

## INTRODUCTION TO THE SPECIAL VOLUME ON THE PSYCHOLOGY OF FILM MUSIC

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Throughout civilization, music has accompanied lyrics, dance, drama, and ceremony. A specific 20th century example of music that accompanies is music for film, the focus of the present special volume.

Most people would agree that music plays an integral role in film perception, but exactly what the role of film music is and what cognitive processes underlie it have been little explored and explained (Boltz, Schulkind & Kantra, 1991; Cohen, 1990, 1993). Film music raises intriguing questions for experimental psychology. How is film music integrated with the other information of screen, voice, and sound effects? Does the accompaniment by music necessarily mean subordination of music to other aspects of the film? What role does film music play in the sensory hierarchy supposedly dominated by vision? What is the relative salience of different components of film music such as melody, harmony, tonality, rhythm, and timbre? How much of the background music reaches consciousness? To what extent does music alter the interpretation of a film? The present volume of *Psychomusicology* provides a forum for addressing some of these questions.

### Timeliness of the Inquiry

The present volume is the first collection of articles devoted entirely to the experimental psychology of film music. This topic is timely for several reasons.

First, whereas experimental psychology has a history of over a century, it is only in the last two decades that psychomusicology itself has contributed significantly to experimental psychology. These contributions focused primarily on the psychological processes underlying structural aspects of music, such as tonality and rhythm (Dowling & Tighe, 1993). Past issues of *Psychomusicology* and other research literature show much progress here. Yet it is not these phenomena that characterize the experience of listening to music. For most people, it is meaning and emotion that stand out as the most important aspects of musical experience (Sloboda, 1985; Storr, 1992). Although emotion and meaning may be the more profound aspects of musical experience, they are difficult to study (Reimer & Wright, 1994). However, the recent foundation of the psychomusicology of musical structural elements now makes it easier to address these less tangible areas. Because emotion and meaning characterize the film experience, film music provides one route for exploring the relations between music and meaning and be-

tween music and emotion. Thus, the study of the psychology of film music helps us examine a difficult but important aspect of music perception—that of musically evoked meaning and emotion—for which the way has been paved by past psychomusicological research on musical structure.

A second reason for the timeliness of the study of film music is the relation between film music and consciousness. Renowned film-score composer David Raksin has said of film music, "Its great usefulness is the way in which it performs its role without an intervening conscious act of perception" (in Burt, 1994, p. 5). The processing of film music often seems to occur without awareness. Unconscious processes are of great current interest in cognitive psychology. This has not always been the case. For most of the 20th century, the Behaviorist Zeitgeist was a major influence on psychological research. Topics of mind, consciousness, and imagery were forbidden in favor of objectively observable behavior (Baars, 1988, pp. 7-8). During the past 25 years, cognitive science has replaced Behaviorism, thus legitimizing the formerly forbidden topics like awareness, and potentially placing the psychology of film music at the center of the research arena.

Third, various disciplines have begun to focus on the co-occurrence of audio and visual stimuli. In cognitive and perceptual psychology, researchers are directing more attention to multisensory effects that the combination of film and music so well exemplifies. Recently, as a case in point, the Annual Meeting of the Acoustical Society of America for the first time held two sessions on audiovisual integration (cf. Bernstein & Grant, 1995). Although the focus here was on audio and visual cooperation in speech perception, the event reflects the general interest in multimodal processing that film music perception also represents. At the same time, there is a growing literature in film criticism which focuses on sound and music (e.g., Anderson, 1988; Chion, 1994; Gorbman, 1987; Marks, 1990; Palmer, 1990). These new monographs are symptomatic of the increasing significance attached to the audio component in film. The effects described often implicate psychological processes. For example, composer-filmmaker-critic Chion (1994, pp. 187-189) advocates audiovisual analytic exercises. One of these, called *forced marriage*, is to pair a film excerpt with various music backgrounds. "By observing the kinds of music the image 'resists' and the kinds of music cues it yields to, we begin to see the image in all its potential signification and expression." This raises the question concerning the psychological origin of these effects of resistance and yielding of the film to music, so evident to Chion. Similarly, film and music scholar and critic, Royal Brown (1994), in his text *Overtones and Undertones*, identifies many psychological effects such as "emotion-grabbing octave leaps" of Steiner's Tara theme for *Gone with the Wind* (p. 45). He also proposes that orchestral size influences the degree of subliminal perception of film music (p. 59). One of his major postulates is the "narrativization" function of film music that results from "affect generating devices" (p. 48). Gorbman (1995) refers to Lukas Kendall, who suspects that the appeal of soundtrack albums is that the music allows the listener to go back into the film. She then "suggests that music is

one of the most powerful elements in a film spectator's affect and memory (p. 75)." Thus, the emerging literature on film music articulates effects of musical stimuli on psychological processes. It begs the psychomusicological researcher for empirical evidence and theoretical explanation.

Three further reasons for the timeliness of psychological film music investigations arise from recent advances in technology. First, new developments in digital-computer technology now provide the precise control of stimulus materials of film and music for much experimental work. Nonlinear editing makes it possible to store and manipulate visual and auditory material in almost unlimited ways. Decreasing costs of computer memory and processor speed make this technology feasible for individual researchers. This new control of audio and visual media promotes formal experiments that can address the myriad of psychological questions about film music implicit in the literature previously described. Second, through electronics and computer technology, the simultaneous control of auditory and visual information is at the disposal of many home and school environments. Multimedia has become a household word, and the problem of understanding the impact of audiovisual media on perception and learning becomes an educational issue as it enters more and more into daily life. Film music is representative of multimedia and provides a venue for these explorations. In other words, the psychology of film music can help us understand audiovisual phenomena in general and such understanding is more important than ever with the increasing prevalence of VCRs and computers with soundcards. Third, in part due to technology and to socioeconomic change (augmented leisure time and disposable income), there is an increased access to film, video, and other recorded media. Consequently, film music soundtracks have become a common source of exposure to music and musical experience. George Antheil wrote in the Forties that it was through the film score that public musical taste was being formed (Handzo, 1995). According to Antheil, the average person who visited a favorite movie theatre for 3 hours a week would not know of being unconsciously "emotionally conditioned" for better music (quoted from Flinn, 1992, p. 29; original in the 1940 *Atlantic Monthly*). Such musical acculturation through film scores continues today. A thorough understanding of the psychology of music entails an understanding of whether there are processes unique to the perception of film music. Is learning about music through film music different from learning about music through other sources?

A final reason for the timeliness of investigations into the psychology of film music returns us to the beginning of this Introduction. Film music is an example of music that accompanies. As contemporary music theorists and musicologists recognize, it is only in recent centuries that music has been listened to for its own sake, that is, accompanying nothing at all (Rosen, 1980). Thus, despite whether film music listening is unique in some way, the study of film music perception is the study of music perception in one of its most conventional states, music as accompaniment. While some may

think listening to music in the film context is unusual, the film context, in one sense, typifies the role of music throughout the course of history.

Thus, fundamental and timely reasons call for psychological study of the many aspects of film music. Not all aspects can be addressed in one issue of a journal. The papers in this issue address facets of one basic question: What does film music contribute to the perception of the film? As the field is a new one for psychology, an important primary goal is descriptive: to show what impact music has on the perception of film. It is only when we identify the influences of music on film perception that we can address the question of how these influences come about.

#### An Overview of the Present Volume

The present volume contains six contributions that report experiments and one contribution that is solely theoretical. They focus jointly on background music, music that is not considered part of the drama and is not heard by the actors. Technically, this kind of film music is called *non-diegetic* music or *underscore* as distinct from *diegetic* or *source* music (Atkins, 1983; Gorbman, 1987). The experimental papers together explore effects of a wide range of background music, including music composed specifically for the studies by leading professional film composers and music composed by the experimenters to emphasize particular structural aspects. Similarly, the film materials examined range from originally created drama, to computer-generated geometric animations, television programs, animal interactions, music videos and Hollywood film. Whereas there are doubtless important differences in the perceptual processes entailed by the different media (e.g., between film music and television music, or music video, cf. Allan, 1994), as a preliminary research collection, we focus more upon the commonalities, leaving the distinctions for future studies.

Methodologically, the empirical studies coincide in their use of rating scales, typically presented in the context of the semantic differential. The semantic differential technique uses many rating scales to measure affective meaning on three basic dimensions: Evaluation, Potency and Activity (Osgood, Suci, & Tannenbaum, 1957). The technique assumes that an item being rated will elicit affective associations on these dimensions and that aggregate scores from separate bipolar scales will tap a particular dimension (e.g., fast-slow and calm-agitated rating scales tap the Activity dimension). It is interesting that while the semantic differential has been applied to the study of meaning in many nominal domains, Osgood (1980, p. 203), one of the originators, noted a link between his own early studies of color music synesthesia (with Odber and Karwoski) and the development of the semantic differential technique. Tannenbaum (1956), another originator of the semantic differential technique, also applied the semantic differential in an early study of the effect of music on television and realistic drama. Thus, it is not surprising that the authors of the present volume independently converged on the use of the rating scale technique. They did so, however, in different ways, and with other measures, such as open-ended questionnaires.

Methods of analysis of the semantic differential results also range from multidimensional scaling to analysis of variance, regression, and factor analysis.

The papers thus share a general question and a methodology, but they differ with respect to the specific problems addressed. Taking advantage of nonlinear editing, William Thompson, Frank Russo, and Don Sinclair examine if the degree of musical closure has an impact on the sense of closure in a film. Valerie Bolivar, Annabel Cohen, and John Fentress ask how the meaning of background music influences the meaning of the visual information and to what extent subtle differences in the temporal relations between music and action influence this effect of meaning. Scott Lipscomb and Roger Kendall, using excerpts from a Hollywood film, examine the shared understanding of professional composer and audience with respect to what background music is appropriate for a film excerpt. Claudia Bullerjahn and Markus Gldenring, also using professionally composed materials, examine how the film music influences the interpretation of a 10-minute excerpt from a pseudo feature film. George Sirius and Eric Clarke focus on a fine-grained analysis of abstract computer generated graphic material and professionally developed soundtracks in an effort to define film music interactions and to determine whether they are more than additive. Shin-ishi-ro Iwamiya examines the physical quality of sound and video to determine the extent to which film may compensate for poor audio quality. He also explores how congruence of film and music is a prerequisite for musical influences on meaning. In a final theoretical essay, William Rosar relates the theory of physiognomic perception to film music and provides an alternative view to the notion that background music affects perception by simply adding information.

It is one of the purposes of the issue to encourage further work in this new area. Thus efforts have been made to provide bibliographic material representing different historical periods (from the origins of film music a century ago to the present), different disciplines (film, music, and psychology), and different cultural origins (primarily European and American). It will be apparent that there is a sizable literature, but a literature that cannot be obtained easily from a simple computerized *Psychological Abstract* search. Also for assisting future research, considerable detail about the data is presented, and some problems that arise in dealing with this kind of data are made evident. We have refrained from oversimplifying in an attempt to show what happens when working with materials of this type. The different studies have various strengths that, when taken together, give the reader both a foundation for further research and a good understanding of some current work in the field.

Whereas topics overlap, articles are not cross-referenced because authors did not have access to each other's materials at the time of writing. Thus, common findings, contradictions, and emergent issues remain to be discovered by every reader. One organizing dimension the reader might consider is the position with respect to the issue of additivity versus nonlin-

ear interactive effects of music and film on some dependent measure, be it judged activity level, or sense of closure. Another point of comparison concerns proposals for mental processing models. More work is clearly needed to provide models of how the film and music are cognitively integrated. Bolivar et al., Lipscomb and Kendall, and Sirius and Clarke make some suggestions. All of the papers, however, provide information about what it is that needs explaining. This situation sets the stage, then, for future original research and theory.

As pioneers in a new field, the authors have shown great commitment to this project. Their work has undergone an extensive review, often entailing considerable revision. In several cases, authors responded to reviewers' requests for additional data. This volume experienced delays resulting from several unforeseen events that occurred in the lives of authors, editors and reviewers, including the change in location and production staff of the journal itself. We are especially grateful to David Williams, the founding editor of *Psychomusicology*, for his enthusiasm about the film music project at its inception and to Jack Taylor, the current editor, for his cogent support in seeing it through. The issue owes a great deal to the reviewers whose conscientious efforts contributed to the success of each paper.

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