**Emotion and the Film Scores**

An Empirical Approach by Hilary Schaefer

This paper discusses some common assumptions made about the emotional effects of film scores and outlines several empirical studies that could be performed in order to test these assumptions. The studies are intended as suggestions; they have not been carried out by the author of this paper.

The purpose of this paper is to focus on a particular topic within the arts and explore how one could study it using techniques of experimental psychology. These studies have practical applications for filmmakers who may be able to use findings from the experiments to enhance the emotional quality of their films.

**Background**

Music has been a part of film almost since the beginning of motion pictures. Music originally had a practical use: to keep the audience from talking and dull the sound of the noisy projector (Buchanan, 1974).

Martin Williams writes that even today, "[a]t the crudest level, one might say that the music is there simply to keep the audience from becoming distracted" (Williams, 1974).

Music is used in various ways in movies: as part of the story as in musicals, as background music within the story (for example, when a character turns on the radio), and as background music to which only the audience is privy. It is used in this way to complement cartoons, comedies, action-adventures, science-fiction, and drama.

**Though the film score is intended to be subtle, it is far from inconsequential. Apparently, "parts of Alex North's music for A Streetcar Named Desire were attacked . . . as 'too suggestive'" (Embler, 1974). This paper focuses on the emotional effectiveness of the film score (the music to which only the audience is privy).**

The following list contains assumptions made by most people inside and outside of the film industry regarding film scores:

Music adds to the emotional quality of the film. There is some empirical evidence to support this: fast and loud music arouses, slow and soft music calms. Motion and emotion are often entwined (Meyer, 1956).

Music, used skillfully, can cover up otherwise weak directing and/or cinematography.

The most effective scores are those which operate just below the consciousness of the moviegoer.

Many in the film industry, including the composers, feel that music offers a kind of sub-text; it serves as thought bubbles on screen. When stories are transferred from the page to the screen, inner thoughts and commentary are lost, a major reason why many people feel a film version of a story is far inferior to the book. This sort of commentary is somewhat replaced by the music.

Composers who write film music are craftsmen rather than artists (though "serious" composers such as Sergei Prokofiev and Aaron Copland have composed for films).

Some film historians consider film music to be a leftover remnant from the silent film era (rather like a vestigial organ).

Often what is true is not as important as what moviegoers think is true. Fred Karlin writes, in Listening to Movies, "We get a lot of our historical musical information from Hollywood. These conventions now sound authentic" (Karlin, 1994). For example, moviegoers have a schema about Asia and what Asian music should sound like. The composer will write more successfully if s/he chooses music that evokes Asia in the listeners' minds rather than authentic Asian music. In this way, false conceptions of cultures' music have been propagated over many decades and are now in the collective consciousness.

Music is generally thought of as a universal language.

Instrumental cliches are common in the industry. According to Kalinak, strings are thought to be the most expressive instrument because they are closest to the human voice in "range and tone" (Kalinak, 1992).

The eye is generally thought to be superior to the ear in our culture (Kalinak, 1992), though Aristotle and Theophrastus feel "'[h]earing is the sense that most deeply stirs our emotions'" (Kalinak, 1992) and Hermann Helmholtz thinks that aural art "'stands in a much closer connection with pure sensation than any of the other arts'" (Kalinak, 1992).

Counterpoint music, which "does not duplicate visual information" (Kalinak, 1992), is far superior to the "Mickey Mousing" technique, in which music duplicates the visual exactly, most often used with animation.

Film composers sometimes get typecast. It is no surprise that John Williams's themes to E.T., Star Wars, and Indiana Jones are difficult to hum in succession because they sound similar.

Some people love the score to a movie within the context of the movie, but if they hear it outside of the context of the movie, they do not like it.

Most of the research in the psychology of music has dealt with the perception and cognition of music. However, little has been done regarding the listeners' emotional response to music and even less has been done specifically concerning the emotional effectiveness of film scores.

Sweeping statements have been made and assumed by those writing about film music. Statements such as "we are more relaxed when we are not straining to comprehend through one sense alone" (Embler, 1974) are made with such ease that they appear to be factual.

But these statements are little more than opinions until one provides empirical support to back them up. It may be true that senses aid each other, but statements such as these cannot be made in a vacuum. References to studies would add to the credibility of those writing about film music.

**A greater problem arises when two writers explicitly differ in opinion. According to William Wolf, "music was applied to drama to tell an audience how it should feel at any given crisis" (Wolf, 1974).**

By contrast, William Alwyn writes that music is "a vital part of the dramatic structure of the production and not an emotional prop filling the sound track with false stimulants" (Alwyn, 1957).

Since neither of these statements is supported by empirical evidence, what is the careful reader to believe? Whereas Wolf refers to a recording studio as an "emotion factory" (Wolf 1974), John Huntley and Roger Manvell explain that "there's always been some form of association between music and the presentation of drama" (Huntley, 1957).

Regardless of its effects, most people agree that music is a vital part of film. The importance of film music does not guarantee respect for its creation, as composers generally enter the film-making process late in the game.

They are asked to add music after a film is shot, rather than being part of the entire creative process. People walked out laughing upon initial screenings of The Lost Weekend. But, when the music was changed, it won best picture (Karlin, 1994).

If filmmakers agree that music can potentially add so much to a film, would giving the composers more time to create add to the emotional effectiveness of the film?

If laboratory and field studies show that the emotional quality of a film is affected by the quality of the music, perhaps directors and producers will treat the film score aspect of the movie making process with more respect and seriousness.

**Previous Research**

Are any of the aforementioned assumptions correct? Some empirical research has been conducted regarding music as a general emotional elicitor. Research done by Konecni shows clear emotional effects of music. Loud and complex melodies arouse non-aroused and aroused people to anger and soft and simple melodies soothe aroused people (Konecni, 1982).

Other studies have shown clear effects of music on the listener. An article entitled "The effects of Music on Responses to a Dining Area" in the Journal of Environmental Psychology shows that the style and complexity of music can affect the diners' mood. Zalanowski "found that soothing music, as opposed to stimulating or no music, led to an increased level of verbalization in a discussion group" (North, 1996).

May and Hamilton "studied the effects of music of positive affect, music of negative affect and no music on the physical attractiveness that female subjects perceived in photographs of males" (North, 1996). And Milliman found that "fast music led to shoppers moving more quickly but spending less money than when slow tempo music was played" (North, 1996).

**Proposed Studies**

Though little has been done to date, researchers can tackle many of the questions involving the relationship between emotion and film scores. The following studies are initial attempts to fit emotion and music into an experimental paradigm.

They are brief methodological sketches designed to give the reader an idea of how to go about studying some of the more general assumptions made regarding film scores. The main approaches to measuring emotions in laboratory experiments include subjects' self-ratings, physiological measurements, and observational assessments.

In self-ratings, subjects rate such measures as how pleasant a stimulus is and how aroused they feel on quantitative scales (for example from 1-9, 5 being neutral). According to Albert Mehrabian and Warren Wixen, "[c]ombinations of various levels of pleasure, arousal, and dominance are necessary and sufficient to describe any emotional state" (Mehrabian, 1986). Thus, subjects' self-reports must contain these scales at a minimum.

In physiological measurements, subjects are hooked up to various machines possibly recording EMG (electric activity in a skeletal muscle), EEG (electric potential produced by brain cells), temperature, heart rate, blood volume pulse, skin conductance, respiration, and serotonin levels (among other vasoconstrictors). Observational assessments include recording facial expressions and body position.

In some cases, the stimulus needs to be edited, dubbed, or altered (when different music is substituted for the original music on a videotape). If no editing services are available, it is possible to play the music separately on a cassette player as the video is running, but this crude measure should only be taken if absolutely necessary.

If this is done, care should be taken to record the original music on the cassette player as well, instead of playing it as part of the videotape. Thus, the sound quality will remain consistent across groups.

The emotion assessments will differ based on the scope of the study and available resources and funding.

Depending on the resources of the lab implementing these studies, the studies may take advantage of sophisticated physiological measurements, incorporate body movement coding (including videotaping the subjects), use simple subject self-rating scales, or any combination of the above. At a bare minimum, no special equipment is needed; emotions can be assessed by subject self-report.

STUDY 1:

How much does music add to the emotional quality of a scene and how much can it detract from it? Observational studies of which music has worked and which music has not worked can be done by looking at reviews, journals, and memoirs during the silent film era. These films are our "purest" sample, as silent films were accompanied by music only.

Max Winkler recalled that "[m]ore and more musical mishaps began to turn drama and tragedy on the screen into farce and disaster" (Winkler, 1974).

Dimitri Tiomkin states that music "has come to be one of the means of story-telling. It is easy to prove this. Just try to transplant any picture's musical score to similar scenes in another picture. You will find that the transplantation doesn't live" (Tiomkin, 1974).

Tiomkin's suggestion is easy to implement in a laboratory experiment which could involve showing the famous battle scene from Laurence Olivier's Henry V to viewers.

In such a study, the feelings, body posture, facial expressions, and/or level of arousal should be recorded for one group of subjects. In a second group, the same scene would be presented without music while a third group would see the same scene with music, such as jazz, that does not fit the mood of the scene.

After listening to the score without the visual, a fourth group would be asked to write down what kind of scene the music might portray.

A fifth group should listen to music which has been taken from Kenneth Branagh's Henry V. Although Branagh and Olivier work from the same source, their approach to the scene is quite different. Can we successfully switch the scores without damaging the original artistic intent of each film?

STUDY 2:

Will viewers who have seen the movies before notice what is different if the score is altered or switched? Subjects may notice something is different, but will they know it is the music? Take a famous scene such as a scene from Jaws or Psycho. The famous two-note Jaws motif when Jaws is about to attack a victim and the screeching violins when Janet Leigh is murdered in Psycho are assumed to be indelibly tied to the scenes.

Will viewers who are somewhat familiar with each movie realize if similar music replaces the original music? The similar music will have been prejudged to be similar in emotional quality (scary, for example). The emotional ratings of three groups of subjects should be recorded.

The first group should be completely unfamiliar with the movies (i.e. have not seen the movies), the second group semi-familiar (i.e. have seen the movies once), and the third group extremely familiar (i.e. have seen the movies multiple times). Is there a between-group difference in noticing something has been altered? Is there a between-group emotional difference?

STUDY 3:

Is good film music truly that which is not perceived by the listener, as many filmmakers believe? Contrary to this belief, Warner Bros. had the most success with movie music simply because it was dubbed louder (Karlin, 1994). In order to test this assumption, volume levels can be adjusted.

For example, researchers could adjust the volume levels in the scene from The Empire Strikes Back when Darth Vader, the villain, first appears. Subjects should be divided into three groups.

The first group should be exposed to the music at such a level that almost everyone notices the music. The second group should be exposed to average levels of sound. The third group should be exposed to a volume that is barely audible.

At what volume level is music most emotionally effective? Does the perceptibility of the music actually take away from its effectiveness? Writers have simply assumed the answer to this question; it would be nice to see some experimental evidence to this effect.

What other aspects of the music make it more perceptible besides volume levels? Is incongruent music more perceptible? Is faster music in a higher register (pitch) more perceptible? In a study, the speed and pitch of the music could be altered.

Higher pitches tend to be more perceptible alone, even when they are at the same decibel level as lower pitches (sopranos are the most detectable because they usually have the melody, but the top notes appear to be more salient, at least to Western listeners). Does this translate into salience in film scores?

STUDY 4:

Does making the music salient affect its emotional effectiveness? David O. Selznick says, "if the audience is even conscious of the score, it defeats its own purpose (Karlin, 1994). What happens when you tell someone to pay particular attention to the music? If you are conscious of it, can it no longer work for you?

Does it have some sort of mysterious subliminal effect? Experimenters could distract one group of subjects by instructing them to look particularly at the costumes while a second group of subjects is instructed to listen specifically for the music.

A control group should simply watch the movie without any directions, and, at the end, all subjects should complete questionnaires about how they felt.

Physiological arousal can be measured during the viewing to determine whether arousal levels are significantly different between the groups. Particular attention should be paid to whether the physiological measurements are similar between the groups even if the self-ratings are different as subjects may not be conscious of the music's effects.

STUDY 5:

Does typecasting result in generic and interchangeable scores within a genre? Though Aaron Copland feels composers should be cast according to their specialty (Huntley, 1957), some of John Williams's scores seem difficult to differentiate. In order to test this question, scores written by the same composer could be switched.

For example, is the score to E.T. sufficiently different from Star Wars to be noticed or are they simply generic futuristic scores grounded in classical symphony orchestra? Researchers could show one group a scene from Star Wars with its original music.

A scene from Star Wars with E.T. music (same genre, same composer) inserted would be presented to a second group, and a third group would view the scene with music from another futuristic epic from the same time period not composed by John Williams, such as Star Trek (Goldsmith, 1980). Which seems more different from the Star Wars music, the Star Trek music or the E.T. music?

A fourth group should be shown the scene with John Williams's music but music from a different genre, such as Schindler's List or Far and Away. Is this music still characteristically Williams's? Is it more or less different from the Star Trek music? In other words, which is more important for continuity, the same composer or the same movie genre?

STUDY 6:

Does making some aspect of a film "familiar" matter? Does it aid in identification? For example, would Star Wars be too foreign were it scored with incredibly futuristic-sounding music? The fact that Star Wars took place in the future was not as important as the fact that it was an epic, and it involved real human emotion.

For Williams, "using a late-romantic sound was 'a conscious decision. . . . music should have a familiar emotional ring so that as you looked at these strange robots and other unearthly creatures, at sights hitherto unseen, the music would be rooted in familiar traditions'" (Kalinak, 1992). In order to test this question, researchers should divide subjects into two groups.

They should show the first group scenes using the original music and the second group scenes using "futuristic" music, including synthesized sounds, computer-generated music, and electronic music.

STUDY 7:

Is it more effective to use clichés that will elicit specific emotional responses from the listener or to use authentic music? How much should the film's time and place influence the score? Take a film such as Spartacus. Is it more important to have music sound ancient or to utilize nearly accurate Roman music? Does precisely researched music performed on authentic instruments add as much to a score as the prevalent but incorrect perception of the music?

This question can be easily tested by showing one group of subjects a scene from a movie set in a foreign place accompanied by authentic music. A second group should be shown the scene with music that moviegoers perceive to be ethnically accurate. Which music is more effective in setting the scene and eliciting emotion?

STUDY 8:

Do viewers differ significantly in their aesthetic ratings of music while watching a movie and listening to the score separately and is the best film score necessarily the best music? Roy Prendergast writes that people like a score within the context of a film but not outside of it (Prendergast, 1954). In addition, Leonard Maltin believes "[f]ilm music was never meant to stand on its own" (Maltin, 1994).

And Karlin states that "musical independence cannot really be considered one of the most important gauges for evaluating a film score" (Karlin, 1994).

Since the score for Star Wars was one of the top-selling of all time, do we then infer that the score is one of the best of all time? An observational study could compare the top selling soundtracks with the most successful movies.

Researchers could approach the question of aesthetics with a between-subject design involving eight groups and two movies (A and B). One group would watch movie A and rate the music on likability scales. Questions such as "Would you listen to the music on your own?" and "Would you buy the soundtrack?" could be used to infer liking.

Then, in a seemingly unrelated experiment a few days later, the same group should be exposed to the soundtrack without the visuals.

Experimenters should present a second group with the soundtrack before having them view movie A. Group three should listen to soundtrack B after watching movie A, and group four should listen to soundtrack B before watching movie A.

The same is done for groups five through eight using movie B as the central movie. The different groups are necessary to account for order effects as well as familiarity effects.

STUDY 9:

Can music ever really be "neutral"? Copland writes, "'Music can serve as a kind of neutral background filler'" (Prendergast, 1954). Is it somehow more "neutral" than nothing at all? Why is it necessary to use music in this way?

And if it is used in this way, as a filler, does it take away from the other scenes when it is used to evoke emotion? Studies have shown that when subjects look at the color red, they perceive time as passing more quickly than when they look at blue since time seems to go by faster when one is aroused (Smets, 1973).

Perhaps the presence of music makes time pass more quickly in the movie, making it less boring and more enjoyable because music is inherently arousing and not "neutral" at all. Karlin writes that music "makes a scene seem shorter" (Karlin, 1994).

Researchers can examine this issue by asking subjects to estimate the amount of time they were watching a clip. The subjects should be divided into four groups. Experimenters should show one group a clip without music and another group a clip with music that has been deemed "neutral" (5 on a pleasantness scale).

The third group should be shown the clip with what has been prejudged as arousing music while the final group views the clip with what has been prejudged as soothing music. Which group of subjects will feel that the least amount of time passed?

Researchers may wish to alter the clips used as some may be more visually arousing than others, which may alter the effects of the auditory stimuli.

STUDY 10:

How do directors and composers determine where music is needed? Filmmakers differ in how they view the insertion of music into film. According to Karlin, the "theory that less is more is favored by some directors" (Karlin, 1994). Huntley states that when used too much, music's dramatic power is weakened (Huntley, 1957). Using a different approach, Jerry Goldsmith, who wrote the scores for Star Trek and Awakenings among others, says, "I decide if it should be there purely by my emotions" (Karlin, 1994).

**Often the absence of music is the most effective (Hendricks, 1974). Some of the best composers know when not to use music; some of the most intense scenes remain so because they live on their own. Copland "realized that sheer contrast is in itself dramatic" (Huntley, 1957). How would the Psycho shower scene appear if it were in silence?**

Would it appear scarier, as the heroine cannot make any noise, and no one hears the murder? Or would it appear empty, as if something were missing? Is it okay if the scene is unsettling in this way, or are the directors responsible for making the moviegoers comfortably uncomfortable? The moviegoers know what to expect within the realm of the "unexpected."

These questions may be investigated by showing subjects a movie without music and asking them where music needs to be added. In addition, a separate group of subjects should watch a movie with constant underscoring. Subjects should be asked when they felt the music seemed unnecessary and out of place.

STUDY 11:

Why is the score so much more a part of film than live theater? Of course filmmakers can make films without music but the composer and "the conditioned reflexes of the cinema audience have made music a vital ingredient in the production of a film" (Huntley, 1957).

Are there differences in emotional distance in movies and plays? Walter Leigh writes that every sound in film, unlike theater, is taken as significant and purposeful (Huntley, 1957).

What is the difference? Does music take away from the spontaneity of the play? Does it add to the emotional present? Does no music make the movie version appear more or less real? What about a recording of a live performance? Would this benefit more or less from an added score?

Experimenters should divide subjects into four groups. They could show the first group the film version of One Flew Over the Cuckoo's Nest without any music and show the second group the film version with music.

The third and fourth groups should be shown the stage version with and without music, respectively; the decision as to whether to show a live stage version or a videotape of a live performance should be made ahead of time.

Showing a videotaped version of the performance, while logistically easier, cannot tease out emotional distance effects. However, because of the nature of live performance, each subject would see a slightly different show. In order to avoid this problem, all subjects could be exposed to the show at once.

Since subjects may affect each other's emotional responses, researchers may wish to show both videotaped and live performances in order to avoid confounded variables.

STUDY 12:

Can viewers recall the theme music to specific characters? Characters are often given their own theme music which filmmakers seem to assume helps the audience to react to certain characters in specific ways. Subjects should be shown a film that they have not seen before and that contains recognizable character themes.

After watching the film, the experimenters could expose viewers to ten different themes (themes for other characters in other movies as well as other characters in the same movie).

The themes should be similar to and different from the original themes. For example, if the character is a "bad guy," the themes should be of other bad guys as well as heroes. Can the subject pick out the theme for the character in question a significant percentage of the time? If not, does this mean the theme was not effective?

STUDY 13:

Beyond the actual music composition, how important is the orchestrator in the success of the film? Should the orchestrator and composer necessarily be the same person? An observational study may be used to answer this question. Some of the questions that may be asked in an observational study include: Are the composers who have orchestrated their own music more successful? Are the films they have composed for more successful (average gross as well as critical acclaim)?

Researchers who choose to perform an empirical study should pick a theme, for simplicity say the theme for Jaws, and re-orchestrate it. Re-orchestration would result in the same melody and rhythm with a different timbre (different instruments would be used). Would the theme be as effective if trumpets played the two-note motif? What if an electric guitar or a flute played the motif?

Researchers could create the stimuli with the help of an electronic synthesizer. The theme could be played on a keyboard where the "instruments" can be changed from a single clarinet to an entire symphony orchestra with a simple press of a button. Each version could be recorded separately and dubbed onto the Jaws video, and each subject would view only one version of the clip.

Is the actual melody more important than the instrumentation? Who would notice a difference more, the person who listens to the original melody played by a new instrument or the person who listens to a new melody played by the original instruments? Using the original written score, which shows the instruments played at each moment of the piece, one can compose new melodies utilizing the instrumentation of the Jaws theme.

Special care should be taken to make the new motifs the exact length of the old motif. Many variables may be altered such as rhythm, pitch, dynamics, and speed.

STUDY 14:

Compare the emotional difference between naturally occurring films containing dialogue only, music only, and both music and dialogue. In these cases, no adjustment to or editing of the stimuli is necessary. Between 1929-1939, there were one-hundred percent talkies, with no music at all. Contrast this with a silent film (scores have been added to these films) and a current film (which contains both dialogue and music).

Is the merge of music and talking the most emotionally evocative? Has there been an evolution in cinema? Researchers especially interested in this question may wish to expand their studies to include live performance by analyzing straight plays (all dialogue), musicals (dialogue and music), and opera (all music).

STUDY 15:

Does film music have to be less complex than art music? Because the purpose of music in films is to evoke specific emotional responses and the music is not intended to be heard, analyzed, and enjoyed on its own, as concert music is, does it have to be simpler? Can trained musicians hear the difference between film music and other kinds of music?

What are the characteristics of art music that are often adopted into films (such as Beethoven's Moonlight Sonata)? Does the relationship between complexity of music and liking (the inverse U-relationship described originally by Berlyne, in Smets, 1973) still apply to film scores?

Researchers may begin to approach these questions by conducting laboratory studies. They could have subjects listen to different music clips (some originally composed for film and some composed for the concert hall) and rate the amount of imagery evoked by each of the pieces (they are blind to the nature of each piece). Perhaps film music is more easily evocative in the pictorial sphere.

STUDY 16:

Is it more effective to use original or known music? Does using a marketable score detract from the film (for example, scores for movies such as Pretty Woman which include old hits such as "Pretty Woman")? Is this somehow less effective because each audience member brings his or her own past associations to the music? For instance, if "Pretty Woman" were playing when you broke up with your lover, the song may elicit specific emotions from you regardless of the context.

But, if the song is composed specifically for the film, then the music is tied to the film; individual experiences will not affect the emotions evoked by the music. Perhaps known music is more distracting even if members of the audience do not bring their own associations to it. On the other hand, studies have shown positive correlations between familiarity and liking; perhaps the music will be liked more if it is already familiar.

These questions may be tested by exposing subjects to films that have been judged as similar in theme and genre prior to the study. Possible confounded variables abound in this study as researchers should be using unaltered scores.

Since no film (to the author's knowledge) has been made in two versions, one with a known and one with an original score, researchers may have difficulty teasing out other variables such as acting, direction, and plot. However, they may wish to show many different films in order to compare the different variables.

STUDY 17:

Can music really cover-up a weak scene? Copland says that "the Hollywood producer secretly hopes that a good score will save a second-rate picture" (Kresh, 1974). In order to study this question, film scenes should be chosen that have been prejudged to be weak, moderate, or strong in emotional elicitation (the scenes will have been shown without music).

Experimenters should divide the subjects into six groups, exposing each group to one version of one scene. The first three groups should view each type of scene without music while groups four through six watch each type of scene with music. Subjects should rate the scene on its ability to evoke emotional response as well as on its quality.

Close attention should be paid to whether the music increases the emotionality of a weak scene more than stronger scenes, whether the music adds less additional emotionality to the strong scene than the other scenes, whether the music detracts from the strong scene, and whether the overall ratings for emotionality and quality for the weak scene with music are equal to or higher than the moderate and strong scenes with music .

STUDY 18:

Does music enhance the understanding of a complex scene? According to Huntley, "music allows the producer to suggest and express emotions and associations which would have been impossible to achieve by pictorial means alone" (Huntley, 1957). In order to study this question, scenes should be chosen that have been prejudged as complex.

Subjects should watch clips with and without music and respond to open-ended questions designed to elicit interpretations of the scene, such as, "What do you think motivates the character?" and "What would the character want to do if she were not in her current situation?"

Researchers may wish to extend this study by choosing clips from movies that were based on books (the subtext is written in the book). Could subjects unfamiliar with the text version describe the subtext more accurately when music is present than when it is not?

STUDY 19:

Does Mickey Mousing lead viewers to predict action, and if so, does it take away from the emotionality of the scene? Mickey Mousing, or the simultaneous mimicking of the action with the music, is often used in cartoons. It appears to be comical when used in dramatic situations. What about it makes it appear comical? Is it more difficult for the viewer to push the music out of consciousness if the music is literally a part of the action?

How can it be deemed less realistic than a score in general? Buchanan says the main problem with Mickey Mousing is that "[e]ach dramatic situation is easily 'predicted' by the viewer unfortunate enough to hear this type of soundtrack, and the dramatic impact is thereby dulled" (Buchanan, 1974). One way researchers may wish to approach these questions is by showing a scene with differing levels of Mickey Mousing.

Experimenters should make one version of a scene with music that duplicates the action (e.g. a chase scene with music timed so that each beat matches the footsteps of the runners), one version with music unrelated to the action (e.g. a chase scene with lento and adagio music), and an intermediate version with music that is similar to the action (e.g. a chase scene with allegro and presto music).

Viewers may interpret music that has nothing to do with the action as a conscious choice on the part of filmmakers, perhaps mirroring a subtext (i.e. there is no way out for the person being chased).

Music can convey the "emotional rather than the physical character of the scene" (Prendergast, 1954). For example, in Force of Evil, David Raksin composed slow music for a final scene where the protagonist is running.

It is not until this point in the movie that the character has "[found] any sort of quietude. Raksin reflects this psychological point in his slow music for this sequence" (Prendergast, 1954). Would incongruous music be more effective than music that mimics the scene, but less effective than music that complements the scene?

Why should we study music?

Many argue that the arts are not worth studying because they are difficult to fit into the experimental paradigm. Others assume that studying them would not add to their appreciation since the arts lack clear objective criteria for quality. In addition, many people feel that few "practical" applications will result from studying the arts.

Contrary to these beliefs, studies such as Smets' have shown that the stimuli which elicit aesthetic pleasure are not arbitrary (thus disproving the first and second arguments). Many practical applications may result from studying the arts as each of us is exposed to art, specifically music, daily in supermarkets, restaurants, theaters, clubs, cars, and homes. Roger Brown wrote in the inaugural issue of Psychomusicology that there are:

... artifacts suggesting the existence of music for as long a period as there are clear signs of the human species. And human societies with no music ... have never been found. It... seems that music has a better claim than language to be considered uniquely human (Brown, 1981).

Music is part of what makes us who we are; therefore psychology, as the science of the mind, has an obligation to study it.

References

Alwyn, W. (1957). Introduction. In Huntley, John & Manvell, Roger (Eds.), The Technique of Film Music. London: Focal Press.

Brown, R. (1981). Do we need a Psychomusicology? Psychomusicology 1: 2, 7-11.

Buchanan, L. G. (1974). The art of composing music scores for films. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp. 29-32). New Jersey: The Scarecrow Press, Inc.

Deutsch, D., (Ed.). (1982). The Psychology of Music. New York: Academic Press, Inc.

Embler, J. (1974). The structure of film music. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp. 61-66). New Jersey: The Scarecrow Press, Inc.

Goldsmith, J. (1980). Music from the Galaxies. London Symphony Orchestra, Stratta, E., (cond.). New York: CBS Classical Music.

Hendricks, G. (1974). Film music comes of age. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp. 45-54). New Jersey: The Scarecrow Press, Inc.

Huntley, J. & Manvell, R. (1957). The Technique of Film Music. London: Focal Press.

Kalinak, K. (1992). Settling the Score: Music and the Classical Hollywood Film. Madison: The University of Wisconsin Press.

Karlin, F. (1994). Listening to Movies: The Film Lover's Guide to Film Music. New York: Schirmer Books.

Konecni, V. J. (1982). Social interaction and musical preference. In Deutsch, D. (Ed.), The Psychology of Music (pp. 497-516). New York: Academic Press, Inc.

Kresh, P. (1974). Is there any music at the movies. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp.32-42). New Jersey: The Scarecrow Press, Inc.

Maltin, L. Foreword. (1994). In Karlin, F., Listening to Movies: The Film Lover's Guide to Film Music. New York: Schirmer Books.

Mehrabian, A. & Wixen, W. J. (1986). Preferences for individual video games as a function of their emotional effects on players. Journal of Applied Social Psychology, 16: 1, 3-15.

Meyer, L. B. (1956). Emotion and Meaning in Music. Chicago: University of Chicago Press.

North, A. C. & Hargreaves, D. J. (1996). The effects of music on responses to a dining area. Journal of Environmental Psychology 16: 2, 135-137.

Prendergast, R. (1954). Film Music: A Neglected Art. New York: W.W. Norton & Co.

Smets, G. (1973). Aesthetic Judgment and Arousal: An Experimental Contribution to Psycho-Aesthetics. Belgium: Leuven University Press.

Tiomkin, D. (1974). Composing for films. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp. 55-61). New Jersey: The Scarecrow Press, Inc.

Williams, M. (1974). Jazz at the movies. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp.42-44). New Jersey: The Scarecrow Press, Inc.

Winkler, M. (1974). The origin of film music. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp.15-24). New Jersey: The Scarecrow Press, Inc.

Wolf, William. (1974). Facing the music: why movie scores are usually so awful. In Limbacher, J. L. (Ed.), Film Music: From Violins to Video (pp. 51-54). New Jersey: The Scarecrow Press, Inc.

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