Chapter 5
Using Music Therapy and Imagined Interaction to Cope with Stress
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ABSTRACT:

Music affects moods and emotion and can help people in dealing with stress. Music therapy has been shown to reduce pain and cope with depression. In fact, the ISO (Incremental Sound Organizer) principle of music therapy reveals how people’s emotions can change while listening to a medley of music. Research is reviewed in which people have imagined interactions while listening to music as memories are recalled. Music is used to maintain relationships as couples often have their own song. Music fulfills the catharsis function of imagined interactions as people release anxiety or tension. Music serves numerous functions, which can be subsumed into 1) achieving self-awareness, 2) expressing social relatedness, and 3) regulating, arousal and mood. Respectively, these functions are similar to the II features of valence, self-understanding, and relational maintenance. Music could have emerged as a form of coalition signaling by using music in groups, we signal to others that our group is organized, resource-rich, synchronized, and “in tune” (both literally and metaphorically) with one another.

Music has been called the universal language due to its rhythm and tonality, and because it (at least on the surface) transcends group-based language barriers. It is a pervasive part of human culture that predates our recorded history (Darwin, 1871); the earliest musical artefacts date back over 30 thousand years (Conard, Malina, & Münzel, 2009). People sing to babies because infants are altricial and need parental attention to survive (Mehr, Kotler, Howard, Haig, & Krasnow, 2017). Music can inspire people as well as depress them. It can be a soothing balm for many people. For example, the late Tom Petty, the classic rock n roll Hall of Famer who died at age 66 in October of 2017, said in his biography that music became a “safe place” where he was free from worrying about his abusive and alcoholic father who would physically him, his mother and younger brother (Zane, 2015). In fact, music can be so soothing for emotional control and release similar to the catharsis function of IIs, that there are songs of tribute. One of most famous tribute songs, the eight-and-a-half-minute “American Pie” by Don MacLean, is about the airplane deaths of early rock n rollers, Buddy Holly, Ritchie Valens, and J. P. “The Big Bopper” Richardson. The famous chorus is “the day the music died.” In 2017, McLean’s original recording was selected for preservation in the National Recording Registry by the Library of Congress as being “culturally, historically, or artistically significant” (see https://www.loc.gov/item/prn-17-029/). National anthems serve a similar function of praise (e.g., The Star-Spangled Banner, US; God Save the Queen, UK; the State Anthem of the Russian Federation, Russia; Oh Canada, Canada; La Marseillaise, France; Wilhelmus, The Netherlands—oldest in the world). In this chapter, we discuss how music along with IIs can be used to cope with trauma. Indeed, when people listen to music, they often can be taken back to time and place as well as seek escape from the daily hassles of life.
Relational Maintenance

One of the major functions of IIs is the psychic ability to retain human relationships within the mind. People imagined encounters with relational partners and relive positive or negative moments. Bodie, Honeycutt and Vickery (2013) showed that lower usage of IIs for relational maintenance and conflict management and higher usage of IIs for catharsis is associated with higher frequency and lower self-dominance. On the one hand, Honeycutt and Sheldon (2018) discuss the classic maxim of “absence makes the heart fonder” in terms of IIs for relational maintenance. They report how engaged partners had more IIs, IIs that were positively valenced, and IIs that were used to compensate for the lack of real interaction than did marital partners. They speculated that there also may be less rehearsal among the engaged partners due to less conflict in the honeymoon phase of their relational development.

A real-life example of the relational maintenance function of IIs comes from the account of Sir Paul McCartney of the number one ranked classic rock and roll band (according to Rolling Stone polls: https://www.rollingstone.com/music/lists/100-greatest-artists-of-all-time-19691231/the-beatles-20110420), The Beatles. They had the most number one songs in at least one chart (n = 103), followed by Elvis Presley (n = 75), and the Rolling Stones (n = 64) (https://tsort.info/music/faq_num1.htm). They are the only band to have an entire Cirque de Soleil show covering their music (Love).

In a Rolling Stone interview, Sir Paul discusses how he has imagined interactions with John Lennon, founder of the band and George Harrison, who was a guitarist. Lennon was brutally assassinated in December of 1980 when he was shot at point blank range in New York while George Harrison died of lung cancer that spread to his brain in 2001. In 1999, he ward ed off an intruder in his home who stabbed him in the lung and causing head injuries before his wife incapacitated the assailant by striking him repeatedly with a fireplace poker and a lamp.

Anyone can google the trauma of Lennon’s assassination. Sir Paul has discussed his contempt for the assassin. However, he has imagined interactions with John in the recording studio that reveals how he is using the relational maintenance function and catharsis as a way to continually deal with this trauma. He said the following about imagining John Lennon being in the recording studio with him:

There was another collaborate in the room, who’s been there for decades. If I’m at a point where I’m not sure about this, I’ll throw it across the room to John. (Following are the literal lines of imaginary dialogue:

John: You can’t go there, man
Paul: You’re quite right. How about this?
John: Yeah, that’s better.

Forgiveness. In the interview, McCartney says, “We’ll have a conversation. I use that; it’s a very valuable thing. I don’t want to lose that.” (Weiner, 2013; p. 44) McCartney also describes how he uses IIs to deal with conflict. The Beatles broke up with John Lennon spent more time with artist, Yoko Ono. McCartney discussed how when he thinks about the end of the Beatles as a band and forgiveness with Ono and Lennon; George Harrison encouraged him. He tells a retroactive II in which George said, “You don’t want stuff like that hanging around in your life” (Weiner, 2013; p. 46). Sir Paul said the following in terms of forgiveness about how the band broke up:

George would say to me: “You don’t want stuff like that hanging around in your life.”
Catharsis and Music Therapy

As shown throughout this volume, catharsis is a major function of IIs in order to alleviate stress. Background music can facilitate recall of pleasant and unpleasant memories as the music triggers endorphins in the brain (Salimpoor, Benovoy, Larcher, Dagher, & Zatorre, 2011). While listening to music, people often have imagined interactions as they experience a range of emotions depending on the key and tempo of the song. Background music is prevalent in our society with the use of smart phones with streaming services and muzak, and it can act as a type of implicit music therapy that can relax or energize people. Even, Ancient Greek philosopher, Plato (428–347 BC), quoted “music gives wings to mind” and believed that music played in different modes would arouse different emotions (Cooke, 1959). Indeed, the emotional processing of music occurs in the amygdala, cingulate gyrus and medial orbitofrontal cortex of the brain (Nizamie & Tikka, 2014).

Music is linked with physiological responses including heart rate and blood pressure. The relationship between music and heart rate is complex and can be beneficial to health (Honeycutt, 2019). The sentimentality of music on listener increases in conjunction with a fast, loud, jumpy rhythm, which sounds happy because it reflects the way an excited person behaves. Conversely, slow, quiet music with a regular beat mimics a mournful emotional state due to brain hardwiring and activation of the amygdala. Songs in major keys tend to sound cheerful, while those in minor keys sound sad (Bowling, Gill, Choi, Prinz, & Purves, 2010). The pattern of pitches in excited speech mimics music played in major keys, while those of dejected speech matched minor music (Honeycutt, 2019). Hence, happy music tends to be faster while sad music is slower. Bowling and his associate found the same association for Mandarin Chinese speakers, suggesting the link is cross cultural, thus enhancing universal similarity. People who listened to music for 20 to 30 minutes each day had lower blood pressure and a slowed heart rate compared with those who did not listen to music with a faster rhythm, such as rap, increases a person’s heart rate, instead of providing a relaxing effect. Studies have shown that adding vocals to instrumental music activates different regions in the brain and may lead to different sensations. Adding vocals to sad music intensifies its emotional impact; cheerful music has a greater emotional impact without words (Trappe, 2010; 2014).

Prior research has shown that listening to music that people considered pleasurable increased the release of dopamine in the brain, and dopamine is well known as a “feel good” neurotransmitter (Gold, Frank, Bogert, & Brattico, 2013). Additionally, listening to classical, symphonic music (Mozart) and Romantic symphonic music (Straus) as well as pop music (Abba) lowered subjects’ heart rate compared to the baseline as well as lowering serum cortisol (Trappe & Voit, 2016). Interestingly, Rickard (2004) reported how skin conductance increased for subjects who were exposed to an emotionally powerful film scene that was accompanied by emotionally powerful music from a piece selected by the subjects compared to relaxing and arousing music conditions.

Relational maintenance and conflict linkage are two common functions of IIs that are easily referenced in music. When people listening to sad music, that they self-select as making them feel sad; people relive conflict which creates a closed, reciprocal cycle of negativity leading to sad memories which reinforces depressive feelings (Garrido & Schubert, 2013). Conversely, when listen to music that they believed selected as making them feel happy, even those with high levels of depression felt much better. Garrido and Shubert (2013) provide an example of a person...
who suffered from a negative body image and esteem who reported that found that listening to the song “What Makes You Beautiful” by One Direction, made her focus on positive aspects of herself. Their study show that when people reported feeling more depressed after listening to sad music, they still tended to report that the music had helped them. Other studies too have shown that some people persist in listening to music that is actually making them feel worse. Next, we compare the functions of music and how they resemble some various features of IIs.

Functions of Music

The question of why people listen to music has been reviewed in numerous studies. Schäfer, Sedlmeier, Städtler, and Huron (2013) surveyed the literature from the past 50 years and identified more than 500 functions for music. From their analysis, they assembled a list of 129 non-redundant musical functions. They tested the reliability of these functions by collecting survey responses from a comparatively large sample. A factor analysis revealed just three distinct dimensions that they refer to as the Big Three of music listening: People listen to music to (1) achieve self-awareness, (2) expressing social relatedness, and (3) regulate arousal and mood. Respectively, these functions are similar to the II features of valence, self-understanding, and relational maintenance.

In terms of expressing social relatedness, evolutionary psychologist that cohesion and social action can be motivated by music. Work and war songs, lullabies, and national anthems have bound together families, groups, or whole nations. Relatedly, music provides a means to reduce social stress and temper aggression in others. The idea that music may function as a social cement has many proponents (see Bicknell, 2007; Huron, 2001; Mithen, 2006).

Empirical studies of musical functions have been very heterogeneous (see Schäfer et al., 2013 for a review). Various studies were motivated by questions related to development, social identity, cognitive psychology, aesthetics, cultural psychology, or personality psychology. Studies differ according to the sample. Table 5.1 summarizes the major functions of music identified by Schäfer and his associates. Column 1 presents one the underlying basic music functions in terms of the robust, tripartite dimensions. Column 2 represents 17 functions identified by Schäfer and Sedlmeier (2009). Column 3 represents the corresponding II feature equivalent. The horizontal line in the middle of the table represents the cutoff point for the top seven functions which are rank ordered by Schäfer on the basis of importance in predicting musical preference that reflects many listeners liked and needed music (e.g., I like this music. I am a passionate listener of this music. I couldn’t live without this music). Table 5.1 reveals that self-understanding is the most used function of IIs when listening to music. It reflects achieving self-identity. These functions occur across all music genres (e.g., symphonic, electronic, rock, rap, pop, country) that were sampled.

A novel evolutionary theory is offered by Falk (2004a, b) who has proposed that music arose from humming or singing intended to maintain infant-mother attachment. The “putting-down-the-baby hypothesis” suggests that mothers would have profited from putting down their infants in order to make their hands free for other activities. Humming or singing consequently arose as a consoling signal indicating caretaker proximity in the absence of physical touch.

Recall chapter four on using IIs to deal with the trauma of loss through bereavement. An evolutionary view espouses that music helps deal with the anxiety related to death, and the consequent quest for meaning. Dissanayake (2009) has argued that people have used music to
deal with awareness of life’s transitoriness. In a manner similar to religious beliefs about the hereafter or a higher transcendental purpose, music can help assuage human anxiety concerning mortality (Newberg, D’Aquili, & Rause, 2001).

A non-evolutionary view of music is the “uses-and-gratifications” approach (Arnett, 1995). This approach focuses on the needs and concerns of the listeners and tries to explain how people actively select and use music to serve these needs. Arnett (1995) provides a list of potential uses of music such as entertainment, identity formation, sensation seeking, or culture identification.

**Music and Group Connectedness**

As hinted above, theories of the origins of human music often reference intergroup processes. Music could have emerged as a form of coalition signaling (Hagen & Bryant, 2003): by using music in groups, we signal to others that our group is organized, resource-rich, synchronized, and “in tune” (both literally and metaphorically) with one another. Such coalition signaling is functional in the animal world for signaling a joint ability to respond to threat (e.g., in coordinated singing of duets in birds to protect territory: Hall & Magrath, 2007). As such, music can be seen as encouraging intergroup divisiveness, and indeed it can emphasize group boundaries (Harwood, 2017, 2018). As is clear from the earlier discussion of national anthems, music can mark group memberships and differentiate ingroup from outgroup. Outgroup music often sounds unusual, and while we can sometimes enjoy it for its exotic qualities, full understanding of non-native music can be difficult and require extensive study (e.g., consider most Westerners’ responses to Indian ragas: they might appreciate the overall “sound” but have virtually no understanding of the music’s tonality or structure (Laukka, Eerola, Thingujam, Yamasaki, & Beller, 2013). At extremes, music can enact direct intergroup provocation (e.g., Irish Protestant bands playing “The Sash” while marching through Catholic areas of Ulster), stimulate intergroup hostility (e.g., white supremacist rock), or can even be directly involved in intergroup violence (e.g., the uses of music in torture, or in conflict—the use of drummers in battle, for instance, goes back many centuries: Norris, 2012).

However, this somewhat pessimistic take on music conceals two important points. First, of course, while the music is separating some people, it is also bringing people together. The reason that music can be effective in separating groups is that within groups it is incredibly effective at connecting individuals, bringing them together with a unique combination of temporal synchronization and emotional connection (Wallace & Harwood, 2018). Its intergroup strength derives from its powers to connect people interpersonally. Wallace and Harwood, for instance, demonstrate that emerging adults who engaged in joint musical activities with their parents during their childhood and adolescence, experience more positive relationships with their parents when the emerging adults are in college. Those effects are mediated through perceptions of empathy with the parents, and even more strongly through feelings of being coordinated or synchronized with the parents. Notably, the effects persist when other forms of (non-musical) joint activity are controlled statistically. Such effects mirror nicely the description earlier of music building connections between mothers and their infants and suggest that the bonding power of music does not stop with very early mother-child interaction.

Second, therefore, the same strategies by which music separates groups of people can, in the correct circumstances, be used to bring those groups together. As demonstrated repeatedly, contact between individuals from different social groups has the potential to reduce intergroup
conflict and prejudice (Allport, 1954; Pettigrew & Tropp, 2006). Just by spending time with one another, people from different groups come to understand one another more, and perhaps even to like and appreciate their mutual differences. Music offers some unique tools to facilitate such intergroup contact. Specifically, it allows contact between members of different groups that is:

- **Equal status**: While status differences might emerge in some fairly specific musical circumstances (e.g., a conductor of an orchestra relative to a second violinist), musical contact is for the most part an equal status activity (e.g., members of a crowd dancing to a band);

- **Low conflict**: While some forms of intergroup interaction offer the possibility for disagreement (e.g., any form of verbal communication offers up the possibility for alternate viewpoints), music is largely free of semantic content. It has, to use Cross and Morley’s (2009) term, *floating intentionality*. A lack of semantic meaning reduces the possibility for disagreement, and thus enhances the possibilities for positive and conflict-free interaction.

- **Physically synchronized**: The potential for music to synchronize people in time is almost uniquely human and offers tremendous possibilities for interpersonal harmony. We like people more when we are physically coordinated with them. Simply moving in time with another person stimulates feelings that we are somehow similar to one another and may suggest that our selves “overlap” (Lumsden, Miles, & Macrae, 2014).

- **Emotionally involving**: While language can clearly express emotion, music is uniquely emotionally expressive—even “super-expressive” (Juslin & Timmers, 2010)—and thus intergroup musical experiences offer opportunities for shared emotional experiences that go beyond what might be experienced in non-musical interaction. Shared emotional experiences, and the sensation of sharing emotion with another (empathy) are very closely tied to interpersonal closeness and relational development.

- **Positively group-salient**: One challenge in intergroup contact is maintaining positivity and enjoyable interaction, while also maintaining awareness of group memberships (Brown & Hewstone, 2005). We need to retain knowledge and awareness of group memberships to make contact meaningful—intergroup contact where we simply forget that we are with an outgroup member isn’t really intergroup contact. At the same time, unfortunately, awareness of group boundaries tends to lead to less positive interaction as a result of intergroup anxiety (Paolini, Harwood, & Rubin, 2010) and differing intergroup agendas (Bergsieker, Shelton, & Richeson, 2010). Music provides a setting in which group memberships can be displayed in a non-competitive and agenda-free manner, and where the benefits of diversity are explicitly on display (see also below).

The structure of music also enables a variety of *types* of musical contact. People from different social groups can *play* music together, thus experiencing peak synchronization activities. They can jointly experience music as *listeners*. And, of course, listeners can experience music played by outgroup members, and performers can experience the responses of outgroup members. One interesting context of musical contact is in *observing* people from different groups making music together (vicarious intergroup musical contact). This type of contact has the potential for strong effects, given that it *models* positive intergroup relations so strongly (Bandura, 1986), and in many contexts also models the uniquely beneficial outcomes.
that come from intergroup diversity (e.g., when the resulting music is an engaging blend or hybrid that couldn’t occur without the combination). Such phenomena can occur around musical styles that cross-cultural groups (Ska, Norteño, Latin jazz) or specific musical projects that feature musicians from multiple groups (e.g., Paul Simon’s “Graceland”; Yo-Yo Ma’s “Silk Road Ensemble”). Harwood, Qadar and Chen (2016) provide data suggesting that exposure to such collaborations is more powerful in influencing positive intergroup relations than exposure to non-musical collaborations.

Music, of course, does not offer a panacea for social relations—as noted earlier, it can exacerbate intergroup tensions (Harwood, 2017). Technological developments since the invention of sound recording have also shifted the ways in which humans encounter music and engage with it socially. Recording has increased our ability to listen to music alone, and our ability to consume music without interacting with the performer (Harwood, 2018). It has also increased our ability to consume music privately (e.g., via headphones), even when in social environments, thus making music consumption a technique for actively blocking social interaction (e.g., when donning headphones in a crowded airplane). Schäfer et al., (2013) note that, particularly in the West, the use of music for personal fulfillment and mood management may be becoming more important than its use for social connection (Heye & Lamont, 2010; Roberts & Foehr, 2008). That said, the continuing popularity of live music, music festivals, and dancing in bars and club all suggest that music is not doomed to a solitary and private future. The growth of technologies such as music streaming have also made it increasingly easy for people to access diverse music. While most people may seek the familiar most of the time, streaming services offer the opportunity for the more adventurous to find music from different cultures—access that was considerably more difficult in the days of physical media, and extremely rare in the pre-recording era.

**Incremental Sound Organizer of Music Therapy (ISO Principle)**

The fifth theorem of imagined interaction conflict-linkage theory states: Thinking about conflict may be facilitated through exposure to contextual cues including music, chemical dependency, and media (Honeycutt, 2003; p. 81). Support for this theorem is reviewed, elsewhere (e.g., Honeycutt, 2004). The brain’s neurotransmitters are affected by the rhythm of the music.

The ISO (Incremental Sound Organizer) principle of music therapy is designed to deal with changing a person’s emotions as they listen to a medley of music. The mood of the person is measured using a series of scales reflecting a continuum of sadness to happiness and the music is designed to matches the mood of the patient to the music being played and/or listened to, which in turn fosters the achievement of an altered state of consciousness (Honeycutt, Keaton, Hatcher, & Hample, 2014). For example, if you are angry, start with music that is loud gradually switch to a more tranquil piece of music. “The vectoring power of music is that we change the mood or emotion of persons from one affective pole (joy) to its opposite (anger) through small incremental changes in the rhythm and intensity of the music” (Honeycutt, 2003; p. 82).

The theory of musical equilibration explains the emotional impact of music as a process in which the listener identifies with the content of the will encoded in the music (Willimek & Wilimek, 2014). For example, if a person is somber; music in the minor keys of F or G minor can reinforce melancholy feelings while music in the majors keys sounds more exhilarating (e.g., D and G majors; Also see [http://www.wmich.edu/mus-theo/courses/keys.html](http://www.wmich.edu/mus-theo/courses/keys.html)).
Earlier research has found that “instrumental music may be conducive to conflict resolution because the harmonics, rhythm, and intensity involved are such that individuals can mimic these attributes verbally or nonverbally without having consciously or subconsciously to process language in the form of lyrics” (Honeycutt & Eidenmuller, 2001; p. 30). Indeed, instrumental music which is not as recognizable by the individuals, may be desirable in order to rule out effects of familiarity with the recording artist. Indeed, instrumental music which is not as recognizable by the individuals, may be desirable in order to rule out effects of familiarity with the recording artist.

In order to change a person’s mood, it is best to offer a medley of songs. For example, if a person reports being sad, you could songs in minor keys. Songs in major keys tend to sound cheerful (Bowling et al., 2010). The pattern of pitches in excited speech mimics music played in major keys, while those of dejected speech matched minor music. Hence, happy music tends to be faster while sad music is slower (Honeycutt, 2019). Alternatively, if a person is feeling irritable or angry, the musical therapist starts with music that is not too quiet so that the listener may transfer some of his or her anxiety over to the music. There is a parallel here in clinical psychology known as the transference effect, in which individuals in therapy may transfer feelings of anger about others to the psychotherapies. For example, many people listen to music while driving.

Music and Stress Reduction

There are numerous studies revealing how background music can alleviate stress (e.g., Belkhuis, 2009; Brown, Martinez, & Parsons, 2004; Hodges, 2010). For example, listening to relaxing music has been found to affect endocrine, cognitive, and emotional responses in healthy women. It has been found that people listening to relaxing music or sounds of rippling water in an acoustic control condition prior to a stress test had the highest cortisol concentrations if they were listening to relaxing music while the lowest concentrations were found in those who were listening to the sound of rippling water. Although there was no significant effect of music regarding autonomic responses, we observed a trend towards a faster recovery in salivary alpha-amylase activity and in respiratory sinus arrhythmia in the music group.

Depression, Music Therapy and IIs

An early dissertation examined the use of IIs to deal with depression. Kroll-Mensing (1992) found that anxiety and depression were positively associated with the frequent occurrence of IIs. Anxiety was associated with reporting that IIs that clarify thoughts (self-understanding function), relieve tension (catharsis), and rehearsal. The presence of an increased frequency of IIs for anxious and depressed individuals makes sense in terms of the view that suggests that the relationships of anxious and depressed individuals are characterized by conflict and dissatisfaction (e.g., review, Honeycutt, 2004). Their IIs may reflect the conflict that they are experiencing in their interpersonal relationships. Hence, IIs can be used constructively to manage conflict as well as destructively, depending on the motives and desires of the individual.

Studies included in the review compared music therapy with either standard care or with CBT or a combination of both. Hsu and Lai (2004) assessed the effectiveness of soft music compared to bed rest for treatment of major depression. They found significantly lesser depressive scores in the music group. A meta-analysis of the effects of music therapy on a variety of mental health conditions including depression and anxiety reveals that music therapy is an effective treatment and that slight improvements are observed with a few therapy sessions,
while longer courses or more frequent sessions result in more substantial benefits (Gold, Solli, Krüger, & Lie, 2009).

Visual imagery is a mode of imagery when having IIs along with verbal and a combination (Honeycutt, 2003). Related the specificity attribute of IIs describes how there are individual differences as people report having either abstract or specific lines of dialogue and specific images of the scene of II. They can tell you what the interaction partners were wearing and where it took place (e.g., car, rooms in an office, home, etc.). A combination of IIs and visualization helps people high in communication apprehension to prepare for a speech (Choi, Honeycutt, & Bodie, 2015).

Research reveals that the visual cortex area of the brain plays an important role in mental health (Romer et al., 2018). The visual cortex helps us understand and recognize what we see. It affects the visual imagery of IIs and daydreaming. In fact, damage to the occipital lobe of the brain can result in decreased visual imagery (Klinger, 1991). The results show that a person’s risk of mental illness broadly increases when the visual cortex has trouble communicating with brain networks responsible for focus and introspection. Participants were given a series of psychiatric tests that measure depression and anxiety. Magnetic Resonance Imaging (MRI) was used to scan their brains. The analysis revealed that people with higher anxiety scores had four regions of the visual cortex that didn’t work together well.

Research reveals that the brain is focused when working on tasks. However, mind-wandering and daydreaming are the default mode of the brain. Indeed, there is voluminous research demonstrating how the brain’s default-mode network provides the substrate for mind-wandering (e.g., Andrews-Hanna, Reidler, Huang, & Buckner, 2010; Christoff, Gordon, Smallwood, Smith, & Schooler, 2009; Klinger, 2013; Mason et al., 2007; Stawarczyk, Majerus, Maquet, & Argembeau, 2011). There is a network of several “hubs” and “subsystems” (Andrews-Hanna, 2012) that constitutes a majority of the brain’s energy consumption (Raichle, 2009). More importantly, several important functions must be served which include a variety of mental processes, including retrieval of past experiences and imagining future scenarios (Buckner, Andrews-Hanna, & Schacter, 2008), which are essential for planning and are also stock components of mind-wandering sequences. Hence, Buckner and his associates are referring to the retroactivity and proactivity attributes of IIs including the rehearsal function. Music facilities mind wandering, allowing the use of IIs to deal with stress. It can be effective in chronic, non-malignant pain including burn pain (Siedliecki & Good, 2006; Tan, Yowler, Super, & Fratianne, 2010).

**Popular Love Songs and Using IIs to Deal with Relationships**

A mixed-method master’s thesis conducted in the West Indies by Amanda Lewis analyzed correlations between SII features and measures of listening to popular love songs. Focus group interviews were used to analyze how they used IIs while listening to their songs and how they helped deal with relational issues, breakups, and maintenance. The quantitative data revealed that the self-understanding function of IIs was negatively correlated with music influencing your moods ($r = -.28, p = .029$), maintain your relationship with a loved one ($r = .43, p = .001$), and relieving tension ($r = -.45, p = .000$). Hence, what this means is that the more you understand the reasons for your values, attitudes, and ideology; the less that popular love songs influence moods, relieve tension, and maintain relationships. For example, one respondent reported, “I prefer love-lamenting songs because it has emotionally advised me how to confront the
disappointment in love. I can relate to these songs, especially as they relate to my past, failed relationships” (Lewis, 2014, p. 44).

Other listeners reported how listening to popular love songs made them feel as if they understand themselves better. For example, a person said, “It allows me to appreciate what I have now with my partner and also reminds me of what not to do, so she would not end up as another ex” (Lewis, 2014, p. 49). A recurring theme was how love-lamenting songs was associated with the II function of conflict linkage and learning from prior mistakes (“If I heard a love-lamenting song, I tend to dwell on our arguments and hiccups in the relationship,” p. 46). Popular love songs helped some listeners to appreciate their present relationship with their partners and reminded them not repeat past mistakes, while relieving tension. Additionally, there was a significant correlation of $-0.29$ ($p = .024$) between the beat of a song and having retroactive IIs while the frequency of having IIs was slightly associated with liking the content and language of the lyrics ($r = .25, p = .05$). Finally, the specificity of IIs was associated with liking the theme of popular love songs ($r =.26, p = .043$).

Hence, it can be argued that listening to certain types of music relives pleasant as well as painful memories (remembrances of exes) that can help people learn from their experiences to the extent that are motivated, resilient, and focused on self-improvement. IIs can facilitate in this process of cognitive learning, which reinforces the theme of this volume.

**Summary**

Music has been called the universal language due to tonality and rhythm. It can unite people through anthems. Music affects moods and emotion and can help people in dealing with stress. Music therapy has been shown to reduce pain and cope with depression as people deal with trauma. In fact, the ISO (Incremental Sound Organizer) principle of music therapy reveals how people’s emotions can change while listening to a medley of music. Research is reviewed in which people have imagined interactions while listening to music as memories are recalled. Music is used to maintain relationships as couples often have their own song. Music fulfills the catharsis function of imagined interactions as people release anxiety or tension. Music serves numerous functions, which can be subsumed into (1) achieving self-awareness, (2) expressing social relatedness, and (3) regulating, arousal and mood. Respectively, these functions are similar to the II features of valence, self-understanding, and relational maintenance. Music could have emerged as a form of coalition signaling by using music in groups, we signal to others that our group is organized, resource-rich, synchronized, and “in tune” (both literally and metaphorically) with one another.

**Discussion Questions**

1. What are three of your most memorable songs? Are they instrumental or lyrical? Do any of the songs remind you of someone important in your life? What do you typically say to them while listening to the song?
2. Have you been in a close relationship with someone, in which both of you considered a piece of music as “your song”? Why does the song serve the relational maintenance function of IIs in bonding you together?
3. Do you listen to music when you are feeling sad (hence, “blues” music), happy, or both?
4. What do you think about the findings that music therapy can assist with pain alleviation? Do you listen to music when you are ill at home?
5. When driving, how often do you listen to music, audiobooks, drive in silence, or use Wi-Fi phone apps? Do ever perform car karaoke to musical selections?

Keywords
Music therapy, ISO principle, conflict-linkage, depression, music functions, stress reduction, major and minor keys.

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<tr>
<th>Big Three Music Function</th>
<th>More Specific Music Function</th>
<th>II Feature Equivalent</th>
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<tbody>
<tr>
<td>Achieve self-awareness</td>
<td>Express self-identity</td>
<td>Self-understanding</td>
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<tr>
<td>Social Relatedness</td>
<td>Helps me meet people</td>
<td>Relational maintenance</td>
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<tr>
<td>Regulate arousal/mood</td>
<td>Makes me feel ecstatic</td>
<td>Valence</td>
</tr>
<tr>
<td>Achieve self-awareness</td>
<td>Express my values</td>
<td>Self-understanding</td>
</tr>
<tr>
<td></td>
<td>Lets me appreciate as art</td>
<td></td>
</tr>
<tr>
<td>Regulate arousal/mood</td>
<td>Puts me in a good mood</td>
<td>Valence</td>
</tr>
<tr>
<td></td>
<td>Gives me information</td>
<td></td>
</tr>
<tr>
<td>Regulate arousal/mood</td>
<td>Helps me chill and time out</td>
<td>Catharsis</td>
</tr>
<tr>
<td></td>
<td>Energizes me</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enables me to reminisce</td>
<td>Retroactivity</td>
</tr>
<tr>
<td>Achieve self-awareness</td>
<td>Enables me to better understand my thoughts and feelings</td>
<td>Self-understanding</td>
</tr>
</tbody>
</table>

What I listen to as background music

Is what I like to dance to

Lets me forget my problems Catharsis

Express social relatedness Helps me feel close to others Relational maintenance

Achieve self-awareness Lets me experiment with different sides of my personality Rehearsal

Makes me identify with the artists