

It takes more than bells, trumpets and strings to bring our emotions into harmony with the action on the movie screen. It takes an artist who understands psychology as well as music.

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If you were to replay in your mind one of the suspense-filled scenes from the film *Jaws* when the shark was about to attack, or conjure up one of the spaceship chases from *Star Wars*, chances are part of your memory would be an echo of the music from those scenes—John Williams's provocative, disturbing score for *Jaws* with its jagged, insistent rhythms provoking tension and dread, or the same composer's *Star Wars*' score, with its strong, melodious leitmotifs for each of the main characters. That the music is interwoven with your memory of a picture's high points gives an inkling of the influence that it can have on a film.

This point was brought home dramatically to a group of UCLA students studying film music with the help of a young actor, Barry Gordon. As his instructor Eddy Manson began to play the harmonica, Gordon started walking back and forth across the room. It was a measured walk each time, not running, not ambling. But as Manson played a slow, doleful tune on his harmonica, the class described Gordon's walk as slower, a walk of sadness, of resignation, maybe a man who had just lost his woman. Manson switched to a bright, lively melody and the young performer—though actually moving the same way as before—suddenly seemed to the class like a man out for a happy afternoon stroll. Each time the harmonica music changed, so did the audience's perception of Gordon's walk, but the actor, a trained professional accustomed to playing with or against a prevailing mood, said he was deliberately not listening to the music and was timing himself so that he would walk the same way each time. Yet, with each repetition, he became a different character. The power of music to excite and direct our emotions and perceptions is considerable.

Illustrations by Marty Cunsaulus

In the Key of Feeling

by THOMAS E. BACKER and
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Film composers know and use this power, often acting like modern-day Machiavellis—moving audiences through quicksilver changes in emotion, underlining the action on screen, giving insights that intensify the film experience. Music can add a powerful dimension to what's happening in a film story—in *Z*, the beloved political leader played by Yves Montand is assassinated in broad daylight in a public square, while nearby a band accompanies the tragedy with a banal tune. The music drives home the chilling realization that his death was the result of apathy as much as the assassin's bullet—nobody really gave a damn. Effective drama? So much so that composer Mikis Theodorakis's score was thrust into the real-life drama of international politics, and the composer—himself jailed and his music banned—almost became a victim of the turmoil in Greece. Or just as readily, the film composer can provide an "establishing shot for the ears," quickly setting time period, geographic location or both. Bachian counterpoint and harpsichords suggest 18th century; "Rule Britannia" says Great Britain, perhaps a British sailing vessel; country-rock says contemporary South. Immediate communication with the audience by way of music can save a director or writer precious time and can sharpen the pace of the movie.

Any film buff knows these are just two of the ways music can function in film. Irwin Bazelon, in his book *Knowing the Score*, says that film music often restores the lifeblood that photography tends to drain away. For example, if you go to a football game, you can look at the field, taking in the action as a whole, or zero in on the quarterback handing off—or closely watch the line-backer—or "pan" all over the stands

watching the fans and the hotdog hawkers. As the spectator, you do your own shooting and editing; but in a film, with every shot edited and ordered in advance, we are robbed of this freedom. Music helps to restore the excitement of immediate perception, because it's such an effective emotional conductor on its own. It impels the viewer along so he or she doesn't mind being manipulated and, in fact, enjoys it! Music humanizes as it goes, controlling our emotions, titillating our curiosity, helping to move us along at the pace needed for a film's action to unfold convincingly.

Film music can often have a life of its own; producers know this and hope for a good score or a catchy little tune if the movie itself is weak; it can promote better box office. It's said that the enormous success of Maurice Jarre's "Lara's Theme" saved *Dr. Zhivago* from being a commercial disaster. True? Maybe, but what is undeniable is the impact the song had on audiences' emotional responses to those parts of the film in which it was used.

But how does movie music acquire these dazzling powers? Why do we react as strongly as we do to the film composer's "bag of tricks"? The answer reaches beyond the mechanics of scoring music for motion pictures, encompassing the whole range of human response to music, which Schopenhauer called the "language of emotion." Some ancient philosophers thought music was one of the basic elements of the universe; music plays an important role in almost all religious ceremonies, in black- and white-magic rituals. We get married to music, christen our children to music, get buried to music. Millions of men enlisted in World War I to the tune of George M. Cohan's "Over There." It strikes directly at the gut level, and we respond intuitively, often without thinking about why we react as we do.

Years ago, in the course of entertaining servicemen in hospital wards across the country, Eddy Manson performed on his harmonica for a bunch of GIs, including some "Section Eights"—the emotionally disturbed. As he played, nearby sat a slight, youngish man in a wheelchair who didn't move, smile or react at all to what was going on—until

Manson launched into a hard-driving version of "St. Louis Blues." It was funky, riffy, a deliberate show-stopper. About halfway through, the young patient rose from his wheelchair and, incredibly, started to dance. The other GIs cheered and stomped for him. When it was over, physicians and patients crowded around this soldier, congratulating him, as he smiled and laughed. Still wondering what the hell was going on, Manson buttonholed an MD, who told him that the man had been in a catatonic state for many weeks, showing no recognition of anyone or anything. For whatever reason, the music had affected him deeply, had helped him move back into contact with reality. Not surprisingly, music is used today in programs of therapy for the mentally ill in hospitals all over the world.

What underlies these powerful responses to music? Although no research has been done yet on the effect of film music per se, for many years music scholars, psychologists and physiologists have studied the effects music has on human behavior. Psychologist Kate Hevner's studies of the 1930s had subjects check off adjectives that best described their feelings when hearing brief passages of music. She discovered that reactions are highly consistent for many musical selections. Hevner's work and other studies that followed find that 80 to 90 percent of us agree that, for example, music characterized as dignified, serious, solemn or sacred is slow, low-pitched and avoids irregularities or rhythm and dissonant harmonies. There is the same degree of consensus that sad music is low-pitched,

slow and apt to be in a minor key, and that triumphant or exciting music is fast and apt to contain dissonance. Musical styles, however, have an impact on consistency: program music is rated most consistently; while some modern impressionistic music, the least—there's a lot more agreement in the reactions to the "William Tell Overture" versus Debussy's "Reflections on the Water."

These kinds of research studies have continued up to the present time, although even today there is much about the psychology of music we don't understand. Modern measuring instruments and computer analysis have only recently made it possible to look at the effects of longer, more complicated passages of music and to record many body reactions instead of just one or

HOW MUSIC WORKS IN A FILM

FUNCTION

EXAMPLE

1. Creation of physical atmosphere (time of day, climate).

Mandel's *The Sandpiper*. Scenes at Big Sur: an imitation of natural sounds—crashing of water reproduced in orchestral terms; solo flute evoking feeling of open spaces.

2. Creation of mood.



Raksin's *Laura*. Scene where detective roams around Laura's apartment: somber romanticism in long melodic line, often repeated but never completed throughout this long scene, helps to create mood of self-absorbed reverie that makes it more plausible that the detective is falling in love with a dead girl.

3. Evocation of time period.



Goldsmith's *Planet of the Apes*. Opening scene with Heston in spacecraft: one repeated stopped note in low register of piano, and gradually increasing dynamic volume as pattern is telescoped by slide whistle, emitting unearthly glissando sigh; gives effect of putting spectator into different time and place with few bars of music.

4. Evocation of culture in which story takes place.

Rosenman's *A Man Called Horse*: use of eagle-boned flutes, recorders, drums, rattles and authentic musical style of American Indian music.

5. Evocation of physical setting (sea, mountains, open space).

Korngold's *Captain Blood*. Music for scenes on open sea: large orchestra, with Wagnerian sweep suggesting the vast sea and motion of the waves.

FUNCTION

EXAMPLE

6. Underlining action.

North's *Spartacus*. Gladiators training: music is discordantly aggressive, full of violence and abrasiveness; use of short rhythmic figures that start, proceed, then back up and proceed again, in a gradually lengthening pattern.

7. Mickeymousing (the music accents or even mimics what is happening on the screen).

Steiner's *King Kong*. Kong on Empire State Building: music rising and falling dramatically in stepwise melodic fashion as Kong climbs (an excellent use of this technique that has been much abused in other films).

8. Rounding off the film.

Mancini's *Days of Wine and Roses*: reprise of melody underscores action of main characters throughout the film, this time played dramatically and with last note missing suggesting question mark.

9. Underlining unspoken thoughts of character.



Arnold's *Chalk Garden*. Scene where Deborah Kerr meets judge who sentenced her for murder years before: music combines a nervous fluttering melody line with essentially slow, pulsating drumbeats, underlining Kerr's agitation about being discovered, and simultaneous silent reminders to herself that she can escape if she keeps control.

10. Revealing unseen implications of a situation.

Bazelon's score for short film by Robert Goodrich, in which a man is seen walking through

two. Armed with these new tools of science, we're about to get to the heart of just what produces our responses to music.

Interestingly, many scientists in past years were reluctant to study music because, as the "language of emotion," it was thought to be beyond rational analysis. Sigmund Freud scrupulously avoided considering music and its psychological impact and admitted on the single occasion (in 1914) when he referred to the subject at all that he himself was "incapable of obtaining any pleasure" from music because he could not comprehend its emotional impact and feared it.

The available research tells us that the effect of music—in a film score or elsewhere—involves some combination of *physiological* responses to ele-




ments of the musical stimuli such as pitch, loudness, tempo, together with *emotional* responses stemming from associations the listener has to the music based on prior experience with the same or similar music.

The third ingredient is *aesthetic* responses based on the listener's evaluation of the quality of the music itself or its performance.

The physiological reactions to music have been overrated. Although music can indeed affect body processes, these effects are not so striking as we once thought, according to the available scientific evidence. Under certain circumstances, music can increase body metabolism; increase or decrease muscle energy; accelerate respiration and decrease its regularity; produce a marked although variable effect on volume,

pulse and blood pressure; and influence internal secretions of the body. Some of the effects are rather dramatic. In one experiment, musical selections were played to trained musicians whose eye pupils had been experimentally fatigued by many exposures to light (and thus reduced in size). Upon hearing the music, their pupils almost instantly returned to normal size. This isn't too surprising in light of the fact that pupil dilation is one of the clearest indicators of perceptual attention. Another study found that when listening to music, musicians produce almost one-third more alpha brainwaves—an indication of relaxation or "inner-focused attention"—than do nonmusicians.

So it's clear that music can have a bodily impact, but the effects tend to be relatively short-lived. The most pro-

FUNCTION	EXAMPLE	FUNCTION	EXAMPLE
11. Revealing psychological makeup of character.	New York City: the man in fact is on his way to commit suicide; score indicates this by omitting all "busy street" noises and telling audience something is amiss by scoring long plaintive tune in flugelhorn. Mancini's <i>Wait Until Dark</i> . Entrance of Alan Arkin to Audrey Hepburn's flat: the score reveals that Arkin is mentally disturbed with the playing of isolated notes on out-of-tune pianos.	14. Underlining expected reaction of audience.	Auric's <i>The Innocents</i> . The little girl and her governess are standing by pond, the girl hums a children's song; suddenly the ghost of Miss Jessel appears: score at this point launches into distorted version of same tune as counterpoint to the humming.
12. Building continuity from scene to scene.	(In scores of the '40s) various films—fade in or fade out, and flashbacks covered by musical "bridges": same piece of music curtains one scene and opens the next; flashbacks often used "vibe mists"—glissando on vibraphone with sustained pedal (considered cliché today).	15. Making philosophical point.	Eisler's <i>Hangmen Also Die</i> : as Heydrich, the Hangman, lies dying, score uses high, strident strings to suggest the death of a rat, not a hero.
13. Building overall continuity.	<i>The Heterosexual</i> . Jean-Louis Trintignant and Stephane Audran make love while Jacqueline Sassard, who has been involved with both, crouches outside bedroom door: the music here develops without a break into an impassioned crescendo as the scene shifts back and forth from inside to outside the bedroom, helping to bind the characters together in their ménage à trois.	16. Setting up audience for subsequent surprise.	Herrmann's <i>Psycho</i> murder scenes: slow, underplayed phrases in the music actually loosen tension in the story, so that shock value of sudden knife murders is even greater.
		17. Deceiving audience as to what has actually happened.	Williams's <i>Images</i> . Scene where Susannah York supposedly murders her lover: the score produces loud, bloodcurdling sound, as knife rips into body, then bell-like tones as blood drips onto floor, helping to lend air of reality to what audience later finds out is a fantasy scene.
			
			

The more the composer knows about human nature, the more he or she can gauge audience reaction.

nounced results are consistently achieved with those who have a strong background in music, so their reactions may be in part the product of past experience with the music and subjects' musical taste. Nevertheless, any American traveling in a foreign country who's ever had a pounding heart, and chills coursing up and down the spine, upon hearing "The Star Spangled Banner" thousands of miles from home, knows that music can have a real physical impact. Our reactions to that impossible English drinking song to which Francis Scott Key wrote militaristic lyrics doubtless began in very early childhood, when we watched people stand at attention while singing the anthem and then cheer at the end. These are responses that film composers can—and do—use.

Though no one has determined for sure how these components interact, a good estimate is that perhaps 70 percent of the total effect comes from associations. Thus, the rule of thumb is that the best predictor of musical response is past musical experience. Even the most unmusical among us hears music on radio and TV, in elevator Muzak, in a thousand places. Inevitably we pick up expectations that, for example, slow music in a minor key means sadness. Certain types of music are associated with significant events in our lives be it graduation ceremonies, dating, marriage or even war. This common musical bond comes down for composers to use in numerous ways to elicit certain feelings or associations from the audience.

In film music, there is also controlled association, as opposed to the free association of the concert hall, radio or jukebox. The music proceeds in tandem with the visual images on the screen, with what is happening in the story, with what the actors are doing and saying. The same piece of music might be called calm, sad or romantic depending on the scene it underscores. Composer Lalo Schiffrin says, "Playing music without the picture is often like playing a two-part Bach invention with one part missing." To get the context, to react properly, you have to know what the music underscored—it's a two-way street.

There has been a decided increase in audience sophistication about film music in the last few years. Walk into any major record store now and you'll see a whole shelf, maybe a whole wing, of the store devoted to sound tracks. Personalities such as Henry Mancini and Marvin Hamlisch have become

well-known to the general public mainly through the success of their film music scores. Film music societies, such as the ones started by composers Elmer Bernstein and Miklos Rosza, have sprung up. As was pointed out not too long ago in *American Film* magazine, these societies are attracting a serious and enthusiastic following. Composers such as Korngold and Herrmann are revered; new books on film music appear regularly. Popular courses about film music are being taught by Eddy Manson at UCLA Extension, Irwin Bazelon at the New York School for the Visual Arts and David Raksin at the University of Southern California.

The film composer of the 1970s thus faces a highly critical and demanding audience, but also a much more responsive one. Audiences want film music of a higher quality, more innovative, more communicative. Music in film no longer has to be "felt but not heard." The chief difference between today's film scoring as opposed to yesteryear is that the composer no longer has to strictly "play the scene"—today what you see on the screen isn't necessarily echoed in the music. Instead, the composer can go off in another direction, often adding a dimension not seen on the screen. For example, Elmer Bernstein's use of a childlike theme throughout the adult drama of *To Kill a Mockingbird* made us see the story through the eyes of the children. Indeed, the tail is coming to wag the dog at times, as attested by the influence of such movie songs as "The Way We Were," "Laura" or "I'm Easy" on the box office of the films that generated them. Film scores now utilize avant-garde musical styles (Lalo Schiffrin's *Hellstrom Chronicle*, John Williams's *Images*) and indeed every conceivable kind of music as needed by the script.

For the composer, this translates mostly into the need to know and be able to use myriad musical styles to capture the right set of associations, and how to make full use of the associations the film establishes. And finally, being aware of his or her audience's increasing sophistication helps the composer look for the novel, the intellectually challenging and avoid "Mickey-mousing"—spelling out musically what is already being seen on the screen—which a more naive audience might not have noticed or minded.

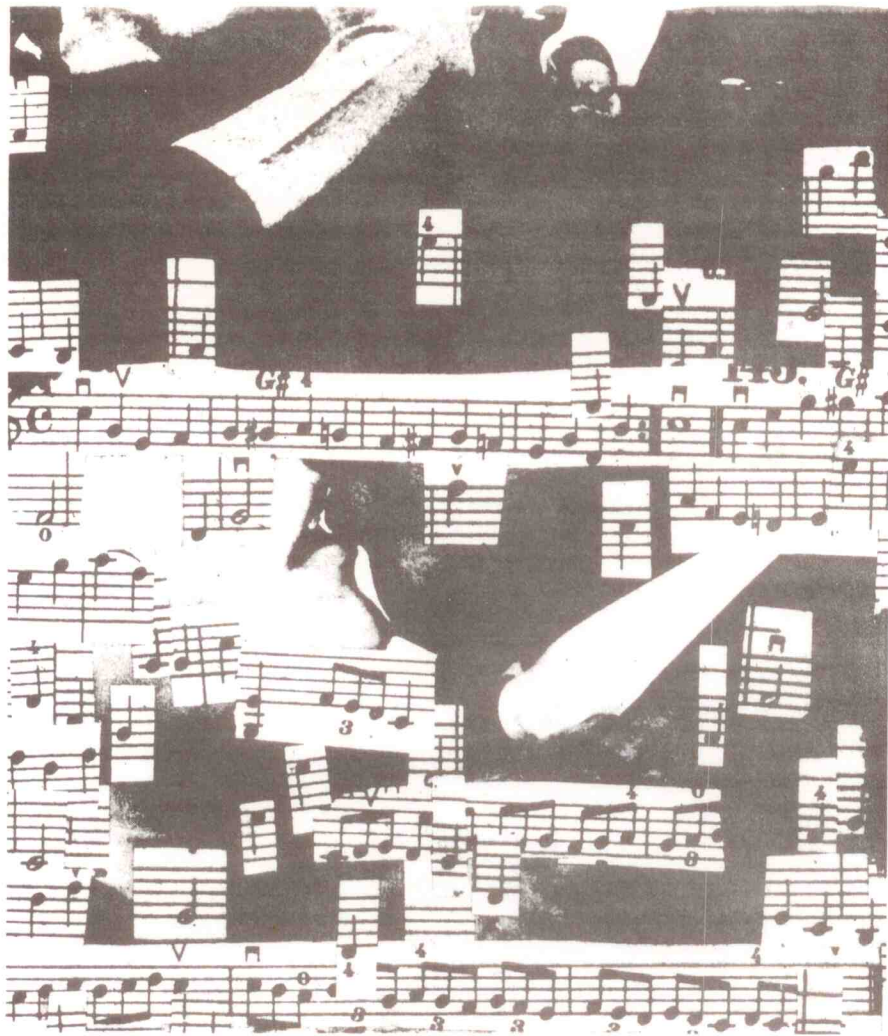
Composers such as Aaron Copland, Henry Mancini, David Raksin and others have written on the art of making music

for the movies. Drawing from their works, and from our own observations, we have derived some 17 functions music can serve in a film. Obviously the explicit musical means by which these can be accomplished are far too numerous to go into here, but we've given one example of each in the chart (see sidebar).

Sometimes several of these functions proceed simultaneously in a single passage. For example, in Eddy Manson's score for *The Little Fugitive*, there is a scene in which little Joey, the film's main character, emerges from the shadows into the crowds on Coney Island, carrying a toy gun and his brother's harmonica. Joey thinks he has killed his brother (actually it was just a practical joke staged to make him think so), and the audience also knows that the brother used to play "Home on the Range" on his harmonica. As we watch Joey walking down a mall crowded with happy fun-seekers, Manson's score uses snatches of "Home on the Range," in a mournful blues for solo harmonica, at once emphasizing Joey's loneliness and total isolation in the midst of this happy crowd, his guilt and his grief for his supposedly dead brother.

The interplay of tension and release is the bedrock of music. Loud, dissonant music continued unrelieved can have a numbing effect, while soft, pleasant music can cause restlessness, boredom and tension (as the Muzak-haters among us can testify). So it is the "rubberband" stretching and relaxing of music that makes it interesting, that builds the kinds of reactions we are talking about. The very nature of an appealing melody is its emotional rise and fall. Henry Mancini's poignant theme for *The Days of Wine and Roses* illustrates this perfectly. His winding, sinuous theme compels us to great feelings of sympathy for the alcoholic couple. At the film's end, as we hear this theme for the last time, played by a lone French horn, the drunken wife walks off into the night and the nearest bar while her husband looks on helplessly. The final note in the climax of the melody is missing, providing the tension of a question mark to the end of the film.

The principle of musical tension and release also is used by writers or directors, of course, in constructing the action of a film. The scripts of Sergei Eisenstein and Ingmar Bergman actually suggest the sonata form—exposition, development, recapitulation and coda. Eisen-



stein also made graphics to illustrate the rise and fall of the music that Prokofiev was to compose for his films.

Composing for films is a demanding and unique art. Scores are created under tight deadlines and often small budgets. And often with interference from producers and directors; Bazelon, after interviewing a number of leading film composers, concluded that only about 2 percent of all filmmakers really understand music at all, let alone all the complexities of scoring for a motion picture. As Jerry Goldsmith puts it, "Film scoring courses are given to the wrong people—they should be given to directors and producers, not composers." And even with the most cooperative of filmmakers, film scoring imposes one inevitable burden on the composer: it must be written to fit the film. Leonard Rosenman goes so far as to say that "film music is simply not music, due to its a priori nature." Film composers are constantly trying to fit a square peg into a round hole, with the result that very little film music can survive in the concert hall unless substantially reworked.

Composers also have to be enormously versatile. Thus, almost all film composers combine the "school and the street," to quote Quincy Jones, composer of *In the Heat of the Night* and

In Cold Blood. Composers may learn their craft in nightclubs, in concert halls, big bands, theaters—for Manson it was the Coney Island boardwalk, as a kid playing the harmonica for whatever people threw at him (sometimes it wasn't money). Formal schooling is part of the training for many (Manson and Henry Mancini were roommates while going to Juilliard). This diversity of experience seems to produce in film composers, the best of them at any rate, a marked lack of musical myopia. In Goldsmith's score to *The Omen*, we hear overtones of Gregorian chant, 12-tone music and strange sounds that were possibly electronic. In Ernest Gold's *Judgment at Nuremberg*, the sound of a German marching band outside reminds us constantly of the Nazi holocaust. In *The Hindenberg*, David Shire wisely paraphrases the style of Mahler and Bruckner to point up the zeppelin as a symbol of apocalyptic German destiny. John Williams, in scoring *Images*, uses the unearthly sounds from stainless-steel sculptures by Baschet to point up the inner world of the film's schizophrenic character.

Composers such as Lalo Schifrin often wade into an ocean of sounds of every description, looking for the ones that to them resonate to the film image they wish to enhance. Before scoring a

film, Schifrin often goes to a warehouse filled with strange and exotic instruments from all over the world. He plucks, beats and shakes his way across the room, listening carefully for sounds he would like to use. Sometimes even musical clichés can provide a clue: Rossini's well-worn "William Tell Overture" might suggest music for an idyllic scene, a storm or daybreak. A film composer would be laughed out of the business if he used Rossini's music as is, but imagining it as he watches a specific scene clues the composer as to where to go with his own music.

So the composer has zeroed in on who the audience is, what musical associations they are likely to bring with them, and then has decided how to use this knowledge in creating music that poignantly dramatizes what Henry Mancini calls the "truth of the film." The more the composer knows about human nature, the better he or she can gauge audience reaction and produce the effect needed to enhance the film.

Billy Wilder, in a recent article for *American Film*, pointed out that young directors tend toward a busy camera, constantly cutting, panning and zooming within a sequence, when a single shot will do nicely, especially if the actors are good. Now, if the camera is constantly coming to the actors, shifting around to put touches of emphasis on a scene, the effect can be very unsettling. This isn't how we see things in everyday life; even if our eyes dart around, there is still a sense of continuity to an event. If the director and editor haven't provided this steadying influence, the film score can. Music often provides the glue that cements the patchwork together, giving overall focus to any given scene. Bernard Herrmann accomplished this beautifully in his score for Scorsese's *Taxi Driver*, as did Marvin Hamlisch in *The Way We Were*, using his poignant theme song to establish a "corridor in time" for the film's action. How lucky we are today, say "The Way We Were" lyricists Marilyn and Alan Bergman, that "songs in films today do not have to point up what is already up there on the screen." Instead, they extend what is already there.

Creative collaboration is the film composer's art, the use of music power to make moving images more real than they were before. Composer Earle Hagen says that film composers are like applied psychologists in their intuitive understanding of human behavior and ability to influence emotional reactions. Even though we are just now coming to understand the composer's power, most of us who love films have been aware for a long time that Hagen knows what he's talking about. ■