screen from a juke box.

Both realistic and source music are recognized as part of the reality of the scene, rather than being part of the score.

**Characterization:** Through the correct composition and created or previously established association of an on-screen character (a role in the storyline) to music, the composer can give insight into a character by the music which comes up when he/she/they come on the screen.

Recall John Travolta in *Saturday Night Fever* (1977) with the opening sequence of Bee Gee's disco number "*Staying Alive*." Travolta struts around the neighborhood, exuding confidence. The beat of the music amplifies the character, the audience experiences this hip sensation. We KNOW and we FEEL more about Travolta's character, Tony Manero. It was used it again in the wretched sequel, *Staying Alive*, directed by Sylvester Stallone, with additional, original songs by brother Frank Stallone.

In *Boys N' the Hood* (1991), we hear a rap passage which tells us about a group of gang bangers cruising the Hood, staring down the two central characters. The choice of music tells us "these guys in

the car are dangerous.” They look it and the music sounds it. All evidence suggests, be afraid, be very afraid.

In James Bond movies, the theme recurs when Bond is making an important move.

Amelie’s themes in French film *Amelie (2001)*, underscore her mood changes.

This scoring is frequently much more efficient than using dialogue (epithets aside), and more emotionally evocative because the music goes directly to our brain’s emotional structures (the limbic system), virtually bypassing cortically-based cognitive mediation.

### **Foreshadowing and Accompaniment.**

Two of the most common ways to heighten dramatic activity in film is through foreshadowing and accompaniment.

**Foreshadowing** acts to prepare the audience for an upcoming event. This event may be in the same scene or the music may bleed into the next scene, starting before the scene is even on screen. Even few notes of dissonance or a fleeting minor chord of subtle intrusion in an otherwise merry scene can anticipate trouble.

The dramatic music comes along PRIOR to the important filmic sequence. It becomes a cue for the audience to play close attention and generates expectancies about what is to occur.

Alfred Hitchcock relied heavily on this technique, incorporating apprehensive music to precede dramatic moments, inducing a tension for the upcoming event.

Filmmakers will frequently toy with this technique, putting audiences in suspense for a trivial event, creating false alarm. Recall the use of cats in *The Exorcist*(1973) and in *Friday the Thirteenth* (1980).

Foreshadowing is comparable to situation where dialogue in a following scene begins as voice over in the preceding scene, a device used quite often in modern filmmaking. The value of this technique is that it involves the establishing of what psychologist Dolf Zillmann (1971, 1980) labeled **Excitation Transfer**, where events and related tension accumulate throughout a film, rising, falling but not to a level of complete audience relaxation. This leaves a residue of tension upon which to build the next exciting scene, having it yield more excitement than, by itself, it otherwise might have.

**Accompaniment:** in contrast to foreshadowing, accompaniment plays directly with the highlighted scene, rather than preceding it, accentuating and enhancing the scene's atmosphere, rather than predicting the future scenarios. Thus, a funeral scene is accompanied by sad, minor key, music;; a musical wedding atmosphere in *Godfather*(1972) and *The Wedding Singer* (1998); joyous action, as with Vangelis's theme from *Chariots of Fire*(1981), blue mood (*Blade Runner*, 1982), escape or traveling fast (*Blade Runner*), comedic or zany music (*Hard Day's Night*, 1964)

But composition of onscreen music can also be a study in contrast.

**Incongruence or Ironic Contrast:** Musical accompaniment to a scene which, by its contradiction to on-screen action, draws attention to and heightens the emotional experience of the audience: *Clockwork Orange* (1971) and kicking man to death to the music and lyrics of the title song from the movie *Singing In The Rain*, Alain Resnais' *Night and Fog* (1955) where he accompanies long pan of dead bodies with festive music. Or Tarantino's *Reservoir Dogs*(1992) graphic violence with a 70's rock accompaniment.

This pairing of graphic violence with music that is generally pleasant results in cognitive dissonance, heightening the adverse reaction to the scene. We also have rock music playing during a shootout in *Boogie Nights* (1997); *Platoon's* (1986) use of composer Samuel Barber's *Adagio for Strings* with onscreen carnage, and contradictory secular and clerical visuals and voice-overs in *Godfather II's* baptism scene (1974), or the assassinations scenes in *Sum of All Fears* (2002).

(In my own writing for television, I incorporated **ironic contrast** in an opening scene in an unproduced script I did for CBS, *Thank You For Dying*. The film opens in Griffith Park in early afternoon. In the background there is a carousel with children laughing and the calliope playing. The ironic contrast is in the foreground, where a man is committing a brutal murder.) Alternatively, in a script I co-wrote for CBS, which was produced, *Miles to Go...*(1986), the director insisted on changing the music that was specified by I and my co-writer and, in doing so, totally changed the emotional tone of the scene, to the detriment of the film's impact.)

### **Cognitive and Affective Associations:**

Film scholar, Jeff Smith (1999), in an article entitled “Movie Music as Moving Music: Emotion, Cognition, and the Film Score, notes that, although the film score plays a number of narrative and structural functions, it is often assumed that its most important function is as a signifier of emotion. Music frequently serves to represent the emotional states of characters, suggest the prevailing mood of a scene, and prompt of an appropriate emotional response from spectators.

Yet, exactly how music does its magic on audiences is still far from definitively understood. In order to answer questions about the relation of film music to emotion, i.e., beyond being merely a signifier of role or character, the relation between music and emotion must be better understood.

From a general theory of pure musical expressivity, it is argued that spectators make sense of film music’s affective properties on a number of different levels. These levels can best be understood within a combination of cognitivist and emotivist theories of musical affect. **Cognitivist** theories assert that music can signify emotional meanings to listeners, but cannot arouse them. **Emotivist** theories, on the other hand, contend that music not only can but often does arouse emotional responses in listeners.

From a music theory and from a psychomusicology perspective, two processes are central to our emotional experience of film music: **polarization** and **affective congruence**. In polarization, the specific affective character of the music moves the content of the picture, the bias or ordained thrust of the movie (*or scene or sequence*) toward the emotional pole communicated by the music (*other than when the music is used in an ironic fashion like happy music over violence*).

**Affective congruence** refers to a type of cross-modal confirmation in which the spectator matches the score’s affective components to the emotional shading of the narrative. This produces a summing effect on the listener, making the degree of emotional engagement stronger than that produced either by the music or the visual tracks alone, i.e., a true Gestalt effect.

The **polarization effect** has been seen using a animation technique introduced by Fritz Heider (Heider & Simmel, 1944). In this deployment of the technique used by psychomusicologist, Annabel Cohen (2000), the effects of film music on viewer’s inevitable animistic interpretation of the meaning of the animated movement of three geometric objects as they move in and out of a geometric enclosure. Subjects (Ss) heard one of two soundtracks of contrasting tempo, one *allegro* or fast-tempoed and one

*adagio*, or slow-tempoed. Ss were then asked to rate the music and film on bipolar adjective scales (known as Semantic Differential Scales) that were then sub-factored into dimensions of evaluation (e.g., good-bad); potency (e.g., strong-weak); and activity (e.g., fast-slow). Each bipolar adjective scale consisted of a set of paired terms, such as calm/agitated, sad/cheerful, villainous/heroic, or serious/humorous.

The results indicated that the music not only affected the perception of each figure, but that temporal congruencies between music and image directed attention of viewers toward certain features of the film. In doing so, the music accompanying the film nudged the meanings associated with each object toward one pole of the bipolar scale. Thus, in a hectic, fast-paced carnival scene, a slow, minor chord piece of music can draw attention to a young child sitting outside a tent in the right corner of the screen, looking sad and rejected. The camera is pointing and the music is highlighting the mood of the boy even though the panorama of the scene is other than sad.

In a second series of tests, Cohen measured the influence of musical associations on the interpretations of computer-generated visual displays. A bouncing ball could be varied in speed and bounce height accompanied by music varying in pitch (rapid vibrations-high pitch, slower vibrations-low pitch) and tempo. Once again, the auditory elements systematically shaped the affective or emotional meanings of the visuals. Happiness ratings were associated with high fast bounce and with major as compared with minor triad.

In a third series of tests, Cohen tested the influence of musical associations on both referential and affective meaning. She asked Ss to match four excerpts of film music with descriptive titles taken from the record jackets for each respective piece. Three of the four titles showed very high agreement among subjects as well as consensus on semantic differential rating scales. Music also affected meaning attributed to short film excerpts.

Results also showed that when the emotional meaning of a film excerpt was ambiguous, music induced polarization was most intense and pronounced. But, when visual and aural information clearly conflicted, visual information took precedence over aural clues, muting the effects of polarization. Thus, ambiguity and opaqueness of scenes increases the polarizing effects of music.

**Affective Congruence**, like polarization, involves an interaction of visual and musical information such that the latter influences the interpretations of the former. Unlike polarization, affective congruence does not involve changing or shifting affective qualities of the on-screen image so much as it serves to heighten and intensify them.

To study this, George Sirius and Eric Clarke developed an experiment designed to test whether music and image combined in an additive manner or produced semantic effects of a true audiovisual percept. Ss were asked to rate a group of musical excerpts and computer generated images on 12 bipolar adjective scales. The images were geometric shapes and musical examples were especially composed to fit the specifications of particular music and film genres (disco, Spanish, thriller, etc.) Results showed that music had only additive effects on relation between sound and image. This was less so in ambiguous visual settings where polarization effects predominated. In other words, the additive effects of music simply intensified the subject's impressions of the affective meaning such that the combination was greater than the audio or visual percept by itself.

It was also found that when music was temporally and affectively congruent with a visual image, **recall of that image was enhanced**. In other words, film music directs our attention to patterns of activity that correspond with the affective qualities of the music, much of which seems innate but much may also be classically conditioned.

When an emotionally powerful visual track is combined with an emotionally expressive soundtrack, the heightening of affective meanings achieves an intensity that can produce a physiological response in spectators. The evaluation of this physiological response may, in turn, produce a sense of self-awareness that the spectator attributes to the emotional expressiveness of the film. *In this way, a well-conceived soundtrack can make an otherwise weak scene into a powerful emotional event. Loud soundtracks are often found in movies with weak storylines or dialogue or coherence, such as a Vin Diesel movie.*

For some analytically oriented theorists, the score not only represents the character's emotions, it also reproduces this emotion in viewers, *much like a CU of a facial expression mimetically might reproduce the same (albeit usually at a micromuscular level) facial expression and related emotion in the*

*viewer*. In other words, someone onscreen shows facial signs of nausea and our mouths and eyes imitate that nauseated look. We see, in effect, a bonding between film, character, and spectator via the film score. We have, essentially, **audience-scene emotional parallelism**.

But the audience's emotional experience can oftentimes not parallel the scene's protagonist (say a veteran having a flashback of war and undergoing fear), but be quite different (shock, pity). Here, rather, music communicates emotional disturbance **TO** the spectator, but does not arouse it **in** the spectator

### **Communication Rather Than Evocation.**

According to Jeff Smith (op cit), again, a cognitivist approach is better able to specify and catalog a film score's affective functions, viz., music's ability to 1) enhance the emotional responses of spectators and, 2) signify the emotional state of characters, and 3) convey the overall mood or tone of a scene.

The power of association is something film and film music utilizes fully. So far as we know, as stated previously, at least empirically, there is no such music (lyrics aside) that we innately associate with seasons, i.e., summer music or winter music. But, over time, the pairing of certain kinds of music with certain seasons, say in film or on radio, triggers the seasonal association and musically amplifies and establishes in our minds the season.

Films, in fact, do classical condition or cement associations between music and screen action, sometimes instantly but oftentimes incrementally. Recall the film, *Jaws*, and the low Duh Duh, Duh Duh, of the bassoon, steadily increasing in meter and volume as the shark is about to take a bite out of someone. From then on, we know that the bassoon passage equates with an imminent shark attack.

In Fritz Lang's first "talkie," "*M*", the child murderer-molester, played by Peter Lorre, whistles the theme from the 4<sup>th</sup> movement of Grieg's Peer Gynt Suite, "*In the Hall of the Mountain King*," as his perverse sexual passion rises and he prepares to abduct and murder a child. This associationist use of film and action provides foreshadow (murder) and character establishment (murderer).

Such associations are key to eliciting emotional responses to what's on the screen. Indeed, they prime us because once the musical passage starts, we begin to tense up and get frightened, we anticipate, and adrenaline starts circulating more heavily in our blood stream, like hearing the first **whirring** of the drill in a dentist's office.

Gestalt psychologists Rudolph Arnheim, argues that our brains are hard-wired to associate certain sounds (musical keys) with certain moods (happy-sad). Happiness is commonly associated with high pitch and fast moving, bouncy rhythms. Conversely, sadness is associated with low pitch and slower rhythms. That is, we parallel energy levels with mood states. In a sense, it is suggested that some associations between music and mood are learned while others are built into our brains. Gestaltists call this “innate organizing tendencies.”

In a study by Boltz and Shulkind (1983), they monitored physiological responses while Ss watched a film on industrial accidents. They varied the type of music which accompanied the visuals, relaxing music, horror music, and no music. The authors found that the type of music directly correlated with the increased or decreased GSR (galvanic skin response, a device to measure stress through the skin) and evaluation of the degree to which the film upset them. Such findings suggest that music can alter internal arousal to a visual stimulus and our total reaction to it.

Being that music can evoke an emotional and physical reaction that is free of any intellectual process, it is the perfect counterpart to film.

## **MUSIC AND MEMORY**

Recent research (e.g., Boltz, Shulkind, and Kantra, 1991) demonstrated that background music has a profound effect on retention of filmed events. The techniques of accompaniment and foreshadowing produce different effects on memory. **Accompaniment** facilitates attentional mechanisms, improving retention of filmed event by illuminating important elements in the scene through the connotative or subjective meaning of music.

Music **incongruent** with scene produces a lower retention rate than congruence, but higher than no music. *Personally, though, if the music used incongruently is previously associated, and famously so, with another, perhaps oppositional mood, as in the use of the song, “Singing in the Rain,” while the thugs sing, dance, and viciously assault the drunk in the violent sequence in the movie Clockwork Orange, I think the memory or retention rate would be startlingly higher than with congruent music or no music at all.*

When it comes to **foreshadowing** (in contrast to accompaniment), incongruent music produced higher retention than congruent, i.e., the opposite of what occurred with accompaniment. Presumably this is a result of either **expectancy confirmation** or **expectancy violation**. When music allows one to successfully predict the outcome of an episode, it becomes redundant. Conversely, when one's expectancies are violated, it remains more salient in memory. When the viewer is presented with stimuli that violate expectations, attention is directed toward it to make sense of it. This produces selective attention and, probably, memorial replay.

Interestingly, when subjects in an experiment are asked whether they prefer confirmation or disconfirmation of expectancy, they prefer the latter involving suspense, surprise, and curiosity.

But expectancy violation that is implausible or the result of poor writing, will turn viewer against film. (However, this is true more with regard to movie plot than with regard to movie music.) In other words, sometimes we need expected closure to feel satisfied with story; sometimes we want to be surprised, or at least appreciate surprise that's intelligently wrought in the script [e.g., major film star Janet Leigh dying early, in *Psycho*; Samuel L. Jackson's early demise in *Deep Blue Sea (1999)*, Anthony Hopkins' death in *Mask of Zorro (1998)*.] *Casablanca* had two endings: where Bogey and Bergman stay together and where they don't. Based on preview audience reactions, the latter was kept and former, discarded. Even Rhett and Scarlet's perpetual star-crossed relationship in *Gone With The Wind*, may have disappointed many, but Rhett's walking out on Scarlet at the end made the movie far more memorable.

The Boltz, et al (1991) study also revealed that events in film accompanied by music eliciting positive affect scored higher on memory tasks than those with negative affect.

They offer three explanations for this result:

1. People are more motivated to expel sad feelings and cling to happy ones.
2. Positive affect is more efficiently integrated into memory and therefore triggers numerous relevant associations.
3. Negative affect may be stored in isolation, thereby lending to memorial distortion. This is consistent with Gestalt psychology and concept of memory trace system vs. isolated memories.

## **Closure**

Closure is a Gestalt psychology term referring to the perception and/or feeling of being finished or closed or completed. In a scene or storyline closure involves strong finality. A storyline in a film is weak if continuation is still expected but doesn't materialize.

Closure represents a strong property in music.. We are aware when it's missing. Music theory dictates that music should return to the tonal starting point. In music composition, this is called "**The Law of Return.**" An example is when the critical music notes in *Close Encounters of a Third Kind* (1977) eventually swell and elaborate into a full orchestral rendition.

The art of good filmmaking requires numerous conflicts and resolutions to sustain motion. Each possesses its own closure. Research by Thompson, Russo and Sinclair reported in journal, *Psychomusicology*, (1994) confirmed that musical **underscoring** resulted in significant changes in psychological arousal. They found that merely by altering the final note of the score (up, down, familiar, unfamiliar in the score) significantly influenced a perception of closure and thus resolution in a scene.

In longer passages of film, this influence is diluted and the visual information provided supersedes the score. On the smaller scene level, when comparing strong and weak closure of music with film events, those who watched the film with poor closure were more likely to perceive the scene as incomplete. This may leave tension in the perceptual system of the viewer and aid in feeling dissatisfied or, worse, interfere with full attention to or feelings aroused in and by subsequent scenes.

## **Music and Tempo and Audience Arousal**

A study by North and Hargreaves (1966) demonstrated that fast music in supermarket led to shoppers moving more quickly but spending less money than when slow tempo music was played.

Fast tempo music in restaurant led to customers eating more quickly while slow tempo music led to more money being spent on drinks from the bar. This relates to studies reported by Holman (2002) which indicated that playing fast clips of music with a movie makes the audience feel that the movie is moving fast even if the film's pacing is actually much slower.

## **Summary of Major Points**

To summarize the major functions of film music:

1. Provides a sense of narrative continuity
2. Reinforces formal and narrative unity
3. Communicates elements of the setting
4. Underlines the psychological states of characters
5. Establishes an overall emotional tone or mood of a film or scene
6. Can be an identification of or signature of a character

Clearly the psychology of experiencing film is pervasively impacted by the filmmaker's execution of these functions in editing and synthesizing a final film product. As music theorist, Noel Carroll (1999), has succinctly noted, music and visual tracks exist in a kind of complementary relation. Music acts roughly like a linguistic modifier, helping to clarify the particular mood, character, or emotive significance of a scene or visual action.

The visuals, narrative, dialogue, and sound effects, on the other hand, imbue the film score with a referentiality that it inherently lacks. Film music may evoke different responses in different people because of different associations and because some or much music is ambiguous enough to lack emotional specificity. Whatever emotional specificity a film score has, is derived from its placement in a narrative context, and is probably not an inherent quality of the music itself. Additionally, different viewers might react differently because of different moods before viewing a film and the extent to which a narrative situation might relate to one's private foibles, fears, desires, and anxieties.

Furthermore, since film genres are become associated with particular moods, music that activates genre schemata may predispose viewers toward certain affective meanings in the visuals they accompany. Romantic music may lead viewers to recognize affective qualities such as warmth, tenderness, or passion. Horror may elicit judgments of fear, terror, and anxiety, etc.

Other extra-textual and extra-musical associations may enter the picture as well. Films which play music from a period (Dean Martin establishes the 50s, Glen Miller, the 40s, Smashing Pumpkins, the 80s) may engage nostalgia for those periods. The selected music may be used to underscore a romance and enhance it with the period association.

In conclusion, multi-Oscar winning composer Elmer Bernstein sums up the impact of music as follows: “Of all the arts, music makes the most direct appeal to the emotion.”

The signification of character’s emotions, the communication of an overall mood, and the arousal of emotional responses in audiences comprise a structure of film-musical affect that corresponds with different levels of emotional engagement. These levels of engagement can be best understood through a combination of cognitivist and emotivist theories of music. As one film composer put it, “When film composers meet with directors, they talk about the same thing--emotions!”

## **Epilogue:**

### **Film Music: To Hear or Not To Hear, That Is The Question**

One important aesthetic in pairing film and score is whether or not we should be aware of the film score. In opera, it is clear that the music is the emphasis, the focal point. In film it’s more ambiguous.

Although the music contributes heavily to the overall shape of the film, the shape originates from the film, not the music. Furthermore, if the score unintentionally draws attention away from the dramatic shape of a scene, then it does not fit.

Film music composer, David Raskin (cited in Thomas, 1991) feels that the purpose of film music is not to be noticed for itself. Its great usefulness is the way in which it performs its role without an intervening conscious act of perception. It is most telling when the music registers upon us in a quiet way, where we do not know it’s actually happening.

But today, with the push to sell soundtracks to the public and even build a desire to see a movie, often the soundtrack is released before the movie and is partially what the audience wants to “see” when it goes to the movie. When the soundtrack is quiet and unassuming, it may not help a movie’s overall impression. And when the soundtrack is a killer, it may make the movie seem better than it was...as a piece of film work. A good example is *Waiting To Exhale* (1995). My wife and I saw it a theater where the volume was set rather low. Our reaction to the film was lukewarm at best. Weeks later, we couldn’t understand why people raved about the soundtrack which, for many, helped make the movie. For my wife and I, the soundtrack in a theater with low volume did not do it’s intended work, i.e., make the film experience a better one than the script deserved! This is one of the major appeals of music centers in the

home. A great sound system can make a great movie experience even if the movie actually watched is not great at all.

Film began to be used to create mood, punctuate dramatic narrative and establish a time period. Later it became useful to pre-sell a movie and to make additional revenues as marketable soundtracks even to sell a movie (or a play) before it opens.

Songs or scores which become signatures of movies, also help in selling a movie, e.g., *Saturday Night Fever*, *Gone With The Wind*, or even *Casablanca*. In effect, main themes or standout scores become additional cast members. Thus, how obtrusive a score is in a movie depends on what its purpose is; to merely underline or foreshadow or create moods or be a set piece, a crown jewel of a film.

### **Scores and Soundtracks**

Recently, however, less is being paid for original music/scores and more is being done with earlier, prerecorded songs and hits. This followed from the premise of psychological salesmanship the conclusion that, if songs and the songlike themes can sell a film, then song writers would make better film composers than composers of a symphonic background. There arose a dramatic transition from classically trained composers dominating film scoring to pop tune writers, pop singers, and hit songs to become the favored sound tracks for films. Other than for composers like John Williams (e.g., *Star Wars* series, *Raiders of the Lost Ark* [1981], *Jurassic Park* [1993], *Amistad* [1997]) Jerry Goldsmith (*Alien* series), and Danny Elfman, (e.g., *Spider-Man* [2002], *Batman* [1989], *Edward Scissorshand* [1990], *Men In Black* [1997]) there are few giants in the film composition pantheon as there were a decade or two ago. Even modernists like Vangelis (*Chariots of Fire* [1981], *Blade Runner* [1982], *Year of Living Dangerously* [1983], *T2*[1991],) find employment gigs in film scoring coming at a rate that is fewer and farther between. Box Office, economics, and serving youth seem to be the major reasons for the demise of the film composer. One hopes this pattern will revert back to earlier days when composing for film was a noble occupation and one where the composer could earn a living and respect and enrich the culture with timeless compositions. One hopes, but one fears otherwise.

## References

- Arnheim, R. (1958). *Film as art*. London: Faber and Faber.
- Barrios, R. (1995). *A song in the dark: The birth of the musical film*. New York: Oxford U. Press.
- Boltz, M.G., Schulkind, M. & Kantra, S. (1991). Effects of background music on the remembering of filmed events. *Memory & Cognition*, 19, 593-606.
- Carroll, Noel (1999) "Film, Emotion, and Genre", in Carl Plantinga & Greg M. Smith (eds), *Passionate Views: Film Cognition, and Emotion*, The Johns Hopkins University Press, pp. 21-47.
- Cohen, A. (2000). Film music perspectives from cognitive psychology. *Music and Cinema*. Eds. James Buhler, Caryl Flinn, and David Neumeyer. Hanover NH: University Press of New England, 2000.
- Handzo, S. (1995, Feb.). The golden age of film music. *Cineaste*, 21, 1, 46-61.
- Heider, F., and Simmel, M. "An experimental study of apparent behaviour". *American Journal of Psychology*, 13, 1944.
- Holman, T. (2002). *Sound for Film and Television*. Boston: Focal Press.
- North, A. C., & Hargreaves, D. J. (1996). The effects of music on responses to a dining area. *Journal of Environmental Psychology*, 18, 55-64.
- Smith, Jeff. (1999). Movie music as moving music: Emotion, cognition, and the film score. In: C. Plantinga & G.M. Smith (Eds.) *Passionate Views: Film, Cognition, and Emotion*. Baltimore: Johns Hopkins University Press; pp.146-167.

- Thompson, W. F., Ruso, F. A., & Sinclair, D. (Spring/Fall 1994). Effects of underscoring on the perception of closure in filmed events. *Psychomusicology*, Volume 13 (Numbers 1 and 2).
- Thomas, Tony. (1991). *Film score : the art & craft of movie music*. Burbank, Calif. : Riverwood Press.
- Zillmann, D. (1971). Excitation transfer in communication in mediated aggressive behavior. *Journal of Experimental Social Psychology*, 7, 419-434.
- Zillmann, D. (1980). Anatomy of suspense. In P. H. Tannenbaum (Ed.), *The entertainment functions of television*. Hillsdale, N.J.: Lawrence Erlbaum Associates.