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## CHAPTER 44

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# MUSIC IN PERFORMANCE ARTS

*Film, Theater, and Dance*

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ANNABEL J. COHEN

## INTRODUCTION

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### Music in Performance Arts—Music that Is Not Alone

Music is rarely alone (Cook, 1998). Throughout civilization, it has typically been performed in conjunction with dance, poetic text, theater, and, more recently, film and television (Cohen, 1999). This chapter considers the psychology of music in the contexts of performance arts, in particular the arts of the moving image, drama, and dance. Research activity in the psychology of music far exceeds that of psychological research in any of these other art forms. Within music psychology itself, research on the role of music in film and television constitutes a small but vibrant subdomain (e.g., Cohen, 1994; Tan, Cohen, Lipscomb and Kendall, 2013), revealing that the role of music in the context of other performance arts is amenable to psychological investigation. In the last few years, new subfields of neurocinematics (Hasson et al., 2008) and psychocinematics (Shimamura, 2013) have emerged, and the foundations of a neuroscience and cognitive science of dance (e.g., Christensen and Calvo-Merino, 2013; Grove, Stevens and McKechnie, 2005) and opera (e.g., Boerner, 2004) are also developing. The present chapter may help to further set the stage for the role of music in such psychological work in these performance arts.

### Nomenclature

The psychology of music usually focuses on hearing, but in fact visual and kinesthetic senses generally play a role, be it watching the motion of the performer, sensing the ambiance of the venue, or tapping one's foot to a beat. Music for film, video, theater, and dance more

obviously requires not only a *listener* but also a *viewer*. For participatory dance, a *mover* sensitive to kinesthetic information, that is bodily motion, must also be considered, and recent notions of both embodied music cognition (Godøy and Leman, 2010; Leman, 2008) and the mirror neuron system (Arbib, 2013; Overly and Molnar-Szakacs, 2009) also implicate the importance of the kinesthetic domain in any music listening or film narrative experience. In the present chapter, the term *audience* refers to the generic member of an audience. Thus the statement *the mind of the audience* refers to the mind of a typical member of the group attending a performance (notwithstanding individual differences).

## MUSIC AS PART OF A MULTIMEDIA EXPERIENCE

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The following section begins with a review of the role of music in film and television, taking a historical approach and considering the recent research in the field of music psychology. Next we will consider the role of music in dramatic contexts and finally dance performance and participatory social dance.

### Moving Images and the Psychology of Music

The art of moving images began in the early twentieth century. Experimental psychology had begun a few decades earlier, and, like film, owed its progress in part to twentieth-century technologies. Hugo Münsterberg of Harvard University was the first psychologist to take film seriously. In his book *The Photoplay*, published in 1916, he proposed that of all the arts, film was the most like music from a structural and psychological standpoint, although theater and photography more strongly resembled film on the surface than did music. Münsterberg also noted the value of music in film for relieving tension, maintaining interest, providing comfort, reinforcing emotion, and contributing to the aesthetic experience. Of course his views applied only to silent film as he predated the talking film. Although there is no psychological research on the role of music in the original silent film context, the conditions of the silent film (i.e., without dialogue and sound effects) simplify psychological studies of the role of music in film, and several researchers have taken advantage of this to study the effects of music on interpretation, beginning with Marshall and Cohen (1988).

Marshall and Cohen (1988) asked whether two contrasting examples of background music would alter observers' attitudes toward characters in a short (2-minute) animation. The animation featured two triangles and a circle and had been used in social psychology research by Heider and Simmel (1944) who showed that typically viewers ascribe personality traits to these geometric "characters" in systematic ways. For example, the larger triangle was regarded as a bully. Using semantic differential judgments (bipolar adjective scales such as fast–slow, strong–weak), Marshall and Cohen showed that the ratings of the film overall and of the individual characters differed under the two types of music. For example, the rated activity of the small triangle was greater for one than for the other of the two types of music. Further examples of the role of music on the interpretation of silent film have been shown in studies of sense of closure (Thompson, Russo and Sinclair, 1994), the perceived aggressiveness–friendliness of wolves (Bolivar, Cohen and Fentress, 1994), animation (Sirius

and Clarke, 1994), and realistic clips of ambiguous human interactions (Bullerjahn and Gldenring, 1994; Cohen, 1993; Shevy, 2007; Tan, Spackman and Bezdeck, 2007).

It was assumed that the advent of the talking film in 1927 would render music for film obsolete. However, surprisingly, films without music were found lacking (Kalinak, 1992, p. 45; Kracauer, 1960, p. 138), and a new industry for recorded music for the talking film replaced the old industry of live musical accompaniment for the silent film. The movie industry soon recognized the importance of the music soundtrack. Simonton (2007) analyzed the relation between success of over 400 award-winning films (as measured by ticket sales, awards, and critic ratings) and success (as indicated by awards) of film songs and film scores. He sampled data from seven professional organizations which give annual awards for film including film music, either best score or song, or both: for example, the Academy of Motion Picture Arts and Sciences (Oscars), the British Academy of Film and TV Arts (BAFTAs), and the Online Film Critics Society. Success of scores, but not film song, was positively correlated with receipt of the best picture award. The positive influence of the film score was as high as that for visual effects (e.g., cinematography, costumes, etc.) and for technical aspects, though all of these were less effective than dramatic components (e.g., best actor). Simonton suggested that a successful score contributes to the film narrative without drawing attention to itself, while a successful song may actually disrupt the narrative.

Tan, Spackman and Wakefield (2008) compared the effects of background and foreground music. In their study, a 1.25-minute action sequence from Spielberg's *Minority Report* (2002) was paired with three soundtracks: (1) the original soundtrack which belonged to the shopping mall environment of the action; (2) the same soundtrack presented as a background score; and (3) a second soundtrack presented as background score. More than 240 participants completed rating scales following the presentation of each condition. Background music as compared to foreground music in a film led to different interpretations with respect to characters' emotions, relationship between characters, and mood of the scene. The authors suggest that different specific effects of the music arise depending on whether the music is part of the foreground drama (known as the *diegesis*), or part of the background (*non-diegesis*). Another direct exploration of diegetic vs. non-diegetic music in a film was conducted by Fujiyama, Ema, and Iwamiya (2013), who manipulated the presence or absence of the source of piano music in an excerpt from a film by Akira Kurosawa. The moods of the piano music and the film were semantically incongruent. The study contrasted subjective ratings between conditions in which the image of a piano did or did not appear in several shots, identifying, or not, the (diegetic) music source. In the condition in which the piano had been visible, ratings on a scale of degree of badness exceeded those for the condition which did not reveal the source of the music.

Music in a film is typically non-diegetic, having no basis in the reality of the story (cf. Gorbman, 1987). This non-diegetic function of music raises an important question for the psychology of music. How does the audience use this musical information, and why does it add value to a film, as suggested by Simonton's (2007) correlational study of award-winning films and as consistent with the experience of most filmgoers? An answer arises by considering that the audience does not aim to record all of the information impinging on the eye and ear. Rather, the audience seeks sufficient information to support engagement and entertainment, making use of two sources of information: sensory information arising from the real world presentation and past experience residing in long-term memory (see Figure 44.1). The audience is constantly synthesizing a story, a *working narrative*, derived jointly from sensory

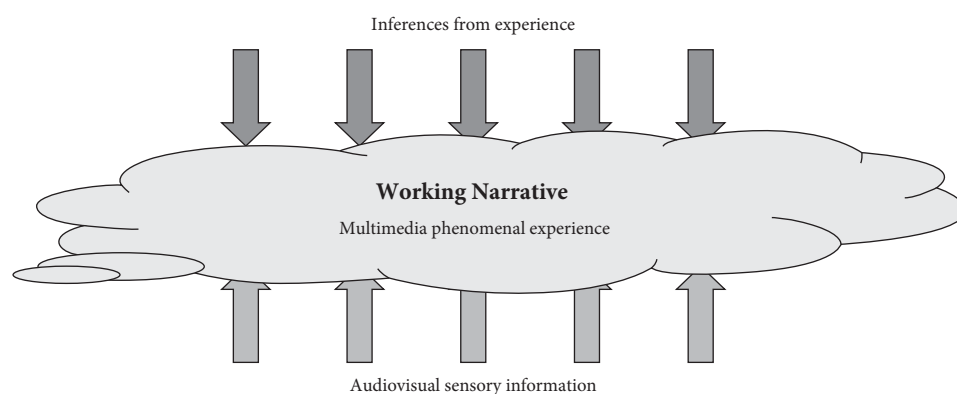


FIGURE 44.1 The working narrative represents the best match between two information sources: the bottom-up sensory information and the top-down expectations based on experience.

information and hypotheses or expectations based on long-term memory. According to this model, then, the audience takes what is needed from music and discards or ignores the rest. Given the capacity limitations of the mind (Miller, 1956), including limitations in multimedia concepts (Betteridge, Stevens and Bailes, 2014; Fisch, 2000; Mayer, 2005; Sweller, 2005), the audience has really no other choice. This approach is basic to Cohen's congruence-association model of music in multimedia contexts, to be described later.

Film information other than music, such as the film's visual images, speech, or sound effects, has been regarded as less effective than music in communicating emotional meaning (cf. discussion of music as the most efficient code for emotional expression in film by film-music theorist Kalinak, 1992, p. 87). The actual sounds of the music used to convey emotion are irrelevant to the story and consequently to the audience. Thus, acoustical information from the music can be discarded as far as audience engagement in a film is considered. The sound of the music may be registered in the mind of the audience but not as an essential component of the story.

The integration of film and music within the constraints of mental capacity may also be viewed from the perspective of two analytic processes (Cohen 2005; Marshall and Cohen, 1988). The first focuses on the *structural* aspects of the media: how patterns of information change in time and space (e.g., rhythms of loudness and pitch, visual movement, visual intensity, color, and contour). Marshall and Cohen (1988) argued that the temporal congruence of musical and visual patterns directed attention to specific elements of animation, and thus visual attention patterns could vary as a function of the particular pattern of music-visual congruency.

Several researchers have explored the structural congruency of music and film. Lipscomb (2005, 2013) showed influences of temporal audiovisual alignment on the judged effectiveness of simple visual animations. Kendall (2010) defined specific iconic archetypal forms (e.g., arch and ramp) which apply in both musical and spatial domains, and has noted that judged congruence of visual and auditory versions of these forms is higher for some forms (arch) than others. Kim and Iwamiya (2008) examined the effect of formal congruency between sound patterns and animated text (Telops) using materials from television programs as well as computer synthesis. They distinguished two kinds of formal

congruency: similarity in temporal accent pattern and similarity in other changes (e.g., augmentation). In a related follow-up study, Iwamiya (2013, p. 145) noted that increased formal congruency led to increased subjective congruency, as well as judged impressiveness. On a larger scale, musicologist Kulezić-Wilson (2005) explored the notion of the musicality of the structure of film, with specific emphasis on temporality, rhythm, and kinesis. She analysed two films (Jim Jarmusch's *Dead Man* and Darren Aronofsky's *Pi*) focusing on the opposing aesthetic choices of the shot and the cut, and her work begs for psychological research to test the human sensitivity to the structures described. Cohen (2002) noted the rondo-like structure of *The Red Violin* and suggested comparable music and film research to explore its cognitive and aesthetic effects.

The second aspect of film and music for analysis is *meaning*. Earlier in this section, studies of film music were referred to that showed the effect of music on interpretation of a film, film characters or the depicted world. The music can also lead to the feeling of emotions, which is an aspect of meaning that can often be measured physiologically. Thayer and Levenson (1983) showed that background film scores were successful in both reducing and increasing electrodermal (skin conductance) responses to a stressful film. Baumgartner, Esslen, and Jäncke (2006) have shown that classical music (as compared to no music) enhanced the emotional meaning of and physiological response (skin conductance, heart rate, respiration, and EEG) to emotional visual images taken from the International Affective Picture System (IAPS). Related work has been reported by Spreckelmeyer, Kutas, Urbach, Altenmüller, and Münte (2006), who measured brain-evoked potentials (ERP) to brief (350–550 millisecond) presentations of happy or sad emotional IAPS scenes and happy or sad single tones sung by trained opera singers. Participants were required to focus on either the visual or auditory information and rate its emotional meaning. Influence of integration of the two modalities was seen in ERP waves as early as 150 milliseconds. Brain wave recordings were more sensitive than were the ratings of the emotional meaning. The visual scenes had a greater influence on the judgments while focussing on the audio than did the audio stimuli while focussing on the visual modality. Zhou, Jiang, Delogu, and Yang (2014) showed that the sense of space conveyed by specific music excerpts influenced the N400 ERP brain wave response when participants judged the sense of space conveyed by subsequently presented visual scenes. The degree of lead time of the music stimulus also influenced the response. These studies pave the way to rarer brain imaging research with actual video (as opposed to pictorial) and music materials so as to reveal the underlying music–video integration process.

In one of these few fMRI studies to investigate the role of music in a film context, Eldar, Ganor, Admon, Bleich, and Hendler (2007) examined the role of happy, sad, and neutral music on a neutral movie (driving a car) and found a modulating effect of music on activity of the amygdala, increasing the activity beyond that for music or visual information alone (see also Raz, Hagin, and Hendler, 2013, pp. 297–298). More recently, fMRI results of Pehrs et al. (2013), who presented scenes of kissing from romantic comedies under conditions of happy, sad, or no music, suggested that the emotional meaning of a soundtrack modulates preprocessed visual information that passes to the amygdala and consequently influences emotions felt while watching a movie.

Marshall and Cohen (1988) proposed the congruence-associationist model to accommodate the two analytic processes for structure and meaning, arguing that structural congruencies direct attention to particular elements of a film scene, and that the associations (meaning) from the music are then ascribed to this direction of attention. In light of



research on comprehension in other fields (e.g., Kintsch, 1998, for text comprehension), Cohen (2001) expanded the model to emphasize the audience's narrative purpose in viewing a media presentation. As mentioned earlier in this chapter, she proposed that the audience is constantly engaged in generating a *working narrative*, a story of the unfolding drama. The working narrative is the audience's experience of a film. Cues from all sources of information, including music, contribute to the working narrative. Vuoskoski and Eerola (2013) have recently shown how extramusical information from different narrative contexts influences emotions induced by music, which is a finding consistent with the concept of the working narrative. The second expansion of the congruence-association model accommodated a notion of the French film theorist Christian Metz. Metz gave prominence to music as one of five channels relevant to the experience of film: text, visual scenes, speech, sound effects (noise), and music (Stam, Burgoyne and Flitterman-Lewis, 1992, pp. 59–63). The congruence-associationist model thus included these five channels, as seen in Figure 44.2. A sixth kinesthetic channel was later included to accommodate recent theory and evidence for the engagement of the motor system in perception, the relation between perception and action, and the embodiment of music (cf., Cohen, 2013a, 2013b, 2014).

Boltz (2004) conducted research on the role of music in television in which 72 participants were presented with short (approximately four-minute) audiovisual television clips with music that was either mood congruent or incongruent. Participants were asked to attend to the audio track, the video track, or to both tracks. Subsequently, they were tested for their memory of the visual film clips and the music excerpts. Performance in the mood-congruent condition was superior to that of the incongruent condition. Performance in the incongruent condition was good for the attended audio or visual medium but did not extend to the unintended medium as it did when the mood of the music and video clip coincided. According to Boltz, congruence in the mood of the music and film elicited a search for similar structural properties in the music and film, and the success of the search led to jointly encoding the music and visual material and an integrated music-video memory. Thus, memory for music information would mean memory for the visual information. However, without mood congruencies, attention to the entire music-visual complex suffers, as the focus is on only one of the two modalities (as per instructions in the experiment) and attention is not automatically directed to the other modality due to incongruent meaning. While in film and television contexts, the visual information seems to be the natural focus of attention, in a more recent study, Boltz, Ebendorf, and Field (2009) showed that the meaning of neutral music could be influenced by a slide show having specific semantic content, indicating that music did not necessarily play the subordinate role, though generally this is the case (e.g., Ellis and Simons, 2005).

Arguing that an effective working narrative leads to audience absorption or involvement in the film, our laboratory has aimed to determine the role of music in engaging the audience in the film, a phenomenon with which most moviegoers can identify. Two procedures were developed. In one, the audience is asked to rate his or her level of absorption in a film clip presented under different conditions of music. Cohen, MacMillan, and Drew (2005) have shown higher absorption in the presence vs. absence of music in short excerpts of several types of genre (e.g., animation, soap opera, drama). As predicted, more realistic genres (such as news) did not show the effect, although the relation between impact of music on absorption and realism of the genre was non-linear, no doubt a result of numerous variables arising from the specific examples chosen. Cohen, MacMillan, and Drew (2006) also explored the



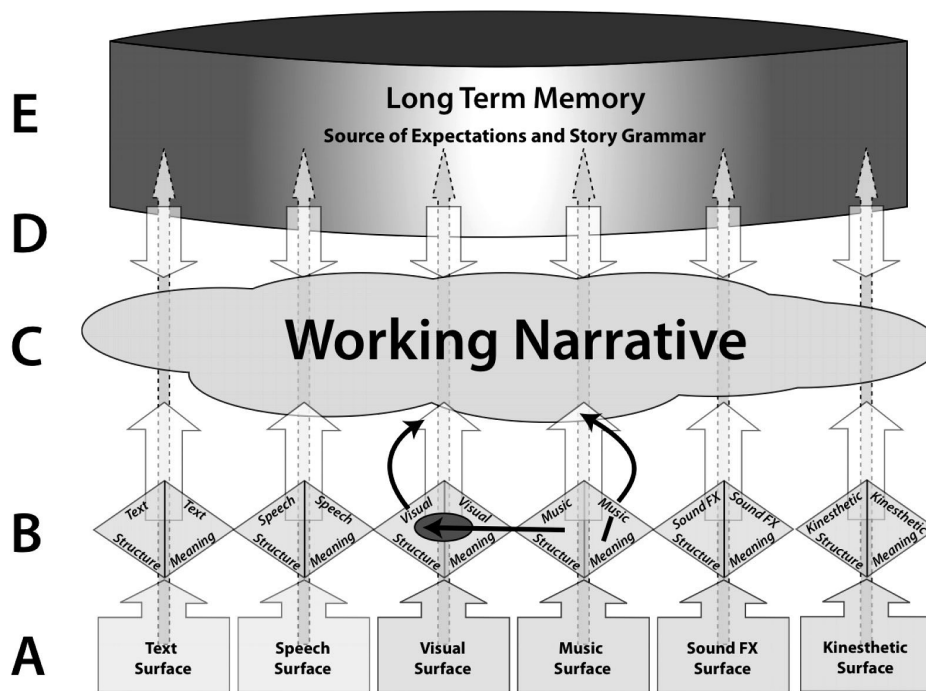


FIGURE 44.2 Congruence-Association Model—and information flow diagram representing five levels of mental activity underlying the joint processing of music and five other kinds of continuous information as depicted by six respective channels. The horizontal arrow at level B reflects structurally congruent activity in the music and visual channels and consequent prioritizing of that portion of the visual information for transfer to the Working Narrative (conscious experience of the media presentation).

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relative contributions of the three audio channels—sound effects, dialogue, and music—on self-rated absorption using two contrasting one-minute clips (from *Witness* and *Day of the Jackal*) presented with only one type of auditory background. Heightened absorption in the presence of music, as opposed to speech and sound effects, was noted for the *Witness* clip that used music which had originally accompanied it in the film.

The second methodology for studying the role of music on absorption in film is less direct, and is based on the rationale that higher absorption (arising from a more compelling working narrative) will increase the difficulty of detecting extraneous information. Cohen and Siau (2008) tested this idea using the Canadian National Film Board's "silent" film *The Railroad* (1965) (starring Buster Keaton). There were 72 participants assigned to one of three music background conditions (original, inappropriate, no music). While watching the 20-minute film, they responded with a keypress when an "X" appeared in a randomly chosen corner of the computer screen on 20 occasions. The film was presented twice. Consistent with the hypothesis, on the second presentation, the original music led to slower responses than did no

music—the inappropriate music may have been appropriate for some of the film, and hence response time in this condition not surprisingly fell midway between the other extremes.

The paradigms that have been developed for studying music perception and cognition in the context of film have thus begun to reveal the effects of music on meaning, memory, structural judgments, physiological variables, and absorption (involvement). The congruence-associationist model has been proposed to accommodate these data and suggest testable hypotheses. All of this may be useful in addressing the role of music in the other performance art forms of theater and dance.

## Theater

The role of music in opera, musical theater, and other dramatic genres has received little attention from researchers in music psychology in comparison with that focussed on film and video. Part of the reason for this arises from the live nature of theater, which makes replication of experimental conditions difficult. Nevertheless, many questions raised by music in theatrical contexts could, in fact, be studied, as some pioneering efforts show.

Opera is among the most ambitious and complex of the performance art forms. It entails an orchestral score, soloists, ensemble, libretto, sets, and dance, as well as epic dramatic themes. How the mind integrates and appreciates such rich information should be of great interest to psychologists in general and to music psychologists in particular.

In an analysis of several indicators of the success of an opera (e.g., performance and recording frequency), Simonton (2000) found that the music is aesthetically more critical to opera than is the libretto. Gregory (1998) conducted a study of opera music in which listeners showed the changes in the strength of their emotional response to a selection of opera arias by moving a mouse whose position indicated high or low emotion on a computer screen. They also completed emotional adjective checklists. Consistency among listeners was shown, and higher emotion was elicited by voice than by the orchestra alone, a finding also consistent with that of Scherer (1995). Several pioneering studies have more recently been conducted with video recording or in a live situation.

Boerner (2004) proposed a hierarchical componential framework of performance quality in opera, emphasizing a distinction between the musical and staging aspects. The audience is viewed as judging the congruence of the musical and staging dimensions, congruence within these separate dimensions (the relation between soloists, choir, and orchestra), and congruence within the individual components (relation among soloists). The author admits the concept congruence here, based on Adorno, is vague and in need of operationalism. A questionnaire study of audience assessment of live opera (Verdi's *La forza del destino*) supported Boerner's componential model, but suggested that staging contributed more to the judgments than did the music (Boerner, Neuhoﬀ, Rentz and Moser, 2008). While this seems paradoxical, particularly in the face of Simonton's evidence for the importance of the music in opera, the authors suggest that a high quality of music is assumed by the audience, while the quality and type of staging is more variable and thus gains greater conscious attention. The authors noted the importance of further research that would explore different operas and control for individual differences. An integrative model of consumer satisfaction of opera followed. Here, Jobst and Boerner (2011) approached approximately 400 members of an audience who were attending a performance of *The Magic Flute* by W.A. Mozart in

one of Germany's largest opera houses. They were invited to complete a survey following a performance. There were 120 respondents representing approximately 35% of those invited. Level of satisfaction was predicted by their appraisal, followed by their perception of the artistic quality, empathy/identification with the actors on stage, and recall from memory, although the memory factor was negatively related to level of satisfaction. The authors conclude that the study shows the role of emotion (rather than factors such as physical comfort) in the audience experience of opera, which they acknowledge that Scherer (1995) had pointed to earlier.

Baltes and Miu (2014) in Romania studied the response of 120 audience members after each of three successive acts of the live opera *Madame Butterfly*. In advance of the performance day, the audience members completed questionnaires providing measures of individual visual imagery tendencies and empathy. Prior to the performance, they completed a questionnaire regarding their current mood, and after each act of the opera they completed the Geneva Emotional Music Scale (Zentner, Grandjean and Scherer, 2008). The wealth of data showed influences of empathy, visual imagery, and mood on reported music-induced emotions and was consistent with prior results obtained under laboratory control.

Scherer et al. (2013) recently directed attention to a subtle aspect of emotion in opera, the ability of operatic performers to convey emotional authenticity. The authors advance the view that the performer achieves success through reliving related emotional memories that unconsciously engage the synchronization of a variety of expressive channels. Interviews of five professional opera singers provided supportive evidence. The theory is not limited to opera and can extend to theater in general or to music theater. Further emphasizing the role of dramatic as opposed to vocal training on vocalists' ability to convey emotional authenticity, Livingstone, Choi and Russo (2013) asked 12 male vocalists differing in level of both vocal and acting experience to sing eight-note isochronous melodies to represent authentic emotions. Subsequently, ratings of the authenticity of a set of these examples from each vocalist correlated with dramatic training but not level of vocal training. Accuracy of pitch production was negatively related to dramatic training and authenticity.

Music is also occasionally found in dramatic works. For example, Felix Mendelssohn composed music specifically for Shakespeare's *A Midsummer Night's Dream*. Frankly, however, the psychology of music knows little about the role of music in musical theater and in drama, and the field is wide open to exploration on the more microanalytic level using paradigms from film-music research or at the level of audience appreciation, as recently developed for opera. The two following studies provide examples of research that begins to explore the phenomena of musical theater, in one case as a didactic tool, and in the other for its impact on well-being in older adults.

Recognizing the popularity of musical theater, Heide, Porter, and Saito (2012) explored the potential of a musical theater piece to create attitude change using a specially created work entitled *Guys and Does* that presented various perspectives on deer hunting. A small change in attitudes toward deer hunting was observed in a questionnaire; however, whether it was the musical aspect of the theater piece or simply the theater piece itself remains unknown. Also using a specially developed musical theater piece tailored for a senior audience, Beaton, Henderson, O'Brien and Cohen (2012) explored the potential benefit of being invited by the performers to sing along at three specific points during the show. The show was presented at eight different homes for seniors. At half of the homes, the performers invited the audience to sing along with the performers for three of the songs while at the other four homes the

invitation was offered for only the final song. Memory for information about the musical theater piece and life satisfaction were measured through interviews following the performance. Video tapes of the audience were also scored for number of singers. The results suggested a relation between reported singing and higher scores of life satisfaction and memory; however, these correlations may have also been related to other underlying factors such as general mental fitness, which were not measured.

A final aspect of music theater to consider is that of the flash mob, a phenomenon that brings together groups of people who have pre-organized to engage in particular artistic activity, be it song, musical performance, or dance alone or in combination, in a public place to engage and surprise an audience of bystanders who are in the vicinity for other purposes. Grant, Bal, and Parent (2012) explored the influence of a flash mob involving two operatic works presented in a market area in Vancouver, Canada. In one condition, six vocalists came together to perform a selection from Verdi's *Rigoletto* followed by Luigi Denza's *Funiculi, Funicula*. In a second condition, an audio recording of these pieces was played in the same area. In a final condition, there was no music presentation. For all conditions, observations of the crowd were made by 18 research assistant observers who also obtained interviews from members of the crowd. The results showed that the flash mob "enhanced consumer arousal, connectedness and positive emotions, as well as consumer-to-consumer interaction" (p. 244).

## Dance

With the advent of film and video recorders, progress in dance research seems more secure than in the past, when dance performances and choreography were difficult to preserve. Jordan (2000, p. 102), however, emphasizes that no single source of information about dance provides an adequate basis for research, as each form of representation highlights some aspects at the expense of others. Notation systems for dance, such as Labanotation and Benesh, have both selective and subjective components.

With few exceptions, classical ballet entails dancing to music.<sup>1</sup> Choreographers have varied in the significance they attach to the structure of the music and the function of ballet in representing this structure. The Russian choreographer Fedor Lopukhov (1886–1973) influenced the development of dance as a non-narrative art form (cf. Jordan, 2002) which gave full importance to the structure of music. Lopukhov prescribed matching dance to music on the dimensions of emotional climaxes, curve, color, and key changes. Major and minor keys were to be treated differently, "en dehors" and "en dedans" respectively. Lopukhov was an influence on Ballanchine, who danced in one of Lopukhov's famous works "Dance Symphony" (Jordan, 2002, p. 3). Contemporaneous with these two eminent choreographers is Jacques-Dalcroze, the Swiss pedagogue who shared the basic principle of the structural

<sup>1</sup> Contemporary or modern dance is less tied to live music, and demands on internal timing are greater. Stevens, Schubert, Wang, Kroos, and Halovic (2009) compared performances of a 4-minute contemporary dance piece with and without music. Detailed measures of movement derived from point-light video data revealed a preponderance of errors of lapses rather than of time-warping. The new methodology provides a means for application of time series analysis to future studies of the cognitive inter-relation between music and dance.

similarities of music and human motion. He believed that the best way to understand and learn about music was to experience the elements of music with the body. His curriculum, known as Dalcroze eurhythmics, has been taught to generations of young people worldwide. Some attention has been directed to Dalcroze from the perspectives of psychology, developmental education, and African musical pedagogy respectively (Juntunen and Hyvönen, 2004; Phuthego, 2005; Seitz, 2005), supporting the significance of Dalcroze's ideas. Recent interest in musical embodiment within music psychology, and the relation between perception and action, as previously referred to in this chapter, is consistent with Dalcroze's intuitions about the connections between bodily motion and musical understanding. A good example is the research of the impact of passive rhythmic bouncing of an infant. Passive bouncing to a particular meter (either duple or triple) of a rhythmically ambiguous piece, has been shown to influence memory for an accompanying melody in the meter of the bounce (e.g., Trainor, 2007).

A pioneering psychological study of the interaction between music and dance is provided by Krumhansl and Schenck (1997), who used a film of Balanchine's choreography of Mozart's *Divertimento No. 15* to test whether dance could represent the structural and expressive qualities of music. Three groups of participants were asked to watch the choreography alone, listen to the music without seeing the dance, or watch the dance and listen to the music simultaneously. All three groups then rated the tension and emotion throughout the piece as well as indicating the beginnings and endings of phrases. Results showed agreement among all three groups and additivity of the information from the separate channels of music and dance: the response in the "music and dance" condition could be predicted as a combination of the responses to the "music only" and "dance only" conditions. The generality of these results to other works of dance would be worth exploring in view of the fact that the particular work chosen by Balanchine was one in which the choreography was treated with great sensitivity to music-theoretic structural parallels.

Mitchell and Gallaher (2001) examined the ability to detect a "match" between a piece of music and its intended choreography. The musical pieces were by John Cage, Peter Gabriel, and David Lanz, and the dances were choreographed and performed by a university-level dance educator. Participants were presented with a piece of choreography in silence, followed by three selections of music. They were then asked to choose the musical selection that best matched the choreography. The reverse condition was also tested, in which the music was presented followed by three examples of dance. Participants were also presented with a choreography paired with music, either intended or not intended to go with it. In both the sequential and simultaneous test formats, Mitchell and Gallaher's results show consistently high ratings for perceiving a "match" between a piece of music and choreography intended to go with it. Participants' answers to a questionnaire indicated that their matches were influenced by similar characteristics perceived in the media, "including emotion, fluidity, an African or Middle Eastern quality, and temporal characteristics such as rhythm and pace." The results indicated that memory for dance was sufficient to enable judgments of congruence with musical excerpts presented later, and that the basis for judged music-dance congruence generalized across participants in the study and was multidimensional.

Based on both the work of Mitchell and Gallaher (2001) and that of a dance theorist, Fogelsanger and Afanador (2006) propose four parallels between music and dance that may contribute to a sense of congruency: (1) matching or intertwining pulse or rhythm; (2) alignment of coincident structural temporal aspects other than pulse; (3) analogous cross-modal

qualities; and (4) complementary referents. It is notable that the first two items refer to structural characteristics while the latter refer to associations or meanings and echo a distinction made earlier between structure and meaning in the discussion of film and music. Dance can represent structure for its own sake (e.g., the choreography of George Ballanchine) and be independent of typical narrative plot, but it can also tell a story through pantomime and other symbolic movement, such as the story of *Coppélia*, *Les Sylphides*, *The Nutcracker*, or *A Midsummer Night's Dream*.

As such, the proposal of Følgsanger and Afanador (2006) fits within the congruence-associative framework and is amenable to psychological test to determine, for example, whether in fact these parallel aspects of music and dance do lead to perceived congruency, and whether some dimensions of congruency are more salient than others. While it is appreciated that music–dance structural congruence is hardly a universal choreographic goal, it is still important to know what congruencies can be discerned by an audience and what impact such congruencies have on appreciation. In regard to audience appreciation of choreography, Renee Glass completed a doctoral thesis which developed a qualitative and quantitative questionnaire (Audience Response Tool, ART) to determine audience responses to contemporary dance. The dances she examined entailed sound effects but not music in the traditional sense, though the tool in theory could be applied to dances in which music played a role. Schubert, Vincs, and Stevens (2013) found that an audience response tool sampling twice per second showed good inter-observer agreement on sections of improvised dance in which expectations were not interrupted. The technique seems applicable to the separate audio and video components in the future.

Ivar Hagendoorn (2004) proposed that the experience of watching dance creates pleasure through the fulfilling and undermining of expectations. Those watching a dancer to some extent sense the dancer's movement as if they were making them themselves. Hagendoorn's proposal of a neurobiological system for a kinesthetic response to dance aligns with recent evidence for mirror neurons which respond equally to an action carried out by the organism or simply from viewing such action (Rizzolatti and Craighero, 2004). However, other research on biological motion detection of Troje (2002) accounts for perception of biological motion without having to call on mirror neurons. Brown, Martinez, and Parsons (2006) in a unique extraordinary PET-scan study of experienced dancers of tango localized a portion of the brain known as the cerebellar vermis that enables entrainment of dance steps to music as opposed to self-paced movement.

Jola et al. (2013) examined inter-subject correlations in the brain activation of 11 persons under audio only, visual only, and audiovisual presentations of a presentation of Indian dance (Bharatanatyam) of approximately 6 minutes in duration, chosen because it would be unfamiliar to the participants. Synchrony among participants was observed for only early processing (primary and secondary areas) in contrast to previous studies in which materials may have been more coherent and engaging, and synchrony was observed also at higher levels (e.g., Hasson et al., 2008). However, previous studies have not explored music or dance independently, and this work deserves follow-up with materials that are familiar and edited.

Whereas classical ballet and modern dance are performance art for the stage, social dance is an avenue open to and taken by most individuals by the time of their adolescence or early adulthood. In spite of both the prevalence of social dance as an aspect of human behavior and the reliance on music for this activity, there has been little attention of music psychology directed to the social dance situation. However, there has been recent attention paid to



auditory-motor entrainment, the ability to align motor actions with an auditory beat, which is a crucial component of dance. Thought to be a uniquely human ability, demonstrations of the rhythmic entrainment of Snowball the dancing cockatoo have done much to question the assumption (Patel, Iversen, Bregman and Schultz, 2009; Schachner, 2010) and a connection between vocal mimicry and beat entrainment has been proposed. Another line of research has explored the linkage between musical beat and motor entrainment by application of transcranial magnetic stimulation (TMS) on motor-evoked potentials (Cameron, Stewart, Pearce, Grube and Muggleton, 2012). Metrical information and metrical strength of rhythmic auditory tone sequences was observed to modulate motor excitability as indicated by motor-evoked potentials measured via electrodes placed on muscles of the lower leg. The picture using real music was less clear cut. The study provided a foundation for further research employing TMS to study the connection between motor processing and auditory rhythm and music.

In the context of social dance, music in a sense legitimates patterns of human interaction that might seem ridiculous or embarrassing otherwise. Music is at least one of the components in social settings that allows people to behave differently than they otherwise would. The permission-giving power of music may result from effects of music that engage more emotional as opposed to analytic processing (Niedenthal, Halberstadt and Innes-Ker, 1999). Cross has suggested that:

music's powers of entrainment, together with its "floating intentionality", fit it for use as a medium for communicative interactions in which meanings are under-determined to the extent that participants are free to develop their own interpretations of the significance of their own, and others', contribution to the collective musical behaviour.

(Cross, 2007, p. 660)

Some of these ideas are now being put to a test. For example, Reddish, Fischer, and Bulbulia (2013) provide evidence that musical entrainment leads to cooperation under conditions of shared intentionality.

## CONCLUDING COMMENTS: FUTURE RESEARCH, TRANS-ART CONGRUENCIES, AND LIFESPAN EXPERIENCE

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Because music occurs frequently in the context of other arts, a model of music perception and cognition must take into account these other domains. The promising frontiers of the psychology of opera, musical theater, and dance are opening up. The more established psychology of music and the moving image may also do well to take note of recent research in opera and dance which aims at a broad understanding of what the audience appreciates.

For all of the performance contexts for music, a recurrent concept is that of congruence: congruence between music structures and structure within the visual or kinesthetic dimensions, congruence of meaning, and congruence that refers to the gestalt or sense of the whole. Thus, questions remain about the perceptual and cognitive responses elicited by these similarities between the music, visual, and kinesthetic domains, and the temporal course of integration processes.



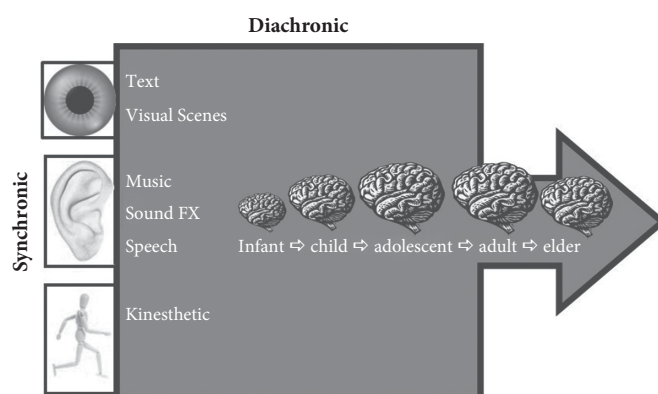


FIGURE 44.3 The Congruence-Associationist Model (CAM) in a developmental context as depicted by the continuum of infancy to old age associated with the metaphoric changing size of the brain (horizontal axis) and the separate domains of sensory experience on the vertical axis.

Another aspect that will need attention is that of the role of the individual experience of the audience member and when in the life course this experience occurs. A final diagram is therefore offered to reflect both the chronometric and synchronic dimensions of a general model of the audience engaged in music and the performance arts (Figure 44.3). This model, though very abstract, conceptualizes the mind of the audience as actively engaged in performances in the arts and affected by such engagement in different ways across the lifespan.

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## CHAPTER 45

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# PEAK EXPERIENCES IN MUSIC

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ALF GABRIELSSON, JOHN WHALEY,  
AND JOHN SLOBODA

## INTRODUCTION

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MANY people experience intensely positive affective states in response to music. The intensity of these experiences often brings about a sense of transcendence and transformation, and their relative rarity makes them greatly prized in the minds and lives of the individuals experiencing them. People tend to retain vivid memories of such experiences many years after they have occurred, and they are often cited as a major reason for continued involvement with music. Yet these are “everyday” experiences in the sense that they seem to require no special context in which to occur. They may occur in the home, while traveling, in places of work or study, or in the more specialized contexts of concert hall or place of worship. They may be triggered by any genre of music, and during both listening and performance. Peak experiences also seem to require no specific musical training or expertise; they have been described by young and old, by the learned, and the musically unlettered. Moreover, these experiences are usually not conjured by acts of will or intention but tend to come unannounced or unexpectedly.

Maslow (1959) was one of the first to formalize the study of what he called peak experiences, or “moments of highest happiness and fulfilment” (Maslow, 1999, p. 85). He spent many years studying peak experiences, and his findings laid the groundwork upon which all peak literature is built. While his investigations were not limited to musical triggers, he discovered very early that “the two easiest ways of getting peak experiences [are] through music and sex” (Maslow, 1976, p. 169), and it is upon the former that this chapter is based.

## FUNDAMENTAL PEAK EXPERIENCE IN MUSIC LITERATURE

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Maslow coined the term “peak experience” after analyzing 190 written and 80 oral responses, having asked for descriptions of “the most wonderful experience of your life; happiest

moments, ecstatic moments, moments of rapture, perhaps from being in love, or from listening to music, or suddenly 'being hit' by a book or painting, or from some great creative moment" (Maslow, 1999, p. 83). The contents of the experiences were individually unique, and in reporting his findings the author "added together all the partial responses to make a 'perfect' composite syndrome" (Maslow, 1999, p. 83).

Beyond arguing that music is a reliable trigger of peak experiences, Maslow describes many of the phenomena experienced both during and after the peak, and asserts that: the peak experience is a self-validating, self-justifying moment with its own intrinsic value. It fills an individual with a sense of wonder and awe. Peaks are never negative, unpleasant, or evil, and cause a characteristic disorientation of time and space as well as a loss of fear, anxiety, doubts, and inhibitions. Frequently eliciting sudden feelings of happiness and well-being, peaks also bring about a heightened sense of an individual's physical and "existential" state of being. After a peak the individual may experience a number of effects, including a more positive view of the self, other people, and the world, various therapeutic effects (both physical and mental), even a sense that life itself is worth living.

In an effort to analyze art-specific peaks, Panzarella (1980) gathered reports of an "intense joyous experience of listening to music or looking at visual art" (p. 71) from a pool largely composed of musicians and visual artists. Roughly half of responses ( $n = 51$ ) were music related. Content analysis revealed 11 response categories that were factored into four major dimensions of the experience: renewal ecstasy, motor-sensory ecstasy, withdrawal ecstasy, and fusion-emotional ecstasy. Renewal ecstasy concerned a new or altered perception of the world and a desire to engage further with the artistic medium. Motor-sensory ecstasy referred to physical elements like tears, changed heart rhythms, chills, or quasi-physical elements like a floating sensation. Withdrawal ecstasy involved a perceptual narrowing, during which there was a sense that everything disappeared except the object (i.e., music or art) and that the object was in perfect focus. Finally, fusion-emotion ecstasy referred to a "fusion" with the medium, like a sense that the music or painting merged and became "one" with the individual. He concluded that the phenomenology of aesthetic peak experiences may be seen as an event with these four dimensions, any one of which may predominate.

Ecstasy was also a central theme in an earlier study by Laski (1961), who collected 63 incidents of "transcendent ecstasy." Triggers of such experiences included childbirth, sex, art, beauty, science, and religion, though the author concluded that "of all the more common triggers to ecstasy, music would be the most rewarding to study in any attempt to find a relation between the qualities of the triggers and the effects produced" (Laski, 1961, p. 190). The contents of these episodes were collapsed into four categories: feelings of loss (e.g., sense of time, space, self, sorrow), feelings of gain (e.g., joy, salvation, perfection, unity with music or mankind, knowledge), feelings of ineffability (the experience eludes description or analysis), and quasi-physical feelings (e.g., peace, pain, light, heat).

Another concept with obvious connections to peak experience is "flow" as defined by Csikszentmihalyi (1990, 1996; Nakamura and Csikszentmihalyi, 2009). "Flow" can occur in connection with a wide range of activities like mountain climbing, sailing, playing chess, dance, and music-making. In a state of flow, everything seems to go by itself without any effort at all, yet there is also a sense of high control and concentration, a full absorption in the task. Self-consciousness may be lost, time seems to move faster or slower than usual, and generally the experience is highly enjoyable and rewarding in itself. Many musicians

describe happy experiences of this kind, “magic moments,” when the performance is executed perfectly, almost automatically and without effort, and feels timeless like it could go on forever. They want to experience this again and are thus highly motivated to continue making music; for examples, see Boyd and George-Warren (1992) and Gabrielsson (2010, 2011a). However, situations in which students’ performances are examined are not favorable to attaining flow (Wrigley and Emmerson, 2013).

Psychophysiological studies of flow during piano playing (de Manzano, Harmat, Theorell and Ullén, 2010) showed that there was a significant relation between reported flow and heart period, blood pressure, heart rate variability, activity of the zygomaticus major muscle, and respiratory depth.

To date, the most comprehensive attempt to understand exceptional experiences with music is the Strong Experiences with Music (SEM) Project conducted by Gabrielsson and Lindström-Wik (1993, 2003; Gabrielsson, 2010, 2011a). This project makes use of over 1300 free descriptions of strong experiences in connection with music, collected and content-analyzed over more than 10 years. Participants were asked, in as much detail as they could, to describe “the strongest, most intense experience of music that [they had] ever had” (Gabrielsson and Lindström-Wik, 2003, p. 163). The resulting wealth of data culminated in the Strong Experiences with Music Descriptive System (SEM-DS), which lists the most common attributes of strong experiences of and with music and includes seven categories: general characteristics, physical reactions, perception, cognition, feeling/emotion, existential/transcendental, and personal/social, each of them with several subcategories. These attributes will be further discussed in the following section on the nature of peak experiences. Various other publications using SEM data discuss other aspects of the experience, including therapeutic aftereffects (Gabrielsson and Lindström, 1995), emotions (Gabrielsson, 2001), experiences reported by old people (Gabrielsson, 2002), and musical triggers (Gabrielsson, 2006). The most complete account of the SEM project appears in Gabrielsson (2011a).

A note about nomenclature is necessary. Maslow’s “peak experience,” Laski’s “ecstasy,” Panzarella’s “joyous experience,” Csikszentmihalyi’s “flow,” and Gabrielsson and Lindström-Wik’s “strong experience” are not identical concepts. For instance, peak experiences are, by definition, positive, whereas some strong experiences are negative. In addition, one could argue for a separation between “exceptional” experiences (like strong, ecstatic, or joyous) and true “peak experiences” which, thanks to Maslow, have a slightly more stringent definition. We recognize the overlap amongst these terms, and accept the fact that no single term or definition fully captures the experience discussed here, be it peak, strong, optimal, ecstatic, or otherwise.

## THE NATURE OF THE STRONG EXPERIENCE

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I was filled by a special feeling that the music began to take command of my body. I was charged in a way. A tremendous feeling of harmony which made me really enjoy the music, and I found it difficult to stand still ... the mystery and power really gripped me. I was filled by an enormous warmth and heat. I really swallowed all the notes that were streaming out in the air, not a single note, effect or

sequence missed my hungry ears. I was captivated by each of the instruments and what they had to offer me. Nothing else existed!

(Gabrielsson and Lindström-Wik, 2003, p. 166)

The research literature contains much data, exemplified by the preceding excerpt, about the nature of the strong experience drawn from retrospective accounts of how it felt while it was happening. Such accounts demonstrate key features of the experience: their positivity, their powerfulness, rarity, nonvoluntary nature, and some emotional, physical, perceptual, and cognitive correlates (Gabrielsson and Lindström-Wik, 2003; Maslow, 1976). The peak has even been called indescribable, and many find their expressive palate insufficient to properly elucidate the experience.

Verbal reports provide insights into the subjective content of different aspects of strong experiences, what happens during the experience, and what it feels like. Gabrielsson and Lindström-Wik (2003) categorized these elements into a three-level hierarchy, the top and most general of which includes seven categories: general characteristics, physical reactions, perceptions, cognitions, feelings/emotions, existential/transcendental, and personal/social aspects. These categories are detailed in Gabrielsson (2011a) and will be briefly discussed below.

The following excerpt, taken from Gabrielsson and Lindström (1993, p. 123), is from a woman's description of how she experienced Tchaikovsky's Symphony No. 6, *Pathétique*, when she listened to it for the first time. Note the various elements—physical, perceptual, cognitive, emotional, transcendental, and personal/social—in her description:

I have had similar [strong] experiences of other music but none so terribly deep as *Pathétique*. In certain passages it evokes sobs, and I feel totally crushed. My listening is fully concentrated, the rest of the world disappears in a way, and I become merged with the music or the music with me, it fills me completely. I also get physical reactions, wet eyes, a breathing that gets sobbing in certain passages, a feeling of crying in my throat and chest. Trying to find words for the emotion themselves, I would like to use words as crushed, shaken, tragedy, maybe death, absorption, but also tenderness, longing, desire in vain, a will to live, prayer. The whole experience also has the character of a total standstill, a kind of meditative rest, a last definite and absolute end, after nothing else can follow.

After the experience I am sort of "gone"—the people in the foyer and their murmur are at a distance, like a stage set rather than something real. I have a hard time trying to talk to them, to "get started" and to "return" to the ordinary reality. The most difficult part is to talk about the music experience itself, it is possible only after a while, when it has faded out a little. One of my concert friends is very sensitive to classical music and he too can have wet eyes. It has happened several times that we are just standing there, shaking our heads and looking down on the floor. Nobody finds any words, one cannot add anything to what the music already has told.

Descriptions like these testify to both the uniquely powerful nature of the strong experience and its ability to include many experiential elements in a single moment. This woman's experience is not only physical ("wet eyes ... breathing ... sobbing"), emotional ("tenderness, longing"), or perceptual/cognitive ("the rest of the world disappears, and I become merged with the music"), but *all* of these, and more. It is these unique but overlapping elements that are categorized in the SEM-DS sketched in the following:

1. *General characteristics* of SEM include testimonies of the unique, incredible, unforgettable, and often ineffable nature of the experience.
2. *Physical reactions* may include such physiological responses as chills/thrills, tears, changes in breathing, heart rate, and body temperature. Beyond internal physical

manifestations, overt actions range from closing of the eyes to singing, shouting, jumping, or dancing around. Contrarily, some people experience total physical immobility, or a sudden desire to be alone. Finally, included in this category are a set of quasiphysical reactions, like a sense that the body has been dissolved into the music or merged with it, or that the body has actually transcended time or space, an out-of-body experience.

Some of the physiological reactions which typically accompany peaks also occur in the context of emotional reactions to music which are less intense. This is particularly true of chills/thrills, “shivers down the spine”. The prevalence of chills, different ways of recording them and their background is discussed in many papers (e.g., Egerman et al., 2011; Grewe, Katzur, Kopiez and Altenmüller, 2011; Konečni, Wanic and Brown, 2007; Panksepp, 1995; Sloboda, 1991). On their own they may be of rather little lasting significance, but when accompanied by other psychological phenomena they can be indicative of strong positive or negative experiences; Konečni (2005, 2008) considers thrills as accompaniments to the experience of aesthetic awe, a kind of peak experience.

3. *Perceptual phenomena* may include auditory, visual, tactile, kinesthetic, synesthetic elements, and generally intensified/multimodal perception. The auditory-musical perception may be accompanied by strong visual impressions, tension or relaxation of the muscles, or simply an intensified sense of perception, among others. Performers, like listeners, frequently describe a sense of being “embedded” in the sound.
4. The *cognitive category* includes elements like changed attitude, a changed experience of situation, body and mind, time and space, or wholeness, a loss of control, a changed attitude to music, a connection to old associations, memories, thoughts, and cognitive imagery. Cognitive elements may relate to some of the more lasting effects of the experience when, for example, an individual achieves a new understanding of some element in their life, like a relationship or their appreciation of the art.
5. *Emotional elements* include strong/intense emotions, both positive and negative emotions, and mixed emotions. Positive emotions predominate, especially joy and happiness, while typical low-arousal feelings include a sense of peace and calm, and high-arousal feelings include rapture and euphoria. In addition to the prototypical positive emotions, there are examples of negative emotions such as loneliness, sadness, anxiety, or even anger during the experience. Typically such negative feelings are related to various personal and other circumstances rather than to the music itself. Mixed emotions often result from the mix of positive affect and the negative social or personal circumstances, such as hearing music that reminds one of a lost loved one.
6. *Existential and transcendental aspects* include, among other things, reflections on human life and existence, cosmic experience, experience of other worlds, religious visions, and encounters with the divine. While these items are easily categorized and listed, their experiential impact and post-experience implications can be immense. Many, for example, describe their experience as having resulted in a better understanding of the human condition, or offered a glimpse at God, Heaven, or similar “other worldly” elements.
7. Finally, *personal and social aspects* include elements such as feeling liberated, uplifted or cleansed, getting new insights, hope, power, and increased self-esteem, various therapeutic effects, and strong motivation to continue listening to or performing music.

A supplementing way of analyzing strong experiences with music was recently presented by Lamont, who had young university students describe their strong music experiences

in music listening (Lamont, 2011) and in connection with performance of music (Lamont, 2012). Methods were the same as in the SEM project, and the respondents' accounts revealed the same kind of categorized experiences as in various categories of the SEM-DS. However, Lamont further analyzed these accounts according to two different concepts of happiness as conceptualized in positive psychology (Peterson, Park and Seligman, 2005; Seligman, 2002; Sirgy and Wu, 2009). One way to happiness, the hedonic route, is through the pursuit of pleasure. Another concept is eudemonia, that is, living life in a satisfying way. Eudemonia involves engagement—the pursuit of gratification through absorption in a given task or activity (as in “flow”)—as well as meaning, that is, striving toward something beyond oneself (as in voluntary work or religion). Well-being may be achieved by a balanced combination of pleasure, engagement, and meaning. Both music listening and performance may provide pleasure/enjoyment and may induce a state of flow, characterized by high attention and full engagement. Music can also provide meaning by strengthening personal and social identity and may lead to experiences of existential and transcendental character. Elements of these three aspects—pleasure/hedonism, engagement, meaning—appeared in varying combinations and weightings in the accounts by Lamont's respondents, no account was limited to any single aspect. These results indicate that the framework developed in positive psychology may represent another fruitful approach in the analysis of strong experiences with music.

Exceptional experiences are often described in terms of ecstasy and trance, which are included in the transcendental aspects in SEM-DS. These concepts—ecstasy and trance—appear in cultures all over the world in connection with various religious rituals in which music is an important element, as amply described and discussed by Rouget (1985) and Becker (2004). Both authors emphasize that these concepts exhibit different characteristics in different cultures, “trancing is a learned bodily behaviour acted out within a culturally pregiven religious narrative” (Becker, 2004, p. 42). Some common characteristics of trancing include strong emotion, intense focus, loss of sense of self, cessation of inner language, and a sense that the experience is ineffable, inaccessible to verbal description. These characteristics appear in SEM-DS as well, and Becker uses the term “deep listeners” to designate persons who, like many SEM respondents, are profoundly moved by simply listening to a piece of music: “Deep listening is a kind of secular trancing, divorced from religious practice but often carrying religious sentiments such as feelings of transcendence or a sense of communion with a power beyond oneself” (Becker, 2004, p. 2). After providing examples of trancing in different cultures, Becker takes a step toward a theory of trance consciousness by trying to integrate recent findings in neurophysiological research with evidence from personal accounts, phenomenology, and anthropological literature on trance.

Further discussions on music and trance and altered states of consciousness appear in the volume edited by Alridge and Fachner (2006).

## FACTORS INFLUENCING STRONG EXPERIENCES

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Factors influencing strong experiences include musical, personal, and situational variables.

With regard to music, Maslow found that classical music, specifically “the great classics” (1976, p. 170), were the most reliable triggers of peak experiences. Panzarella (1980)



and Laski (1961) also list “serious/classical music” as the primary peak-inducing music, though each also found some examples of rock, folk, and jazz music. In the SEM project, roughly half of the musical pieces belong to classical music, while folk, jazz, pop, rock, and other popular music comprised about 40%; the remaining 10% included music from other cultures, improvised music, music performed on specific instruments (e.g., flute, trumpet, drums), or by outstanding musicians. This distribution differed a lot depending on the gender and age of the respondents. Older participants were more likely to list classical music and younger participants were more likely to list popular music. The greatest contrast appeared between older women (classical music 74%, popular music a few percent) and young men (classical music 30%, popular music 51%) (Gabrielsson, 2011a). The strong listening experiences in Lamont (2011) were mostly associated with pop music (82%), while strong experiences during performance of music mostly occurred with classical music (Lamont, 2012).

Concerning specific musical factors, Sloboda (1991) discovered that certain musical devices, including appoggiaturas and syncopations, were associated with the precise temporal location of a chill. These devices seem to involve violations of listener expectancy. Guhn, Hamm, and Zenter (2007) likewise found that chills tended to appear at certain combinations of musical and acoustical elements and include a sense of deviation from the previous pattern. Participants in the SEM project indicated a broad range of musical elements—timbre, loudness, dynamics, rhythm, mode, harmony, various formal aspects—as eliciting their strong experience; sometimes just a single note or chord, a short theme, or a rhythmic pattern was the decisive moment, in other cases it was certain sections of the piece, its form and perceived emotional expression that was most influential; text (lyrics, libretto) was also of importance (Gabrielsson, 2011a). Features like these were also mentioned by the participants in the studies by Lamont (2011, 2012).

Beside the association of gender and age with certain musical genres in the SEM project, there were other, mostly minor, differences related to age and gender. For instance, young people are more likely to physically move to the music than are older persons. Women seem to react more with tears/crying and mention more positive feelings of low activation (e.g., peace, humility, reverence, and solemnity) and more examples of mixed or changed feelings; they also describe religious experiences to a greater extent than men. Further comparisons and comments appear in Gabrielsson (2011a).

On the whole, there are no major differences between musicians and nonmusicians in their descriptions of SEM, except that musicians sometimes use musical technical terms and that their own experiences of performance can shine through. On the other hand, several musicians maintain that on the occasion of their SEM, they totally forgot any thought of technique and performance and “just listened to the music” like any listener.

There is little evidence concerning the possible influence of traits related to personality. Maslow first thought that only the self-actualized, that is, those who had achieved the highest level of his hierarchy of needs (Maslow, 1943), were capable of enjoying a peak experience. Later, however, he changed his view and thought that virtually everyone can report peak experiences if questioned appropriately. Panzarella (1980) indicated that “renewal ecstasies” are correlated with sensation seeking. According to Masluk (1999), “peakers” appear to display a general willingness to explore and experience states of consciousness differing from their usual states of being and are “open” in the broadest sense of the word. This seems



somewhat similar to the characteristics of an “autotelic personality” discussed in relation to “flow”—a person who does things for their own sake rather than to achieve some external goal, and who is distinguished by general curiosity, persistence, and low self-centeredness (Nakamura and Csikszentmihalyi, 2009). Investigating possible relationships between the “Big Five” personality traits (openness, conscientiousness, extraversion, agreeableness, neuroticism; Costa and McCrae, 1992) and proneness for “flow,” Ullén et al. (2012) found a positive association between flow proneness and conscientiousness and a negative association between flow proneness and neuroticism; there was no relation between flow proneness and intelligence.

Absorption is a phenomenon that frequently recurs in descriptions of exceptional experiences. Absorption has also been conceptualized as a personality trait (Tellegen and Atkinson, 1974) that may be assessed by means of a questionnaire (Jamieson, 2005). However, there is as yet no research demonstrating a relationship between high engagement in music and trait absorption; see further comments in Herbert (2012). Sandstrom and Russo (2013) have recently developed an “Absorption in Music Scale” to be used for predicting which individuals will feel strong emotions in response to music.

With regard to situational factors, Sloboda (2005, ch. 9) found that positive experiences with music during childhood tended to occur in informal situations, where achievement was not a concern, when the person was a listener and surrounded by positive social and environmental factors (like friends and family). Negative experiences were associated with nervousness, humiliation, and criticism from others in situations where music was performed. Positive experiences increased the likelihood that the person even in the future would be involved in music, while negative experiences had the opposite effect.

In the SEM project, strong experiences during listening to music (about 81% of all cases) and during performance of music (19%) seem highly similar; the categories in SEM-DS apply to both. But there are, naturally, certain reactions that are special for a performer including, for example, nervousness before a performance (stage fright); inability to perform adequately because of overwhelming feelings; enjoying “magic moments” of total perfection (flow) in performance of the music; and receiving appreciation, confirmation, and increased self-confidence by audience feedback (Gabrielsson, 2011a). Performers’ involvement with the audience, relationships among band members, and connection with music being performed are also common topics in the survey of performing musicians by Boyd and George-Warren (1992).

The experiences in the SEM project cover almost 100 years, from 1908 to 2004, and have accounts from nearly every possible setting: at home, in churches, concert halls, outdoors, in cars, on buses, in shops, restaurants, offices, hospitals, and still many other places (Gabrielsson, 2011a). Konečni (2005, 2008), though, claims that peak experiences of aesthetic awe may occur only in vast architectural spaces with superb acoustics, such as in European medieval cathedrals.

With regard to the social setting in SEM, strong experiences happened when one was together with people one knows (68% of the cases), while alone (19%), and while together with unknown people (12%). These values varied for different types of music. The largest proportion of experiences together with familiar people happened in conjunction with religious music, folk music, rock music, and songs/tunes, while the largest proportion of experiences in isolation occurred with classical (nonreligious) music, pop music, and other popular music genres. The proportion of experiences together with familiar people is also

especially high (90%) for performers, and occurred during performances with people they know, or while familiar people were in the audience (Gabrielsson, 2011a).

## EFFECTS OF THE STRONG EXPERIENCE

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Both Maslow (1999) and Panzarella (1980) identified a number of positive effects following a peak experience, such as a more positive view of the self, of other people, of life, or world in general, even a sense that life itself is worth living. Other effects included general appreciation of music or art, increased aesthetic sensitivity, enhanced perception of everyday reality, and long-lasting mood effects (see also Lanier, Privette, Vodanovich and Bundrick, 1996). These effects recur in the “personal and social aspects” category of SEM-DS, for example, feeling liberated, uplifted, or cleansed, getting new insights, hope, power, increased self-esteem, and strong motivation to continue listening to or performing music. Respondents in Boyd and George-Warren (1992) demonstrated a desire to repeat the strong feelings they experience while performing, so much so that a survey of pop and rock musicians uncovered a tendency to turn to drugs to “induce” the same feelings.

Therapeutic effects are amply exemplified in Gabrielsson and Lindström (1995) and Gabrielsson (2011a). They include relief from physical pain, relief from stress, uneasiness, anxiety, grief, and depression, a release of personal and social barriers, and increased self-confidence. Respondents also describe how they learned to use music for therapeutic purposes; already the memory of the strong experience may bring strength and hope in critical situations.

## METHODOLOGY

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The majority of the music-related peak experience literature is based on what Sloboda (2005, ch. 9) calls the “autobiographical memory technique,” that is, using retrospective reports of significant events. There is some doubt about participants’ ability to recall specific details about an experience, particularly when recall is many years after the episode. It is known, however, that events of a strong emotional character and of great personal importance result in memories that are very detailed, easy to retrieve, and very resistant to forgetfulness (Conway, 1990); most SEMs evidently belong to this kind of events (Gabrielsson and Lindström-Wik, 2003). There are also articulacy issues, as strong verbal and expressive skills are critical to describing the experience. This could mean that many potential “peakers,” including children, are expressively incapable of describing their experiences.

To get beyond these limitations and concerns, researchers may also make use of questionnaires in which the participants rate their agreement with propositions on the experience gathered from different sources, as in papers by Privette and Bundrick (1987), Privette and Landsman (1983), and in the Flow State Scale (Jackson and Eklund, 2004), used by de Manzano et al. (2010) and Wrigley and Emmerson (2013). These data enable use of common quantitative and statistical methods for further analysis. Participants in the SEM project (Gabrielsson and Lindström-Wik, 2003) not only produced free descriptions of their strong

experiences but also rated how well their reactions corresponded with a large set of statements on strong experiences with music. Factor analysis revealed up to 14 factors accounting for 64% of the total variance. Most of these factors corresponded to (and thus confirmed) various categories in the SEM-DS, though there were also factors revealing co-occurrence of different categories (e.g., one factor included transcendent state, perfection, peace and happiness, healing experience), which may be difficult using solely content analysis of free descriptions. Notable, however, is the fact that these 14 factors fail to account for over one-third of the total variance—a testament to the extremely multifaceted character of SEM. Progress in the study of musical peak experience is likely to be furthered by a broader combination of qualitative and quantitative methods.

## STRONG EXPERIENCES AND EVERYDAY LISTENING TO MUSIC

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Recent research on the experience of music can largely be categorized into two main emphases: one focuses on particularly strong experiences (the subject of this chapter), another one on everyday listening to music (see Lamont, Greasley and Sloboda, Chapter 43 of this volume). A comparison between the two approaches (Gabrielsson, 2011b) reveals that the former approach focuses on the *contents* of the experience (as illustrated by SEM-DS), while the latter approach focuses on *uses* and *functions* of music. The comparison also revealed differences with regard to the type of music, place for the experience, the social situation, and the prevalence of live versus reproduced music in the respective approaches. In both cases, however, listeners' attention may vary significantly during the course of the music, and there are many examples of situations where everyday listening to music in the background may turn into a very strong experience (Gabrielsson, 2011a).

In order to study the contents and processes in everyday experiences of music and enable comparison with strong experiences, Herbert (2011, 2012, 2013) used content analysis of interviews and diaries from selected, articulate participants concerning their experiences in everyday music listening. Key concepts in her work include trancing, absorption, and dissociation. While Becker (2004) considers trancing to be influenced by cultural expectations (e.g., familiarity with common rituals), Herbert claims that there are moments of spontaneous trancing during everyday activities, including situations with music. Trancing subsumes absorption and dissociation; they are components of everyday trancing in a variety of contexts including music. The superordinate thematic categories in Herbert's (2012) analysis of absorption—reduction in density of thought or internal dialogue, change in sensory awareness, imaginative involvement, each with several subcategories -- have direct correspondences in various SEM-DS categories. Elements of dissociation in everyday listening to music (Herbert, 2013) serve as a temporary escape from internal (e.g., anxieties, ruminations) or external (e.g., disturbing surroundings) pressures, for example, when listening to music through headphones. The concept of dissociation is rare in music psychology settings and does not appear as a concept in SEM-DS; however, "escape" reactions such as to withdraw, leave, feel need to be alone, "dream oneself away," or to experience other worlds appear in different parts of SEM-DS.

This brief account is intended to show that SEM and everyday listening to music overlap and share many characteristics. Further research is needed to elucidate this in more detail. Herbert's contributions are further discussed by Lamont, Greasley, and Sloboda in Chapter 43 of this volume; she also refers to a volume on everyday ecstasy by Laski (1980).

## CONCLUSION

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Some conclusions from the research reviewed in this chapter are:

1. Not all individuals may be equally prone to peak experiences. Some elements of personality (specifically flexibility and openness) seem to encourage these experiences. On the other hand, demographic factors such as age, gender, and education seem to be of minor importance.
2. All types and genres of music can engender peaks, though perception of aesthetic value seems important.
3. Many different settings and environmental circumstances can be found in descriptions of peaks, including both formal and informal music listening and performance.
4. Peaks contain strong and distinctive perceptual, cognitive, physical, and emotional components which make them highly salient to the person experiencing them.
5. Peaks are often remembered, and ascribed causal significance for various aftereffects, long after their occurrence.

Free phenomenological reports are indispensable for the study of strong experiences with music. In further research they may preferably be combined with the use of multivariate statistical methods and such real-time methods as experience-sampling. This may make it possible to make progress on some of the unanswered questions in the field, such as whether there are distinct syndromes within the larger phenomenon, and whether specific enabling conditions can be more precisely characterized, thus potentially helping people to find their way more reliably to these high-value and life-enhancing experiences.

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## CHAPTER 46

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# MUSICAL IDENTITIES

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DAVID J. HARGREAVES, RAYMOND MACDONALD,  
AND DOROTHY MIELL

## INTRODUCTION

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WE published an edited collection of essays with this same title over a decade ago (MacDonald, Hargreaves and Miell, 2002), which arose from a small invited conference that we organized at the Open University, UK. We were aware that the topic of identity had been discussed and theorized in other disciplines, notably in philosophy and sociology, but our conference was designed to deal specifically with identities in relation to music, and also to delineate the main dimensions of the *psychological* study of musical identity. Since then, different writers' uses of the concept of musical identity have broadened substantially, and many empirical studies have been conducted which have used the concept in order to capture the essence of the ways in which people interact with music.

Our chapter in the first edition of this Handbook (MacDonald, Hargreaves and Miell, 2009) brought this up to date by looking at definitions of musical identities in relation to general definitions of identity; at the identities of jazz musicians (by looking at how they talk about their musical lives); at the question of motivation and identity; and at the content of children's perceptions of their own musical ability. A few years later we contributed a chapter to the *Oxford Handbook of Music Education* entitled "Musical identities mediate musical development" (Hargreaves, MacDonald and Miell, 2012) in which we put the case for the central role of musical identity—of people's views of their own musical development—within that development. As we were writing the present chapter, we were also preparing a large-scale follow-up to our original (2002) collection of essays, to appear as the *Handbook of Musical Identities* (HMI). All of these developments clearly illustrate how the study of musical identity has expanded and developed massively over the last decade or so, and how it continues to do so: for example, a very informal and quick search on Google Scholar using the term "musical identity" yielded 557,000 results in late 2014, and Amazon's website shows 75 pages of current books with a link to musical identity.

In the present chapter we focus on the psychological aspects of this now multidisciplinary field of study, and this falls into four main sections. We look first at how the definition of "musical identity" has developed and widened since 2002, and at how it overlaps with other

concepts such as personhood, the self-concept, and musical preference. The second section looks at some of the different psychological explanations of the development of musical identities, and the third with individual differences in musical identities, and the associated question of how they might be assessed. Finally, we briefly summarize the many different fields in which the concept of musical identities has been applied: all of these are pursued in more depth in the forthcoming HMI (MacDonald, Hargreaves and Miell, in press).

## DEFINITIONS OF MUSICAL IDENTITIES

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In our opening chapter in *Musical Identities* (Hargreaves, Miell and MacDonald, 2002), we expressed our fundamental view of musical identities in terms of a conceptual distinction between what we called *identities in music* (IIM), and *music in identities* (MII). IIM deals with those aspects of musical identities that are socially defined within given cultural roles and musical categories. The culturally defined features of musician, composer, performer, improviser or teacher, for example, which occur in and are reinforced by musical institutions such as schools, universities and conservatories, are recognized by most people, and indeed are central to the identities of professional musicians. However, IIM are not only relevant for professional musicians. We all have a sense of our own musicality. Assertions such as “I can only sing in the shower,” “I am tone deaf,” “I like to play a few Beatles songs with my friends,” or “I have grade 8 piano but my brother is the real musician in the family” are all examples of the pervasive and socially constructed nature of IIM. Furthermore, developing positive IIM is absolutely crucial for young people if they are to continue their engagement with music over the life span. We will return to this point, providing evidence for our assertion, later in the chapter.

A key point here is that IIM are not solely based on an individuals’ technical abilities or expertise in music, but rather on a complex and highly nuanced interplay between social, psychological and musical factors. People’s occupation of these different roles is quite likely to change over the life span as musicians are involved in daily practice and praxis of different kinds, and as their careers develop: informal levels of engagement change over the life span for non-professionals. The concept of MII, on the other hand, is based on how we use music within the development of other aspects of our individual identities. These can be thought of as complex, hierarchical networks of interrelated constructs, which exist at different levels. Some are overarching, superordinate constructs, such as masculine—feminine or old—young, whereas others exist within these at a subordinate level.

MII is also pervasive in that everybody has musical tastes that influence and are influenced by wider aspects of our identity processes. For example, music listening is a crucial recreational activity for young people, and may indeed be one of the most important recreational activities in which young people take part. Music plays a critical role in the formation of friendship groups, in digital media usage, in choice of clothes and of places to socialize (all important markers of identity). Moreover, music is so completely intertwined with other aspects of our lives that in many ways our tastes in music signal fundamental aspects of our lives to other people. The bands and genres of music that we like, the places we go to hear music, and even how we listen to music can be important markers of our identities. There may of course be overlaps between MII and IIM, and sometimes the distinction may not

be clear-cut, but it nevertheless provides a useful perspective for some of the more recent debates in this field.

Our 2002 conception of musical identities also attempted to clarify some of the current terminology in the study of the self. We suggested:

that the *self-system* is made up of a number of *self-concepts*, or *self-images*, which are the different ways in which we see ourselves. These self-concepts can be context- or situation-specific (eg. how I see myself as being able to cope under stress, or in an emergency), or domain-related (eg. how I see myself as a linguist, or a musician). *Self-identity* is the overall view that we have of ourselves in which these different self-concepts are integrated.... *Self-esteem* is the evaluative component of the self, and has both cognitive and emotional aspects: how worthy we think, and feel we are.

(Hargreaves, Miell and MacDonald 2002, pp. 7–8)

## Musical Identities as Performative and Social

We also wrote that “The idea of the self as a kind of focus, or relatively unchanging core aspect of individuals’ personalities has given way to a much less static and more dynamic view of the self as something which is constantly being reconstructed and renegotiated according to the experiences, situations and other people with whom we interact in everyday life’ (Hargreaves, Miell and MacDonald, 2002, p. 2). This view is very much in line with that expressed by Elliott and Silverman (in press), who have stated their case for reclaiming the concept of “personhood.” They see the self and identity as being the main dimensions of personhood, which they suggest has two main dimensions—“embodied” and “enactive.” Your embodied self is your own experience of yourself, and your enactive self refers to the ways in which you express yourself through your actions and behavior.

Identity is thus seen as performative and dynamic, and as having *narrative*: it is something that we *do* rather than something that we *have*. In relation to music, the Aristotelian concept of *praxis*—in essence, the ways in which people engage *practically* with music together—are at the heart of the nature of identity. In Elliott and Silverman’s view, music-making provides important social, interactive and indeed intersubjective contexts in which people can co-construct each other’s musical, social and personal identities. This also brings in concepts such as empathy, such that an ethical dimension is built into their conception of identity construction. For Aristotle, *praxis* is guided by a moral disposition to act truly and rightly, and includes a concern to further human well-being and the good life. This dimension, which includes concepts including healthiness, joy, respect for others, an “ethic of care” for oneself and others, and many other dimensions of human flourishing, are all part of the concept of well-being that Aristotle summarized in the word *eudaimonia*.

## An Ethical and Conative Dimension of Musical Identities

This ethical and conative dimension is also an important part of Trevarthen and Malloch’s (in press) account of how infants develop their musical selves, which is an extension of their well-known concept of *communicative musicality* to a much broader range of phenomena

than has been in the case in their previous work. They characterize the interactive relationship between the infant and the caregiver as an essentially musical one in that music provides a unique means of communication between the self and others, thereby creating cultural meaning. In their chapter they consider how the infant's innate musical intersubjectivity gives rise to her personal identity as a performer, which is based on the simple distinction between the self and the other, and then how she gradually learns to become part of an interacting musical group which has communal identity, and how this process is guided by musical conventions. We can extrapolate from Trevarthen and Malloch's evidence to conclude that musical identities play a fundamental role in the earliest and most important bonding relationship of life, i.e., the relationship with our parents.

This notion of the musical self growing in relation to others, based on the imitative dialogues and proto-conversations of babies with their caregivers, is a central aspect of Trevarthen and Malloch's conception. They link this with new neuroscientific developments which propose that neural events can be seen to mirror the intentions which can be discerned in the movements of other individuals, such that the social dimension of musical development adopts a much higher profile. They reach what they call the

radical conclusion... that an infant is born a humanly social creature, an artful person or Self, with a motor intelligence equipped with uniquely human talents to make or detect the *aesthetic* value of melodic stories, and *moral* feelings of the relationship, both of which may be sustained with a respectful and sympathetic Other in expressive body movements and song.

(Trevarthen and Malloch, in press)

As with Elliott and Silverman's view of a moral dimension in the development of identity, so Trevarthen and Malloch suggest that "Play is unreasonable. It is not a *cognitive*, outside-fact-driven activity. It is *conative* or willful and hopeful, and *emotional* or passionate. Its invention and self-related delights and fears benefit cognition, and develop with it."

## What Is Music, and What Is a Musician?

Music plays a greater part in the everyday lives of most people than at any time in the past. This partly arises from the rapid technological developments that have occurred in the last two decades or so, and from the increasing commercialization and economic power of the music industry. In the developed countries of the world at least, the widespread availability and relative inexpensiveness of the broadcasting media, MP3 players, the Internet, social media, and other digital technology means that a vast diversity of musical styles and genres is available to an increasingly wide population of listeners in an almost infinite range of social and cultural environments. The ways in which people experience music—as "consumers," fans, listeners, composers, arrangers, performers, or critics—are far more diverse than at any time in the past, as are the range of contexts in which this takes place.

This increasing diversity and availability has had two effects in particular: the first is what might be called the "democratization" of musical genres and styles. It is not now unusual to hear pop, folk, or other forms of music hitherto regarded as "popular" or "non-serious" in hallowed and traditional institutions such as London's Royal Albert Hall or on the BBC's Radio 3 station, which is devoted primarily to "serious" (usually classical) music.

Correspondingly, it is also possible to find “serious” classical repertoire being played in shops, cafés or other commercial environments. The equation of certain genres with “seriousness,” “high quality,” or “intellectualism” and vice versa for other genres is now very rare, and this liberalization of attitudes can be found within the musical establishments themselves as well as in schools and classrooms.

This makes it vital that the study of musical identity must be as all-inclusive as possible: researchers should not only be concerned with artistic or aesthetic expressions of musical excellence at the highest levels of expertise (although this is not excluded!), but also with music produced by children, or by people suffering from ill-health or undergoing therapy. Musical quality is not the primary concern here: what is important is the expression of people’s cognitive, social, and emotional feelings and values through music. In this sense, the answer to the question “what is music” must be couched in terms which are as general as possible, perhaps following Stravinsky’s (only semi-humorous) statement that “my music is best understood by children and animals” (The Observer, October 8th, 1961). In essence, music cannot be defined solely in terms of its physical or acoustical properties, but in terms which also take the social and cultural context in which it is performed and experienced into account. Even issues of quality and aesthetics are inextricably linked to psychological and social processes, and may not be directly related to exclusively musical features. Thus, even the most basic and fundamental aspects of music are related to identity processes.

The second effect of the increasing diversity and availability of music of all kinds is to blur the distinctions between different practitioners of music, and in particular to broaden the definition of a “musician.” Cook (1998) discussed the definitions of the culturally defined roles of the composer, the performer, the improviser, or the teacher, which are central to the self-definitions of some professional musicians, in terms of the issue of *authenticity*. He suggests that these are based on outmoded and hierarchical value systems which derive from nineteenth-century European “classical” music, and which can be traced back to Beethoven. This view implies that the creators of music exist on a higher plane than its reproducers, or performers, which in turn implies that music is something which exists “out there,” in a sense independently of those activities which bring it to life.

In today’s diverse and technologically-oriented musical world, the dividing lines between the composer, the arranger, the studio recording engineer, the performer, the critic, and the listener become increasingly difficult to define: as Cook suggests, “in truth none of these things are natural; they are all human constructions, products of culture, and accordingly they vary from time to time and from place to place” (p. 17). One important distinction here is that between the composer, the performer, and the improviser: in Western classical music, of course, the composer and the performer have quite distinct roles, and even the improvisation of cadenzas within solo performances has now largely been replaced by playing from written scores. In jazz and many other forms of music (including Western European organ playing), however, improvisation is an essential part of the performer’s role, and this reinforces Cook’s point that these divisions are transitory and ever-changing.

The specific question of the definition of “musicians” as compared with “nonmusicians” is discussed at length by Rickard and Chin (in press), who propose that the traditional view of the former as people with performance training who have reached a high standard on their instruments is misleading. Furthermore, they argue that the definition of musician in terms of the *production* of music is inappropriate, since many aspects of the reception or *perception* of music may provide equally valid definitions of musicianship. Drawing on cognitive

and neuroscientific evidence that overlap exists between the nature of musical processing in performers and listeners, these authors see musicianship as being multidimensional, and as capable of including listening. This same point of view was expressed by Hargreaves (2012) as well as by Hargreaves, Hargreaves and North (2012), who used similar reasoning in making the case that a focus on musical *imagination*, which refers to the cognitive processes *underlying* both musical production and perception, is likely to be more fruitful than the current overwhelming concentration on “creativity.”

Rickard and Chin go on to develop the now widely held view that everyone has the capacity to be musical, and that modern digital equipment means that high levels of musical creativity can sometimes be attained by those with little instrumental skill. They reconsider the definition of the “nonmusician,” suggesting that what they call “receptive musicianship” can be as valid as that of productive musicianship, drawing on instances such as community choir or band performances, or playing music games on handheld mobile devices and computers. They also suggest that what they call the “musicianship of listening” (based on evidence that a great deal of detailed knowledge about music is acquired implicitly as a result of everyday exposure to it, and that this can occur without specific musical training), and the “musicianship of engagement” (such as in using music to regulate mood, to forge group identity, or to facilitate relationships with others) both have considerable overlap with the traditional “musicianship of production.” Finally, they argue that the benefits of non-productive musicianship can lead to the promotion of mental health and well-being, and cite some of the increasing body of research evidence for this point of view.

These ideas have considerable importance when exploring the relevance of IIM (Identities in Music). For example, every time we choose a piece of music to listen to we make a number of highly sophisticated and complex musical and psychological assessments, such as “How do I feel right now?”, “How do I want to feel in ten minutes?”, “How do I want to feel in a hour?”, “What music will help me reach these psychological goals?”, “What am I doing right now?”, “What music is appropriate for this environment?”, “Is there anybody else listening, and if so, do I care what they think about my choice?”, “Do I want to change my mood or enhance my current mood?” We make these kinds of psychological and musical assessments very quickly and very efficiently, so that musical choices in these situations can be conceptualized as a kind of self-medication. Specific music is selected to achieve particular psychological goals, and identities in music are inextricably linked to these assessments.

## DEVELOPMENT OF MUSICAL IDENTITIES

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### Processes and Putative Stages in Musical Development

One of the main, longstanding questions in the literature on the psychology of musical development is whether or not there exist Piagetian-style cognitively based stages in musical development (see, e.g., Hargreaves and Zimmerman, 1992). The issue as such is still unresolved, although there undoubtedly exist age-related changes in musical behavior (see Hargreaves, 1996). Our focus here is upon the development of musical *identity*, a concept which goes beyond the direct behavioral manifestations of musical development, and is



more concerned with the internal representations of those changes, and the ways in which they draw on the social and cultural environment.

In Hargreaves, Miell and MacDonald (2002) we drew attention to three clear trends which could be identified in the general developmental literature on identity and self-esteem. These were (1) that generalized aspects of the self-concept become increasingly differentiated with age; (2) that there seems to be a general shift away from an emphasis on physical characteristics and activities in early childhood and towards more psychological judgments involving feelings and emotions; and (3) that children's self-concepts become increasingly based on comparisons with others in middle childhood through to adolescence. Since then some more specific accounts of the development of musical identity have emerged, and in this section we review three of these, namely those of Trevarthen and Malloch (in press), Evans and McPherson (in press), which includes some proposals about the application of self-determination theory to the development of musical identity, and Lamont (in press).

All of these draw to differing extents on Erik Erikson's (1968) proposal of eight stages of psychosocial development and also on Marcia's (1980) subsequent elaboration of it, as indeed does Dys, Schellenberg, and McLean's (in press) exploration of the relationship between musical identities, musical preferences and individual differences. In brief, Erikson (1950, 1968) suggested that adolescence and early adulthood was a critical time in the development of self-identity, and that the failure to develop appropriately during this period could have negative effects on subsequent development. He also proposed that there are three key processes in this development: namely, *identification* (the process of relating to significant individuals or groups in taking on some of their characteristics); *individuation* (establishing individual continuity across different contexts and over time); and *integration* (organizing these new elements into a continuous sense of personal identity).

Marcia (1980) developed this theory by proposing two main processes of identity development, namely *exploration* (the extent to which teenagers attempt to discover different attitudes and activities whilst searching for a sense of self), and *commitment* (i.e., taking on a particular set of beliefs or values). The conception of high or low levels of both exploration and commitment gives rise to a  $2 \times 2$  framework incorporating four distinct identity outcomes which Marcia called *achievement* (the clear attainment of a coherent identity), *moratorium* (referring to those who are still exploring the possible range of their own identities), *foreclosure* (those who have taken on an identity, but who have not fully explored the alternative possibilities), and *diffusion* (those who have not taken on an identity or engaged in the exploration process, perhaps through disinterest).

Trevarthen and Malloch's (in press) extension of their concept of communicative musicality to explain the development of musical learning and identity in childhood draws on both of these approaches, and gives rise to a stage theory in which they identify four transition points across the lifespan in which significant transformations occur in relation to music. In infancy (Erikson's first stage of trust vs. mistrust), children are developing their physical and motor skills to express themselves, and to engage in interactions with their caregivers in stories and play with their faces, eyes, voices, and hands. In early childhood (representing Erikson's second, third, and fourth stages of autonomy vs. shame, initiative vs. guilt, and industry vs. inferiority), toddlers are developing their own children's musical culture, which is partly self-created but which also partly involves the songs and rhymes of the culture (see, e.g., Hargreaves, 1986).

These songs and performing abilities gradually approximate more and more closely to cultural songs in later childhood until the third major transformation occurs, in adolescence (Erikson's fifth stage of identity vs. role confusion), in which musical preference and taste has been found to be a key indicator of personal identity. Simon Frith's (1981) well-known view that "music is a badge of identity" in adolescence expresses this clearly: if you know which particular types of music teenagers like, it is often possible to determine their preferred clothing and hair styles, friendship patterns, leisure interests, and many other aspects of their values and behavior. Teenagers spend more time per day listening to music than they do in any other kind of activity, so that music forms a critical aspect of identity at this stage, more so than at any other stage across the lifespan.

Hargreaves' (1982) notion of "open-earedness," or tolerance for different musical styles and genres, has been used to characterize the nature of people's stylistic preferences, in particular their musical *dislikes*, at different ages across the lifespan. Le Blanc (1991), for example, suggested that there are four distinct developmental stages in the development of open-earedness: namely, (1) that younger children are more open-eared; (2) that open-earedness declines as the child enters adolescence; (3) that there is partial rebound of open-earedness as the listener matures from adolescence to young adulthood; and (4) that open-earedness declines as the listener matures to old age. One of the clearest and most consistent findings within the research literature surrounding this description concerns point (3), in that the level of people's open-earedness is at its lowest in early adolescence, at round about the age of 12 or so; as we pointed out above, the "badge of identity" must be very clear so as to distinguish between different preference groups, and social identity theory has been invoked to explain this (e.g., Tarrant, North and Hargreaves, 2002). Point (4), which describes what occurs in old age (Erikson's eighth stage of ego integrity vs. despair), involves people becoming increasingly aware of their increasing limitations and infirmity, and developing a more contemplative relationship to music.

## Self-Determination Theory

Evans and McPherson (in press) also draw specifically on Marcia's (1980) development of Erikson's work, as well as on self-determination theory (SDT: Ryan and Deci, 2000), in describing how musical identity is consolidated during adolescence and how this becomes very important at that stage. They develop Marcia's two central concepts of *exploration* and *commitment* by considering the extent to which adolescence involves a continual process of exploring various identities within music, and by considering the future long-term implications of this exploration for their future careers.

Evans and McPherson's (in press) empirical work with 157 children who were learning to play musical instruments clearly shows that these identity processes were important even before the children began formal learning of their instruments. At this early stage the researchers asked them how long they thought they would continue to play their instruments, and found that those who took a longer term view (e.g., "until I'm an adult") were more likely to continue their involvement in musical activities than were those who expressed a short-term view (e.g., "until the end of this year"): it also emerged that this relationship was dependent on individuals undertaking appropriate amounts of practice. It seemed that it was important for children to have a sense of their future selves, and that

music was one of the clear options to consider as part of this. This highlights one of our earlier points regarding the importance of positive identities in music (IIM) in young people.

Evans and McPherson also investigated the application of SDT to the development of musical identity: this theory proposes that people's well-being thrives most when their behavior primarily originates from and is regulated by themselves rather than by others, and that this self-regulation involves the fulfilment of three basic psychological needs: *competence* (the desire for mastery and effectiveness in one's activities); *relatedness* (the need to feel a sense of belonging and acceptance by others); and *autonomy* (the need to feel that one's actions are self-originated).

This theory has been widely quoted and adapted in various practical and academic contexts, and has become an important part of *positive psychology*, which emphasizes the promotion of health and well-being rather than the treatment of ill-health (see, e.g., Seligman and Csikszentmihalyi, 2000). Evans and McPherson's application of SDT to the development of musical identity involves issues such as whether teenagers' musical practice is regulated by themselves or by their parents, and whether they see their own particular variety of music learning as an important and central part of their own lives. Evans and McPherson provide four detailed case studies of young musicians which clearly show how useful Marcia's and SDT's theoretical constructs can be used to explain the processes involved in the music identity development of individual teenagers.

## A Lifespan Approach

Lamont (in press) takes a lifespan approach to the development of musical identity by focusing on the ways in which specific social contexts and cultural environments shape people's behavior, and on how they negotiate life transitions. Like us, she characterizes identities as fragmented, multiple, and shifting, but she also contrasts this view of the social construction and negotiation of identities, and their constant redefinition and change in different contexts, with what she sees as stage or phase approaches, such as those of Erikson and Marcia, which we have reviewed in this section.

Lamont identifies some key influences on musical identity at different parts of the lifespan, first considering the beginnings of musical identity by looking at research on mothers singing to their infants, pointing out that musical interactions between caregiver and child are a natural part of learning to be human: coordinated rhythmic movements and precisely synchronized interactions seem to take place intuitively and to be associated with very powerful positive affect: "children acquire musical culture as naturally as they learn to walk and talk" (Bannan and Woodward, 2009, p. 467). Lamont goes on to look at childhood, using in particular Bronfenbrenner's ecological systems theory of development, which considers different contextual influences on individual behavior and attitudes at different stages: the focus is on effects of the home, the school, and peer groups in the development of musical identity. She looks next at the role of music in later life, and the ways in which older people can gain many benefits from music including its social dimension, its ability to generate feelings of well-being, and the opportunities it presents to maintain physical and instrumental skills, and in some cases to overcome mental and physical health problems.

We would like to make four main points in concluding this section. The first two, simply, are (1) that the research literature suggests there are indeed age-related regularities in the

self-regulation of musical activities which could be described as the development of musical identities, and (2) that this development seems to include an ethical and conative dimension. The third and fourth are effectively precautionary caveats to be applied to the first two points, namely (3) that we need to be careful not to confuse the development of musical identities with that of musical preferences, although there is considerable overlap between them; and (4) if identities are indeed negotiated, performative and socially defined, then they are not permanent and unchangeable, but constantly subject to development and change according to the surrounding social and cultural environment, such as might occur in response to ill-health or in times of economic hardship, which might lead, for example, to “damaged identities” (see, e.g., Magee, in press).

## INDIVIDUAL DIFFERENCES IN MUSICAL IDENTITIES

Another important question from the psychological point of view is whether it is possible to identify and indeed to assess individual differences in musical identity, which includes the question of whether clear group differences exist. We have looked at the issue of age differences in the previous section on the development of musical identities, but corresponding questions could be asked about whether or not there are consistent gender differences, social class differences, differences with respect to disability status, or indeed differences between people with varying degrees of musical expertise, in their musical identities.

In this section we look first at Spychiger’s (in press) account of musical identity, which centers on the musical self-concept, and which derives from her own empirical research on the assessment of musical self-concept and the exploration of its multidimensionality, which she has investigated by developing a psychometric instrument called the MUSCI (the Musical Self-Concept Inquiry). We look next at two accounts of musical identities which also adopt what might be called a “mainstream” psychological approach based on individual differences, both of which are also associated with fairly large-scale empirical studies. The first of these is Dys, Schellenberg, and McLean’s (in press) examination of the relationship between musical identities and musical preferences, which was mentioned earlier in this chapter, and the second is Greenberg and Rentfrow’s (in press) account of “the psychological underpinnings and manifestations of musical identities.”

### Dimensionality of the Musical Self-Concept

Spychiger (in press) puts the musical self-concept at the center of her account of musical identity: she sees musical experience as being transformed into musical identity via self-concept processes, and suggests that “*Musical* self-concepts summarize a person’s answers to his or her inquiring of ‘who-I-am’ and ‘what-I-can-do’ with regard to music’ (p. 1). She reviews various theoretical accounts of the self-concept, including those of Marsh (2005) and Shavelson, Hubner, and Stanton (1976), dealing with issues such as domain specificity, and with our own distinction between MII and IIM.

Spychiger then develops her account of the musical self-concept and of its measurement by referring specifically to her own empirical research, which has partly been devoted to the

development of an instrument for assessing the musical self-concept (the MUSCI). This was developed from a heuristic model of musical self-concept which hypothesized the existence of five distinct dimensions, namely the social, emotional, physical, cognitive, and spiritual. Factor analysis of her empirical data gave rise to a more complex eight-dimensional model, however: namely, technique and information, the social dimension, musical ability, the emotional and physical dimensions, and the spiritual, ideal, and adaptive. Spychiger then carried out comparisons between five different groups of participants who varied in their level of expertise and found, for example, that high expertise groups were associated with high levels of evaluation of musical ability and technique and information (perhaps unsurprisingly), but that a group of non-performing listeners placed more emphasis on mood management than the higher expertise groups did.

## Musical Identity and Musical Preference

Dys, Schellenberg and McLean (in press), as we mentioned earlier, draw on Erikson's (1968) theory of the development of identity, and on Marcia's (1980) empirical implementation of this in their account of the development of healthy identities in teenagers, and the specific role of music within those. They also draw on Berzonsky's (1989, 1990) model of individual differences in processing styles, which include an *informational* style (including giving attention to decision-making, and possessing high levels of self-esteem and conscientiousness), a *normative* style (conforming to the expectations of friends and family), and a *diffuse-avoidant* style (characterized by delaying, procrastination, and putting off identity-forming decisions).

Dys et al. (in press) discuss how these analyses of identity relate to music, and what role in particular is played by musical preferences. They are concerned with trying to explain whether musical identities parallel considerations about identity development in general, i.e., whether or not the concepts outlined above are useful in explaining music. They describe a large-scale factor analytic study which involved administering various psychometric measures of self-identity, personality, and musical background to 330 first-year undergraduate students. The specific research questions and the detailed results of the study are too numerous and complex to detail here, but we can extract the following general conclusions: (1) that musical identities showed significant associations with musical preferences as well as with individual differences in personality, self-concept clarity, and musical training; (2) that length of musical training was associated with measures of musical preference as well as of musical identity; and (3) that there were only small associations between the participants' musical identity statuses and their identity formation in other domains.

## Musical Identity and Personality

Greenberg and Rentfrow (in press) review what they call the "psychological underpinnings" of musical identities, which include self-identity, and the role of personality characteristics in relation to musical identity: this follows up some of their earlier research on the same topic (Rentfrow and Gosling, 2003; see also North, 2010). They also discuss musical preferences in relation to social relationships and group processes, emphasizing that people

(especially teenagers and young adults) often develop normative beliefs about the characteristics of fans of particular musical styles (see also North and Hargreaves, 1999; Tarrant, North and Hargreaves, 2002).

Their own research in this area also involved the development of a factor analytic model of the structure of musical preferences, which has five dimensions which they describe by using the acronym "MUSIC," which comprises: "Mellow" (e.g., soft rock, R&B, and adult contemporary music, which is characterized as romantic, relaxing, slow and quiet); "Unpretentious" (e.g., country and western, folk, which is uncomplicated, relaxing, and non-aggressive); "Sophisticated" (e.g., classical, opera, jazz and world music, which is seen as inspiring, intelligent, complex, and dynamic); "Intense" (e.g., punk and heavy metal, which is characterized as distorted, loud, and aggressive); and "Contemporary" (e.g., pop, rap, and dance, which is seen as related to extraversion, valuing social recognition, having more permissive attitudes about sex).

Rentfrow and Greenberg go on to look at "manifestations of musical identities" in terms of the normative beliefs that people hold about the characteristics of fans of particular styles and their interpersonal relationships, which once again are interpreted in terms of the MUSIC model, and they present some results from a new empirical research project which explored these issues. Broadly speaking, their findings confirmed the view that there are high levels of agreement about the social attitudes which are linked to musical styles: there seem be clear relationships not only between people's own musical preferences and their personalities, but also in their perceptions of the personalities of the fans of other styles and genres.

## MUSICAL IDENTITIES IN APPLIED CONTEXTS

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In the forthcoming HMI (in press), we have adopted a multidisciplinary approach in order to review the many developments that have occurred in the study of musical identity: this field has expanded and developed massively over the last decade or so, and it continues to do so. Whereas the present chapter has focused on the psychological aspects of this field, our introductory chapter in HMI summarizes these briefly, and then devotes more detailed attention to what we see as the four main domains, or applied contexts, in which musical identities have been investigated. This involves taking on a wider range of theoretical and methodological approaches than those covered in the present chapter.

We look first at musical identities in musicians and in musical institutions themselves, considering how particular styles, genres, and practices give rise to particular aspects of musical identity. This includes the use of talk about music in pop music, in jazz, and in free improvisation, as well as looking at the particular problems which were faced by a group of eight professional opera choristers (Oakland, MacDonald and Flowers, in press). We also consider the role of music technology here, which has had a strong influence not only on the ways in which musicians perform, but also on their identities: this includes historical developments in stringed instruments and in the development of the pianoforte, as well as the very recent rapid growth of electronic and digital instruments, recording technology, and the associated use of the Internet.

One of the key features of this work is a focus upon language as the primary source of data in understanding musical identities. In these studies, talking about music is viewed



as a crucial part of the overall process of musical communication (Miell, MacDonald and Hargreaves, 2005). How we talk about music influences how we listen to music and how we perform music. Thus, talking about music is a performative aspect of our musical identities. When we talk about music we are not simply describing a musical event or thought that resides within our brain; but rather we are actively engaged in negotiating and constructing our constantly evolving musical identities. When interviewing professional musicians about their musical identities in relation to improvisation, Wilson and MacDonald (in press) suggest that not only is improvisation a unique, universally accessible type of collaborative creativity but that it also has significant potential to be utilized for health benefits in therapeutic contexts.

We next consider musical identities in specific geographical communities, starting with deNora's (in press) identification of five key features of identities which stem from her sociological approach. These themes are very useful in trying to explain phenomena such as the identities of ethnic minorities and immigrants, and the ways in which music has been used in trying to overcome the adverse effects of violence and displacement in Colombia, as well as in the Balkan region of Europe: we also include a historical account of the social and cultural background of the "first folk revival" in England, which throws light upon the nature of "Englishness," as well as on how it was regarded by the musical experts of the time.

We go on to consider musical identities in education and educational institutions, which includes consideration of pupils' views about their own musical abilities and aspirations, of the effects of school transition on musical identity, and two sociocultural/sociological analyses of secondary music education which draw on phenomenology and ecological systems theory, and which address the important and widely used notion of *personal agency* in the development of musical identities and of pupils' future careers.

Finally, a great deal of recent attention has been paid to research and theory on the role of music in promoting health and well-being, and we start by considering some important theoretical analyses of the mediation of this relationship in terms of the regulation of emotion, and the self-reflective awareness of one's own emotional states. This leads on to a consideration of music therapy work with people with complex disabilities, of therapeutic songwriting, and also of the use of music therapy in young people who are struggling with mental illness. An understanding of musical identities in these health-related contexts is important, as illness often produces negative changes in identity. However, there is growing evidence that musical interventions can ameliorate these negative effects (MacDonald, Kreutz and Mitchell, 2012).

In summary, this chapter has outlined a number of key concerns for researchers and practitioners interested in musical identities. Musical identities are defined as being performative, constantly evolving, and negotiated across a range of social contexts. We have highlighted the exponential growth of interest in the topic of musical identities in recent years. In elaborating the distinction between Music In Identities (MII) and Identities in Music (IIM), we also suggest that musical identities are central to fundamental questions about the nature of music and its aesthetic attributes. The chapter also presents an exploration of three broad topics: the development of musical identities, individual differences in musical identities, and musical identities in applied settings. In the first of these three topics, influential psychological theories such as those of Erikson, Marcia, and Ryan and Deci are combined with a number of contemporary empirical examples to support the view that children develop musical identities in incremental and tangible ways that are linked to broader

psychological development. The second topic of individual differences is discussed in terms of the empirical investigation of broad group differences in musical identities. The notion of the musical self-concept, and how it can be measured, is considered alongside studies investigating how musical identities may be related to broad personality characteristics. The third and final section highlights the importance of studying musical identities in applied settings, outlining possible benefits to health and well-being.

There is no doubt that musical identities are an important component of human musicality. As the notion of what it means to be musical continues to broaden, it becomes critical to understand the psychological basis of our personal perceptions of our own musical lives. The study of musical identities will therefore continue to develop in a number of diverse yet related directions. This research will make significant contributions to our understanding of human musicality, and is likely to remain an important subdiscipline within music psychology.

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