

Commentary

The legacy of Dr. Helen Bonny, and Guided Imagery and Music (GIM)Denise Grocke¹¹Melbourne Conservatorium of Music, University of Melbourne, Victoria. Australia**Abstract**

Guided Imagery and Music is a model of music therapy developed by Dr. Helen Bonny in the 1960-1970's. Research into the Bonny Method of GIM has advanced our understanding of the mechanisms involved when music evokes the imagination, enhances mood, and supports transformative experiences. Studies adopting qualitative approaches demonstrate the link between music elements and types of imagery responses, and EEG studies indicate possible pathways when music stimulates discrete areas of the brain.

Keywords: *Guided Imagery and Music; Bonny music programs; EEG studies of music*

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In the late 1960's Dr Helen Bonny was appointed as music therapist at the Maryland Psychiatric Research Centre (MPRC), where her role was to support patients receiving medically-sanctioned *lysergic acid diethylamide* (LSD) treatment for "persons suffering from neurotic symptomatology, substance abuse and terminal cancer" [1]. The LSD session lasted approximately 12 hours, and Bonny was responsible for programming recorded music to parallel the stages of the LSD session. The use of LSD was abandoned when increasing recreational use resulted in bad trips, and restrictions were placed on its use. Bonny had witnessed extraordinary responses to the music however, and she believed music alone would enable patients know moments of a spiritual peak experience. Her method of Guided Imagery and Music evolved over several years to become the four-phase session that is practiced around the world in 25 countries [2].

Guided Imagery and Music (is) a "music-assisted transformational therapy that offers persons the opportunity to integrate mental, emotional, physical, and spiritual aspects of themselves" [2]. Normally the recipient of GIM (sometimes referred to as client, or traveller) listens to programmed classical music in a deeply relaxed state (also known as an altered state of consciousness), in which visual imagery,

changes in mood and physiological effect in the body are experienced. Clients may not always be in a relaxed state, particularly if strong emotion is present, and at those times the focus for the client is to be fully present to the emotion. The method can be understood as based on the principles of music psychotherapy, where unresolved issues or concerns of the client are brought to the surface by the dynamic shifts in the music selections. The client's issues are represented in symbolic form in visual images, feelings states and body responses. The therapist engages the client in a dialogue to enhance the experience of the imagery through occasional verbal interventions that seek more information about an experience, or assist in enabling the client to deepen the experience more fully [3]. Each of the music programs (of 30-40 minutes duration) designed by Bonny incorporates selections from the Western classical tradition. A movement of a larger work may be programmed alongside a work of another composer or another stylistic period. The choice of music for each program is made according to its potential for inducing imagery and deepening emotion [3].

The Bonny Music Programs

Helen Bonny was an eager researcher, and during her time at the MPRC she completed her PhD based on her knowledge of how the music, in conjunction with an altered state of consciousness (ASC), enabled personal and spiritual growth. Over the period 1973-1989 she designed 18 core music programs for use in GIM, and her writings illuminate the characteristics of classical music in supporting diversity of experiences in GIM [4].

Each music program comprises a collation of 3-7 selections of music that form a contour of one kind or another. Different genres of music may be placed alongside one other, for example, a movement of a symphony may be followed by a section of a tone poem, concerto or string

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International Association for Music & Medicine (IAMM).

quartette, and the composers may represent different time periods: Baroque, Classical, Romantic, or 20th century.

Characteristics of Classical Music of the Western tradition

Bonny articulated the characteristics of classical music of the Western tradition that underpinned the structure of her music programs [5]:

- 1) That music acts as a catalytic agent [6] in stimulating imagery. Music may be associated with memories of significant places, persons and events, and thus on hearing the opening phrases of the selection, a memory can be activated.
- 2) Music evokes emotion through the dynamic shift between tension and resolution. Tension may be created when the listener's tendency to respond is inhibited by unexpected delays in the resolution of the music, so that anticipation and heightened arousal evokes stronger emotion, which is resolved as the music itself reaches a cadence point or climax [6]. The cycle of expectation, building of anticipation and subsequent release is played out melodically, harmonically and rhythmically and enhanced by dynamic fluctuations [5].
- 3) Repetition and variability play important roles. Repetition is important in establishing trust in the music stimulus in that a repeated melodic or rhythmic phrase gives an auditory sense of security. Variability through modulation to different but related keys also is heard as secure in that the progression follows a logical structure within the music. When a theme and variations is used in GIM, the recipient hears the melody in a different texture, timbre, and register, with each variation providing a new "color" to the theme. As the music is designed to stimulate imagery, each new color may introduce a different perspective on the one issue or imagery experience. In this way "music superimposes its structure on the unfolding experience" [7].
- 4) The music as container. Based on the work of Bion, the music as "container" theory asserts that music of a small container (repetitious, predictability, low level dynamic change) will be helpful to a recipient who needs structure and support in the imagery experience. Conversely a person who has learnt to use the unfolding imagery to good effect may tolerate music of a wide container, comprising music that is more challenging, has greater dynamic range, may include dissonance and a wide range of instrumentation including brass and percussion. Music that underpins a transpersonal experience allows a wide container to explore expansiveness of emotion, where a small container may be needed to express anger [5].
- 5) The quality of the performance is important. Bonny was particular about the selection of artists for her music programs. For instance, she preferred the recording of the Mozart *Laudate Dominum* (on the *Positive Affect* program) that features the soloist Lucia Popp. Bonny

disliked strong vibrato for this work as it might convey a mature voice. She preferred Lucia Popp's "clear and lyrical" quality [5]. The qualities of the artist's interpretation therefore played an integral role in Bonny's choice of recording.

The contour of the music programs

Bonny was inspired by various theorists and leaders of the time in creating her music programs. One of the first programs however was developed from the six phases of the LSD session and her program entitled *Positive Affect* follows that contour

1. Pre-onset: Elgar: *Enigma variations* #8 and #9
2. Onset: Mozart: *Vesperae Solemnes* (Laudate Dominum)
3. Build to Peak: Barber: *Adagio for Strings*
4. Plateau: Gounod: St Cecilia Mass: *Offertoire*
5. Peak: Gounod: St Cecilia Mass: *Sanctus*
6. Return: Strauss R: *Death & Transfiguration*: Part 6 (excerpt)

Bonny (2002) illustrates the shape of the Affective Contour of the *Positive Affect* program as:

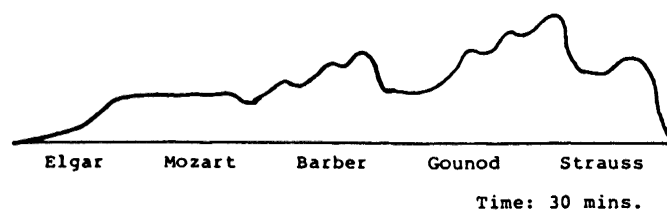


Figure 1: Affective Contour of the *Positive Affect* Program [8].

A diagnostic music program, now entitled "Explorations" was crafted to follow six of the ten visual scenarios developed by Hans-Carl Leuner in his method of Guided Affective Imagery [9]. The purpose of the scenarios was to present the patient with the visual image and then to "diagnose" how the patient responded affectively to the suggested image. Bonny matched six of the ten scenarios with a selection of music as follows [4]

1. Relaxing in the meadow: Ravel: *Daphnis and Chloe* suite #2 (segment)
2. Exploring a house as a symbol of the 'self': Brahms: *Symphony* #1, 3rd movement
3. Following a brook upstream to its source: Respighi: *The Pines of Rome* (Gianicola)
4. Following the brook downstream to the ocean: Debussy: *Nocturnes* (Sirenes)
5. Climbing a mountain and describing the view: Tschesnekoff: *Salvation is Created*
6. Return to normal consciousness: Debussy: *The girl with the flaxen hair* (prelude for piano).

Another program was developed to enhance opportunities for a peak experience. Bonny had been influenced by the humanistic philosophy of Abraham Maslow and peak experience as it related to self actualization. Bonny developed the music program *Peak Experience* to match the humanistic quest of “an experience higher than themselves” [10]. The selections for this program included:

1. Beethoven: 5th piano concerto (Adagio)
2. Vivaldi: *Gloria* (Et in terra pax)
3. Bach/Stokowski: *Tocatta, Adagio & Fugue in C major* (Adagio) - orchestrated by Stokowski
4. Faure: *Requiem* (In paradisium)
5. Wagner: *Lohengrin* (Prelude to Act 1)

One of the later programs Bonny designed was titled the *Death-Rebirth* program, which was intended for sessions in which the recipient would benefit from a deepened experience of the music, and then be uplifted to a rebirth experience. The selections for this program included:

1. Wagner: *Gotterdammerung* (Siegfried’s Funeral March)
2. Rachmaninoff: *Isle of the Dead*
3. Bach: *Mass in B minor* (Crucifixus)
4. Mahler: *Songs of the Earth* (Der Abscheid)

Bonny suggested the *Death-Rebirth* program might be followed by the *Peak Experience* program, and she develop a contour for the double program:

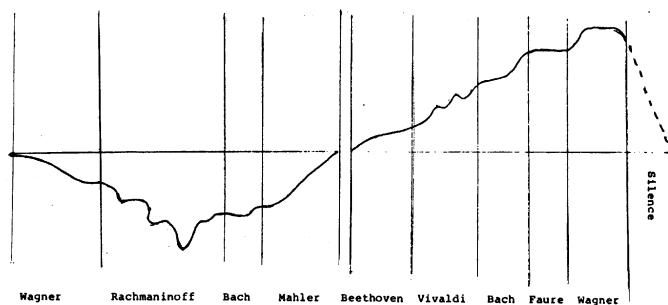


Figure 2: Profile of the *Death-Rebirth* and *Peak Experience* Program

Other programs were compiled for particular purposes:

The Quiet Music program (comprised entirely of impressionist music) was developed for a recipient’s first session where the object was for the music to elicit imagery. Impressionist music with the characteristic use of open fifths, and spacious intervals, and predominantly string sounds, is particularly effective in evoking imagery of movement, such as water, dancers, or birds in flight [11].

The Nurturing program was designed to create an auditory environment of nurture, in which the music in several selections has a rocking quality, and features female and male voices, and chorus [11]. Another program entitled

Comforting/Anaclytic (meaning a return to childhood) features solo selections for female and male voices. Villa-Lobos’ *Bachianas Brasileiros #5* is sung in the Portuguese language and features a middle section in which the voice descends the scale tone by tone with a motif of repeated notes. The effect is one of yearning or longing, and it facilitates a projection on to the sung voice of a woman lamenting some event. The recipient can therefore overlay his or her own yearning onto the woman’s sung voice [11].

Bonny also developed several programs that are grouped as “working programs.” The intention of these programs is to deliberately evoke strong emotion, to “loosen the soil.”¹¹ One such program, Emotional Expression 1, commences with the 1st movement of Brahms Piano Concerto no 2 in Bb. In her programs Bonny mostly used slow movements of symphonies and concertos, but for this program the 1st movement “allegro non troppo” was selected. The movement lasts 17 minutes, and comprises thick textured chords of the piano across the full register. The solo instrument is accompanied by a strong orchestral background. The 2nd and 3rd selections of this program comprise sections of Brahms German Requiem (part 1 and part 5) in contrast to the solid and, at times, bombastic sound of the piano concerto. The program ends with a movement of Brahms symphony #4 [11].

A further program, entitled Affect Release comprises music to support the expression of anger and other strong emotions. Commencing with Mars, from Holsts’ *Planets Suite*, the subsequent selections include Stokowski’s arrangement of Bach’s *Prelude and Fugue in d minor* (originally composed for organ), orchestrated for full orchestra. The program concludes with selections of Carl Orff’s *Carmina Burana*. The music in this program features strong rhythmic features, wide-ranging and loud dynamics, that support clients as they confront memories that have evoked anger, frustration, or paradoxically, celebration [11].

The later music programs

In the late 1980’s, Bonny underwent heart surgery, and during her rehabilitation period she was introduced to music of the 20th century, particularly the works of Shostakovich, and the Danish composer Carl Nielsen. Her final three programs *Inner Odyssey*, *Emotional Expression 2* and the *Body Program*, stand out from the earlier music programs, in the use of dissonance and ambiguous elements [11].

The effect of music in generating imagery

Various theories and research studies have explored the effect of music to generate imagery, and the shifting nature of the unfolding imagery. Goldberg developed a *Field Theory of Music and Emotion* to explain the role of music in generating imagery and emotion [12]. Goldberg argued that music stimulates imagery that is bound to an emotional response, and that either the image itself, or the emotion aroused then activates further imagery experiences in response to the music.

Summer [13] further argued that in GIM it is the music, not the therapist, that is the primary therapeutic agent, and as such it becomes the object of the client's transference. She referred to this phenomenon as the "pure music transference" [13]. Clients new to the Bonny Method of Guided Imagery and Music however may not have established an ability to engage music in an intimate and focused-listening manner, and Summer [14] developed a theory to suggest that repeated listening to music with music-focused interventions is appropriate in the early phases of GIM.

Summer [14] tested her theory in a study of six participants using a music-centered GIM session comprising: 1) repeated music (instead of a music program comprised of different pieces, the music program included repeated hearings of the same piece); and 2) music-centered guiding (instead of verbal interventions that focus primarily on imagery, the interventions focused primarily on the music). After the GIM session, each participant was interviewed, and transcripts of the six GIM sessions and six interviews were analysed. Summer [14] confirmed that when repeated music and music-centered guiding were used, the intention of the therapist was to establish the music as the primary therapeutic agent of the GIM session. When the client's relation towards the music deepened, there was a concomitant transformation in the client's self relation through a projection-reintrojection cycle resulting in a reconstructive, transformation of consciousness [14].

One of the earliest studies of the music in GIM was Kasayka's [15] phenomenological study of the Peak Experience program. Kasayka adopted Ferrara's [16] five-stage model for listening to music using 1) open listening, 2) listening for syntactical meaning, 3) listening for semantic meaning, 4) listening for ontological meaning, and 5) open listening incorporating new understand from the previous listening experiences. She analyzed each of the five selections of the Peak Experience program using the five-stage model, and then conducted a qualitative meta-analysis comparing the music descriptions with a client's imagery. She noted key elements in the music that may have triggered imagery responses, such as the sequence of trills in the adagio of Beethoven's 5th Piano Concerto that triggered imagery of a ritual.

A study of pivotal moments in GIM [3] also adopted Ferrara's five-stage phenomenological model to analyze the music that underpinned the pivotal moment in GIM sessions of seven clients. Grocke [3] placed the phenomenological descriptions alongside the clients' imagery noting the shifts in imagery relative to the music description. In order to look across the music underpinning all clients' experiences, she developed a Structural Model of Music Analysis (SMMA) to compare the music elements of the selections. She found that for these seven clients "the music that underpins pivotal moments may prolong the moment or provide momentum for it. Typically the music is composed in a structured form within which there is repetition of themes. It is predominantly slow in speed, predictable in melodic, harmonic and rhythmic

elements, and features dialogue between instruments" (p. 234).

Marr [17] took a different approach to investigate the role of music in activating imagery. She recorded six GIM sessions of three clients (two male, one female), and then transcribed the imagery as spoken by the client at the precise point on the score of the music program. She used the SMMA to analyze the key features and elements of the music. Reporting of imagery was evident when the music presented predictable rhythms, harmonic structure and long, symmetrical melodic phrasing. Reporting of imagery was sparse when the music had rapid changes in tonality, dynamic range, rhythmic pulse and melodic fragmentation. Images expanded with high pitch, light timbre and texture, while imagery became embodied with music characterized by low pitches and descending melodic line.

EEG Studies

Electroencephalographic (EEG) studies have provided more precise evidence for the effect of music on image creation. Lem [18] studied 26 participants who listened to Pierne's Concertstücke for harp and orchestra (duration 13:45) in a relaxed state (altered state of consciousness). Measures were taken via 12 electrodes placed in anterior and posterior positions across the scalp. Lem created a spectrograph of the contour (amplitude) of the Concertstücke, and created 26 descriptive segments of the work, based on musical properties, for example one segment comprised the introductory measures of the piece, another segment comprised the first theme, and the next the bridge between the first and second themes. The EEG tracings of the 26 participants were averaged and superimposed across the spectrograph and the 26 segmentations of the music. Lem found that the highest activation of EEG activity occurred at places where there were sudden changes in the music, such as the orchestral tutti that leads into the cadenza played on the solo harp. The cadenza commences pianissimo in the high register of the harp, thus the music shifts from a full orchestral sound, to a thin barely audible sound. The greatest activation was found in the anterior area of the brain and Lem argued it may have occurred as a result of the build-up of muscle tension activated by the orchestral tutti. In addition, the EEG tracings indicated decrease in EEG frequency over time, but increase in EEG amplitude, findings that are consistent with a deepening relaxation response.

Lem's second study [19] included two full music programs designed by Bonny: Relationships and Nurturing. Fifty healthy adults (female = 39) listened to the full music programs, and their responses were recorded using skin conductance to monitor change in emotional response through autonomic arousal. Participants reported their imagery on conclusion of the music program, and the imagery was categorized into Visual Imagery, Emotions, Body Sensations, Thoughts, Memories, and Spontaneous Imagery. Visual imagery was associated with a decreasing level of

arousal during the first 7 minutes of music, Emotions were associated with increased level of arousal in the middle section of the music program, and Body Sensations were frequently experienced during the final section of the music program that was characterized by low and stable dynamics.

McGraw Hunt [20] also utilized the EEG to record brain activity of four participants while they listened to a GIM music program. She pre-recorded a guided imagery script, which included six different experiences (affect, body, interaction, kinesthetic, memories and visual). Subsequently, the four participants viewed a video of the session and described their imagery during a phenomenological interview. These experiences were coded. The EEG tracing were analyzed examining relationships between regions of the brain activated during each script type. Findings suggested imagery generated brain activity in the regions of the brain where similar real-life experiences would be processed. Further, beta and gamma frequencies were implicated in participants maintaining an ASC, and in the meaning of the imagery.

Conclusion

Research into the Bonny Method of GIM has focused predominantly on showing effect for symptoms of diverse conditions, such as those recovering from cancer, childhood abuse, addictions, rheumatoid arthritis, depression and other illnesses [21]. The current focus on the neuropsychology of music and imagery, and the importance of mirror neuronal activity when listening to music that produces positive emotions, opens up exciting opportunities for studying the richness of music-evoked imagery.

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