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Music as a Catalyst for Altered States of Consciousness and Peak Experiences in the Treatment  
of Depression, Anxiety, and PTSD

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### Abstract

This paper investigates the therapeutic uses of altered states of consciousness (ASC) and peak experiences (PE) for the treatment of depression, anxiety, and post-traumatic stress disorder (PTSD), and the ways in which music can be used to facilitate or enhance these experiences. ASC's and PE's can help uncover hidden or repressed unconscious material and potentially change the way an individual views and interacts with his or her world. In cases of people suffering from depression, anxiety, and post-traumatic stress disorder (PTSD), these emotional, cognitive, and perceptual changes have been shown to have sometimes profound and long-lasting therapeutic effects, resulting in reduced symptoms and improved quality of life. Two methods for inducing ASC's and PE's, psychopharmacology and Guided Imagery and Music, are discussed in a review of clinical literature from the last six decades of research, and presented as emerging alternatives to existing conventional therapeutic interventions. Implications for future collaboration between these two modalities are also discussed.

*Keywords:* Altered States of Consciousness, Peak Experiences, psychedelic, Guided Imagery and Music, depression, anxiety

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### Introduction

Altered states of consciousness (ASC) and peak experiences (PE) are psychological phenomena in which a person experiences perceptual and cognitive changes, often resulting in subjective feelings of “oneness” and transcendence of ordinary consciousness. These experiences occasionally occur spontaneously, but more often are the result of a specific activity or external stimulus. Meditation, hypnosis, consciousness-altering drugs, sensory deprivation, ritual drumming, and playing or listening to music under certain conditions are ways in which human beings throughout history have attained these states. ASC’s and PE’s can change the way an individual views and interacts with his or her world. In cases of people suffering from depression, anxiety, and post-traumatic stress disorder (PTSD), these emotional, cognitive, and perceptual changes have been shown to have sometimes profound and long-lasting therapeutic effects, resulting in reduced symptoms and improved quality of life.

Kjellgren and Erikson (2010) define the term ASC as “a way of describing subjective alterations in psychological functions, as compared to the experienced normal state” (p. 1) This definition brings into question the notion of what constitutes a *normal* state, and also encompasses a wide variety of *non-ordinary* psychological states, ranging from alcohol intoxication to transcendent spiritual experiences, and not all ASCs are of therapeutic value. For the purposes of this inquiry, I will investigate ASCs that have been reported to produce subjective experiences of healing, insight, and well-being.

Peak experiences are perhaps the most profound type of ASC. Maslow (1962) described peak experiences as “moments of great awe, moments of the most intense happiness or even

rapture, ecstasy, or bliss” (p. 9) Individuals who have had these experiences often report feeling “that they had really seen the ultimate truth, the essence of things, the secret of life, as if veils had been pulled aside” (Maslow, 1962, p. 9). According to Maslow (1962), such alterations of consciousness can have life-changing effects, revealing entirely new perspectives on physical, psychological, interpersonal, and cosmic reality. ASCs and PEs can occur at any time, even accidentally, or be induced intentionally by several methods. The therapeutic use of these experiences, though common in many ancient and shamanistic cultures (Kjellgren and Erikson, 2010), is a relatively recent development in modern Western society, but several studies provide strong evidence for their clinical effectiveness.

Music can be a powerful tool for inducing ASCs and PEs. Guided Imagery and Music (GIM) is a music therapy technique developed by Helen Bonny in which the client, in a deeply relaxed state listens to recorded music that has been carefully chosen by the therapist. Throughout the process the client dialogues with the therapist regarding imagery and feelings that are evoked by the music. After the music ends, the client and therapist verbally process the images and their relation to the client’s inner world. The content of the imagery can be quite powerful, emerging from the client’s unconscious mind in an ASC (Abbott, 2005). GIM was designed for use primarily with well adults, but adaptations can be made when working with clients with depression. Summer (2010) advocated using “supportive” music, or music with very little dissonance or drastic dynamic changes when working with emotionally vulnerable clients to help them access positive internal resources before moving on to more challenging material. When the client is ready to confront and work through the deeper psychological issues that may lie at the root of his or her depression, the therapist can help carefully guide the client through more difficult images by selecting music containing more melodic, harmonic, and thematic

movement and variation (Summer, 2010). In another application of GIM, Clark (2005) used the model of the Hero's Journey, developed by Joseph Campbell (1949), to serve as a framework for working through core psychological issues. Carefully selected music is used to represent each of the stages of the journey, and the resulting imagery, specific to the individual client, provides a personalized set of symbols to aid in coping with psychological obstacles (Clark, 2005).

Another method for inducing ASC's is through the ingestion of consciousness-altering hallucinogenic drugs. Due to the widespread recreational use of these substances during the 1960's their possession and use were prohibited by law in the United States, as was all research on their potential clinical benefits. However, several recent FDA approved studies have shown remarkable effectiveness in hallucinogenic-assisted psychotherapy in the treatment of depression, anxiety, and PTSD. The clinical effectiveness of these interventions is closely related to insights reportedly gained from mystical, "religious," or peak experiences in this altered state. In a study of 18 adults, administered psilocybin, a hallucinogen derived from a type of mushroom, Griffiths et al. (2011) found that more than 70% of the participants had "complete" mystical experiences, as measured by the *States of Consciousness Questionnaire*, and also reported the experiences as "having persistent positive effects on mood and behavior" (p. 664). The effects that such an experience can have on individuals suffering from anxiety and depression can be dramatic. Ross et al. (2016) conducted a study to measure the potential anxiolytic and anti-depressant effects of psilocybin on cancer patients with cancer-related anxiety and depression. The results showed a significant reduction in symptoms of anxiety and depression in both groups after their respective psilocybin doses. In addition, both groups reported significant increases in quality of life, spiritual wellbeing, and decreased cancer-related hopelessness and demoralization. For people suffering from PTSD, Wagner et al. (2017) found

that MDMA (popularly known as “ecstasy”)-assisted psychotherapy resulted in an increased sense of openness and decreased neuroticism, leading to symptom reduction and increased quality of life. The authors stated, “Qualitatively, a consistent subjective theme emerged, with our subjects reporting a profound cathartic experience, often described as going to a “place” (in their mind) where they had never been before” (p. 972). In August, 2017 the Food and Drug Administration gave expedited approval for phase 3 trials, beginning in spring, 2018, of MDMA-assisted psychotherapy as a potential “breakthrough” therapy for the treatment of PTSD (Karel, 2017).

Music has long been used during psychedelic-assisted psychotherapy sessions to provide emotional and environmental support to participants during the experience (Kaelen et al., 2016). Furthermore, Barrett, Robbins, Smooke, Brown, and Griffiths (2017) conducted a study designed to determine which music best supports peak experiences in individuals during the acute effects of psilocybin. This research is the beginning of a new way of understanding how the power of music to access deep emotional and psychological material can be combined with powerful psychopharmacological tools to foster experiences of insight and existential meaning in people for whom other means of therapeutic intervention may have failed.

In this paper, I will conduct a literature review of research on the therapeutic uses of ASCs and PEs in the treatment of depression, anxiety, and PTSD, with a focus on the ways that music is, or can be used to facilitate or enhance these experiences. I will explore this topic beginning with the origins of research in this area, and carry it through to the clinical trials and theories of the present day.

### Literature Review

The 1950's and 1960's were an extremely active period for scientific inquiry into the nature and therapeutic value of ASC's and PE's in the United States. With the arrival of lysergic acid diethylamide (LSD) samples in the United States in 1949, researchers began to experiment with the drug as a means of producing a "model psychosis."

Ingestion of LSD causes an ASC in which the subject experiences drastic sensory and cognitive changes. The action of the drug:

increases sensory perception with illusionary changes of perceived objects, synesthesia, and enhanced mental imagery. Affectivity is intensified. Thoughts are accelerated, with their scope usually broadened to include new associations and altered interpretation and meanings of relationships and objects. LSD induces a dream-like alteration of consciousness with increased affectivity and enhanced production of inner stimuli.

Without any clouding of consciousness, the dream-like altered state is experienced with full awareness of the self and good memory of the experience. (Gasser, Kirchner, & Passie, 2015, p. 58)

LSD also has the effect of distorting the subjective perception of time - five minutes may seem like one hour, or vice-versa, and, perhaps most importantly for the purposes of psychotherapy, causes the weakening or dissolution of ego boundaries and defenses, facilitating more direct access to unconscious psychic material (Eisner & Cohen, 1958; Grof, 1968; Gasser et al., 2015).

The ASC induced by the drug can be experienced as an incredibly positive, potentially transcendental experience, or a terrifying psychotic episode, or "bad trip," depending on the psychological state of the subject, and setting of the experience (Eisner & Cohen, 1958; Grof, 1968). Johnson, Richards, and Griffiths (2008) stated, "The most likely risk associated with



hallucinogen administration is commonly known as a ‘bad trip’ and is characterized by anxiety, fear/panic, dysphoria, and/or paranoia” (p. 607). The risk of this type of negative reaction to the effects of psychedelic drugs can be minimized by proper preparation of subject and post-session follow-up, providing a comfortable and aesthetically pleasing physical environment during the experience, and establishing good rapport between staff and subject (Johnson et al., 2008).

Griffiths et al. (2011) found that even in cases in which an individual experiences fear, anxiety or paranoia during a session, later, he or she will often view the experience as extremely meaningful and significant. The researchers cited a case example of a volunteer who had reported feelings of extreme fear and anxiety during a psilocybin session and who was reluctant to repeat the experience, but in the following weeks felt that she had learned something useful from it. At the one month follow-up, this volunteer “rated the experience as having slight spiritual significance, and as having slightly increased her sense of well-being or life satisfaction” (p. 657). The volunteer agreed to continue in the study and during her next session, fulfilled the criteria for a “complete mystical experience,” and rated the experience as “the single most personally meaningful and spiritually significant of her life” at the one-month follow-up (Griffiths et al., p. 658).

By 1955, The Central Intelligence Agency and the Army Chemical Corps began covert experiments to determine if LSD could be employed as a truth serum or a form of chemical warfare. The test subjects in this early research were often students, soldiers, psychiatric patients, animals, and medical students. In many cases, the physicians themselves experimented with the drug (Novak, 1997, p. 90). One of these physicians, Sydney Cohen, found his personal experience with LSD to be quite different from a frightening temporary psychosis. Instead, Cohen reported feeling an “elevated peacefulness” and a sense that he had “arrived at the

contemplation of eternal truth” (Novak, 1997 p. 92). Cohen hypothesized that the profound shift in consciousness produced by LSD could be a useful tool for uncovering and integrating unconscious psychic material. In 1957, Cohen and Betty Eisner began to use LSD in psychotherapy, and published the results in 1958.

Eisner and Cohen (1958) explored the therapeutic effects of LSD when used in psychotherapy with 22 patients receiving weekly treatments. The initial dose was 25 micrograms, and was gradually increased to doses of 100 to 150 mcg. The patients were composed of 5 inpatients and 17 outpatients (14 male and 8 female) who suffered from a range of psychiatric disorders, from anxiety and depression, to borderline schizophrenia. The effects of the drug lasted from 4 to 6 hours at lower doses, and 6 to 8 hours at the higher doses. During this time, the patient lay on a couch in a “pleasant room” with a therapist constantly present. Food was available if the patient was hungry and music was played, both to aid in relaxation at the beginning of the session, and to potentiate the drug effects throughout the experience. Both a male and a female therapist were present during the sessions to account for a variety of transference experiences. Family photographs were also used to help the patient “externalize associated conflicts, and to re-experience repressed events with such vividness and force that they were repeatedly described as ‘relived’” (Eisner & Cohen, 1958, p. 531). Near the end of the session, the patient was taken to the hospital art clinic to draw or paint. The unconscious material that arose during the session was sometimes understood and integrated by the patient himself, but more often was interpreted by the therapist. If the therapist believed that the patient was ignoring or repressing psychological problem areas, the patient was “deliberately directed toward the painful resolution of his walled-off conflicts” (p. 535). For the patients, confronting painful or frightening previously unconscious material sometimes resulted in “psychotic-like episodes,

experienced symbolically as terrifying, overwhelming, or excruciatingly painful” (p. 533). After such an experience, patients often reported feeling “purged.” After the problematic issues were exposed and processed, patients sometimes had an “integrative experience” (p. 533), described as a feeling of harmony and extreme relaxation. Eisner and Cohen (1958) stated:

The patients describe an insightfulness into themselves, an awareness of their place in the environment, and a sense of order in life. These are all fused into a very meaningful episode, and it is believed that this can be significantly therapeutic. (p. 533)

Follow-up interviews were conducted with the participants 6 to 17 months after the sessions concluded to determine the continued success in translating the insights gained during therapy into adaptations in behavior in their lives. The therapists’ own judgments, patients’ self-evaluation, as well as reports from someone close to the patient were all considered, and had to agree for a patient to be “improved.” The results showed that 73%, or 16 of the 22 subjects met these criteria. The patients that responded best to this treatment were those with diagnoses of anxiety, depression, or trauma.

Based on his own experiences as a researcher during over 1,100 LSD and psilocybin psychotherapy sessions, Grof (1968) proposed a theoretical framework for describing and understanding how unconscious material emerges during the experience. Grof (1968) used the term “COEX systems” (systems of condensed experience) to describe “memory constellations,” or emotionally charged layers of memories and experiences from different life periods with a similar basic theme. The deepest layer of a particular COEX system stem from infancy or early childhood experiences, and the successive layers build up over a person’s lifetime. According to Grof (1968), LSD can facilitate activation of particular COEX systems, and bring them into amplified consciousness, and stated, “Repeated LSD sessions can be viewed as successive

revealing, abreacting, and integrating of the COEX systems of the subject” (p. 450). After the COEX system is engaged, it governs the subject’s entire perceptual realm. Sensory information, interpersonal interactions, mode of reasoning, etc. are transformed as the subject re-experiences the different levels of the COEX system until the oldest, or “core” experience is relived and integrated. After this integration, that COEX system “definitely loses its power and never appears in successive LSD sessions” (p. 451). Grof (1968) stated that it can take several sessions for some COEX systems to be worked through and integrated. After many sessions, when no COEX system manifests itself, “the LSD reaction has the form of a contentless, ecstatic, transcendental experience, and the free interval after the session is marked by a striking clinical improvement” (p. 451).

By the early 1960’s, the drug, which was only authorized for use by researchers, was being administered as therapy by hundreds of psychotherapists, sometimes charging up to \$600 per treatment, circumventing the regulations by tabulating their results. Researchers like Cohen and Ditman (1962) voiced growing concern that some of these therapists were unqualified, and the treatments were causing adverse patient reactions (Novak, 1997). Cohen and Ditman (1962) were also concerned that LSD was beginning to appear in the public for recreational use. These concerns over the safety of LSD coincided with the thalidomide crisis, in which thousands of children worldwide had been born with birth defects as a result of mothers having taken the experimental sedative during pregnancy. In 1962, following a congressional investigation prompted by concerns over experimental drugs like LSD, and thalidomide, Congress passed the Kefauver-Harris Drug Amendments, requiring FDA approval prior to all testing of new drugs. In 1963, Sandoz, the manufacturer of LSD, restricted LSD to researchers associated with the National Institute of Mental Health, state commissioners of mental health, or the Veterans’

Administration. In 1965, Congress prohibited the manufacture or sale of psychedelic drugs, and in 1966, cut off nearly all LSD research, while in the public, recreational use continued to increase, giving rise to the “hippie” movement of the late 1960’s (Novak, 1997).

Despite the new legal restrictions, research on psychedelic therapy continued at approved locations under controlled conditions, experimenting with different dosages, settings, and patient populations (Yensen & Dryer, 1992). The psychodynamic approach to LSD psychotherapy employed by Eisner and Cohen (1958) utilizing relatively low doses, increasing gradually over many sessions with the goal of systematically working through suppressed unconscious material became known as *psycholytic* therapy (Leuner, 1968). Other researchers, including Grof (Bonny & Pahnke 1972) at the Spring Grove State Hospital in Maryland, later called Maryland Psychiatric Research Center (MPRC), studied the effects of higher doses, called *psychedelic*, therapy (Leuner, 1968), or *psychedelic peak psychotherapy* (Bonny & Pahnke, 1972) with the goal of inducing transcendental peak experiences. Regarding peak experiences, Maslow (1962) noted that “Peaks come unexpectedly, suddenly they *happen* to us. You can’t count on them. And, hunting them is a little like hunting happiness” (p. 13). Eight years later, Maslow (1970) stated:

In the last few years it has become quite clear that certain drugs called "psychedelic," especially LSD and psilocybin, give us some possibility of control in this realm of peak-experiences. It looks as if these drugs often produce peak-experiences in the right people under the right circumstances, so that perhaps we needn't wait for them to occur by good fortune. (p. 27)

Researchers at the MPRC used psychedelic peak psychotherapy (PPP) as an intervention to treat alcoholism, narcotic addiction, and psychological distress related to terminal cancer. In these

sessions, patients were not verbally directed toward specific unconscious material as in psycholytic therapy, but rather, were encouraged to surrender to the experience (Bonny & Pahnke, 1972). Before being accepted for PPP treatment, patients underwent psychiatric tests and interviews. This was followed by a total of 20 to 30 hours of intensive psychotherapy before the administration of the drug. After the drug session, patients underwent further psychotherapy and psychological testing.

During the LSD sessions, music was found to play an important role in helping to facilitate peak experiences (Bonny & Pahnke, 1972). Helen Bonny, a music therapist, began work at the MPRC in 1969 and was charged with the task of selecting music to be played throughout the 8 to 12 hour high-dose LSD therapy session. Bonny & Pahnke (1972) stated that carefully selected music helped to complement the therapeutic goals in five ways:

1. by helping the patient relinquish usual controls and enter more fully into his inner world of experience
2. by facilitating the release of intense emotionality
3. by contributing toward a peak experience
4. by providing continuity in an experience of timelessness
5. by directing and structuring the experience (Bonny & Pahnke, 1972, p. 84)

During these sessions, the music was the primary external stimulus. The patient relaxed on a couch, wore eyeshades to focus attention on internal imagery, and listened to the therapist-selected music with headphones. A male and female therapist were both present. Bonny & Pahnke (1972) found that therapist-selected classical music served as the most effective catalyst for the LSD experience during peak intensity, but that patient-preferred music of any type, determined by a questionnaire given prior, was helpful in the early and late stages of the session.

The music therapist could change the music at different phases of the experience based on patient behavior, or to elicit certain emotional responses. Music was played constantly throughout the sessions, as patients often became uneasy during silent periods. Bonny & Pahnke (1972) found:

Pauses between recordings are difficult to tolerate and the patient will often beg for the music to continue as, for him, the visual experience may appear to “stand still” as if de-energized or suddenly bereft of meaning. The flow of colors or feelings will suddenly gel and, as one patient described it, “substance is present but fluidity has fled.” Thus, recordings should be quickly and smoothly changed, and the volume turned down between selections. (p. 122)

To best facilitate smooth and comfortable transitions at different phases of the LSD experience, Bonny & Pahnke (1972) developed a list of specific music suitable for each phase, leaving room for the personal discretion of the therapist. For example, during the peak intensity of the drug reaction (3 to 4 hours after drug administration):

Peak music can help lift a person to psychedelic peak reactions if he is already headed in that direction on a smooth course. A degree of trust, cooperation and willingness to surrender and go into the music must be experienced before even this maximal music is going to be effective. Appropriate music for peak time includes Gounod’s St. Cecilia Mass, Richard Strauss’s “Transfiguration” from Death and Transfiguration, Faure’s Requiem, “Parts III and VII,” Barber’s Adagio for Strings, Brahms’ German Requiem, “Parts IV, V, VII,” and selected hymns and anthems. (p. 115)

By 1978, due to unrelated negative publicity surrounding CIA experiments with LSD and the resulting political pressure, all psychedelic research at the MPRC was stopped, and very little research in this area occurred elsewhere in the United States (Clark, 2017; Johnson et al., 2008).

The research that occurred at the MRPC during those years gave rise to other non-drug-induced methods of triggering ASC's and PE's. Bonny (2002) recounts an event that occurred during her tenure at the MPRC:

There were two therapists in attendance during the 8 to 10 hours of an average drug session—one male, one female. The three women therapists took turns serving on a team. When we were not busy—being women—we served as hostesses to spouses or guests who needed to be “entertained” during the day of the session. This was particularly true when sessions were given to professional therapists, health and pastoral personnel. On this particular “day I suggested that the spouse might get a feeling for the session by listening to music in a relaxed state. I said, “If you get any images or feelings, let me know.” Well, I played music and the spouse imaged for three hours! (p. 144-145)

This experience led Bonny to experiment with music and imagery as a therapeutic intervention without the use of LSD, calling the process Guided Imagery and Music (GIM). Bonny experimented with shorter music programs, about 40 minutes, which were preceded by a period of relaxation in preparation for the music experience. The music programs were contoured in the same way as those for the LSD sessions, only condensed, and the subject reclined on a couch with eyeshades, just as in the drug sessions. The music therapist was always in close proximity to the subject and encouraged verbal reactions to the music. When the music ended, the eyeshades were removed, and the subject was encouraged to discuss any imagery and feelings that emerged during the music, and engage in mandala drawing. The resulting images and discussion provided



insight into the inner world of the subject (Bonny, 2002). As Bonny continued to develop and test GIM, she created taped audio programs, such as *Positive Affect*, *Death-Rebirth*, *Peak Experience*, *Comforting-Analytic*, *Affect-Release*, *Imagery*, and *Group Experience*, designed to elicit specific moods and imagery. These programs were first used with healthy individuals to promote personal exploration and growth, and were later adapted and used for drug crisis counseling. During the drug counseling sessions, Bonny added a component of dialogue between the subject and the therapist, or “guide”, whom had previously been a passive, supportive witness to the experience. The guide might ask, “Where are you now?” or “Can you describe your experience?” This dialogue was not required, but was often found to aid in the experience (Bonny, 2002).

In 1973, Bonny (2002) founded the Institute for Consciousness and Music (ICM) for the purpose of training other therapists in the method and sharing the music programs she had developed. As GIM continued to develop, new practitioners developed new ways to use music to evoke and interpret different kinds of imagery and to treat a variety of client populations. Blake (1994) found that GIM was effective in an inpatient setting with Vietnam combat veterans suffering from PTSD, by allowing the patients to access images and emotions in a safe, controlled, and non-verbal way. The author stated, “The bringing to consciousness of these memories, in order to integrate them into the veteran's sense of identity, may be more easily facilitated through a non-verbal process” (p. 7). Blake (1994) used *supportive* (Summer, 2010) music programs, such as “Comforting” and “Nurturing” (Blake, 1994) to create a sense of warmth and safety (Bonny, 2002). Results of the GIM interventions varied from relaxation and symbolic imagery, to remembering specific combat experiences. One patient, who was described as being “alexithymic and amnesic regarding his combat experiences” (Blake, 1994, p.9), after

describing and re-living such an experience in a GIM session, stated, "I was more able to get in touch with my emotions, to reconnect with those feelings in Vietnam. It helped me to remember some things I had forgotten... it made me face myself and my emotions" (p. 9-10). Blake (1994) also acknowledged the inherent risks involved in vividly reliving traumatic memories, even in symbolic form, especially in outpatient settings. She stated, "Working with veterans with PTSD on an outpatient or private practice basis would require a gradual, long term approach to treatment, with careful attention paid to ego strengths and defense mechanisms" (p. 14).

As GIM continued to evolve, in addition to using well-established programs created and disseminated by Bonny, GIM practitioners began to use their own therapeutic and musical instincts to develop programs to meet different needs and goals. Clark (1995) developed a music program designed to follow the cyclic pattern of Joseph Campbell's (1949) Hero's Journey.

Campbell (1949) summarized the Hero's Journey in this way:

A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man. (p. 30)

The stages of the Hero's Journey are:

1. The Call to Adventure
2. Crossing the Threshold
3. Trials and Tasks
4. Reaching the Nadir and Receiving the Boon
5. The Return
6. Crossing the Return Threshold (Clark, 1995)

Clark (1995) had noticed this pattern emerging spontaneously in the reported imagery of her GIM clients during more traditional music programs, then developed an original program, choosing specific musical selections to evoke imagery relating to each stage of the journey. Some pieces were chosen specifically for their ability to evoke images and feelings of tension and conflict, and others that provide a comforting respite, depending on the stage of the journey. Because of the potentially intense and confrontational nature of the music, Clark (1995) noted that this program is not recommended for beginning imagers, and stated, “The appropriate place to use it within a GIM series is when the client is fully ready for a challenge” (p. 61). Clark (1995) presented the case of Sarah, a GIM client who suspected that she was a victim of incest, but had no clear memories. Sarah was depressed, had very low self-esteem, and was anxious about leaving her children with her mother, and sometimes her husband. In previous GIM sessions, she had responded well to GIM and experienced images of both monsters and angels, and of a “special community.” In preparation for the Hero’s Journey session, Sarah was told that the music would be intense and could evoke challenging imagery and emotions, and she indicated that she was ready to use this music. Though she was not told that the music program was modeled after the Hero’s Journey, the resulting imagery did correspond with the pattern. Clark (1995) reported that Sarah experienced the following imagery:

For **Crossing the Threshold**, she started in a victim role and was pestered by elves and then fish.

For **Trials and Tasks**, she began to take on her own power during the Hovhannes piece as she became the shape of a star.

Upon reaching the **Nadir**, her image ego divided as she saw a girl being pinned down by a man; she said it could have been her father. Then the girl killed the man. She was

bleeding from the vagina. She cleaned her wound, put on layers of clothes to protect herself and said she was determined to live.

At the **Reward**, her image ego integrated as she became the girl and was bathed, anointed and given a blessing by the special community which had taken care of her before.

Upon the **Return**, she said she would have to learn to walk again. She was relieved that she was alive and was more than skin and bone. (p.62)

Sarah's willingness to confront her fears about her past relationships was a prerequisite for such an application of the GIM process. Clark (1995) emphasized the importance of establishing trust and rapport in the therapeutic relationship prior to initiating such a treatment. The author noted that this session was not a miracle cure, and that Sarah continued to work with the imagery and insights for several more sessions before they translated into tangible changes in her life.

Short (1997) examined the imagery that emerges from the unconscious mind during the GIM process in terms of Jungian Archetypes often found in fairytales and myths. Jung (1959) proposed the existence of a "collective unconscious" which:

has contents and modes of behaviour that are more or less the same everywhere and in all individuals. It is, in other words, identical in all men and thus constitutes a common psychic substrate of a suprapersonal nature which is present in every one of us. (p. 4)

Jung (1959) suggests that common imagery or *archetypes* exist within the unconscious mind and emerge through dreams, fairy tales, and myths across disparate cultures and traditions. Short (1997) observed that these universal human themes and symbols also emerge in the imagery evoked by music in GIM sessions, but noted that a client may alter elements of a particular story or theme, and that the imagery may not emerge in a linear sequence. Short (1997) presented a case example of a client who had previously undergone eight sessions of GIM during her

pregnancy. Short (1997) stated, “At this time, she addressed issues related to adaptation to pregnancy in terms of her body, her relationship with her husband, the resolution of a prior ectopic pregnancy, and bonding with the fetus-baby in utero” (p. 39). The client returned after an approximately six-month hiatus, when her baby was 5 months old. During this ninth session, the therapist used a traditional Bonny program entitled, *Relationships*. Short (1997) observed that much of the imagery that emerged corresponded with the “Snow White” fairy tale, altered in ways that fit the circumstances of the client’s life. The imagery included a witch (examining the client to determine if she was a good mother), dwarves, poison food, a deep sleep, and a relationship with a prince, all of which is consistent with the original tale. However, the client also reported images of a multitude of babies, conveying a feeling that “I can’t take care of them all” (p. 42-43). Also, an image emerged of a beautiful female dancer dancing alone. The client stated, “She doesn't have any children to worry about, or wouldn't be doing it that way. A single childless woman. At first I'm envious, but now I realize that if she stops dancing, she'll realize how alone she is” (p. 45). These added images point to the client’s specific issues related to motherhood, personalizing the story and aiding in the interpretation of previously unconscious (perhaps repressed) psychic material.

Because GIM, like psychedelic psychotherapy, can facilitate access to potentially painful or frightening unconscious psychic material, great care must be taken by the therapist to ensure that the client is psychologically and emotionally ready to confront these parts of themselves. (Blake, 1994; Clark, 1995). Without sufficient positive resources on which to rely during such an experience, a client may become overwhelmed or feel defeated by the imagery that emerges. Summer (2010) described a client whose condition seemed to worsen after a GIM experience:

He reported to me that in the previous session he had realized how out of control his life was, and that during the previous week, he had felt an increased sense of hopelessness about himself. Instead of relief and reinvigoration, he was despondent. (p. 490-491)

As a result, in future sessions Summer (2010) worked with the client using other, more concrete therapeutic interventions (verbal processing and drawing with supportive music) to identify positive experiences in his past to utilize as a foundation on which to build ego strength.

After decades of relative silence in the scientific literature on research of psychopharmacologically induced ASC's and PE's in the treatment of psychological disorders, recent studies are revealing new evidence of the effectiveness of these interventions, and exploring and quantifying ways in which music can be used to complement them. Gasser et al. (2015) conducted a study of the effects of LSD-assisted psychotherapy on twelve patients suffering from anxiety resulting from life-threatening illnesses. Participants were given a 200 mcg dose of LSD in each of two guided LSD sessions during the course of 6-8 psychotherapy sessions over a period of 3 months. Each session lasted 8-10 hours, with music and other interventions. Qualitative and quantitative psychometric measurements were taken at baseline, 1 week after the sessions, and at 2-month and 12-month follow-ups. The results showed that all of the nine participants who received the LSD treatments demonstrated significantly lower scores on the Spielberger State and Trait Anxiety Inventory (STAI) Form X. Data from the follow up interviews confirm that seven of the nine participants reported sustained reductions in anxiety, less fear of death, and an improved quality of life. All of the patients reported that they experienced no negative effects beyond the duration of the sessions, though a few mentioned difficulties "letting go" during the initial onset of the drug effects. Gasser et al. (2015) also noted:

For some others, it was a difficult experience to feel their emotions with more intensity and to be confronted with anxiety, hopelessness and fear of death. But all patients were able to handle these unusually intense emotions and reported that a lot of tension was dissolved afterwards. (p. 64)

In another recent study, Ross et al. (2016) conducted a double-blind, placebo-controlled, crossover trial designed to measure the potential anxiolytic and anti-depressant effects of psilocybin on 29 cancer patients with cancer-related anxiety and depression. Patients were randomly assigned to two groups: the first was given a moderate dose of psilocybin, and the second, a dose of niacin. At the crossover, 7 weeks later, the doses were reversed, with the first group receiving niacin and the second receiving psilocybin. Both groups also received psychotherapy throughout the process. The results showed a significant reduction in symptoms of anxiety and depression in both groups after their respective psilocybin doses. In addition, both groups reported significant increases in quality of life, spiritual wellbeing, and decreased cancer-related hopelessness and demoralization.

Researchers are also re-examining the effects of music during psychedelic-induced ASC's. Kaelen et al. (2016) studied the interaction between LSD and music listening in a placebo-controlled functional magnetic resonance imaging (fMRI) study. Participants were scanned while resting, eyes closed, with and without music under the effects of 75 mcg of LSD. Afterward, the participants were asked to rate the degree of visual imagery they experienced. The scan results showed increased functional connectivity in the LSD sessions between the parahippocampal cortex (PHC), which is linked with music-evoked emotion, the action of psychedelics, and mental imagery, and the Visual Cortex (VC). These findings correlated with the participants' reported imagery experiences. The researchers stated, "The present results

provide the beginnings of a mechanistic explanation for the role of music listening in psychedelic drug-assisted psychotherapy,” (p. 1107) but acknowledge that more research is needed in this area.

### **Discussion**

The research cited here, conducted over the last six decades, explores methods for inducing ASC's and PE's for the purposes of uncovering previously unconscious psychic material. The revelation and analysis of this material can help to facilitate therapeutic growth and positive change in individuals previously trapped by destructive thought patterns and emotions. Insights gained in these states have been shown to produce sustained psychological and emotional benefits with relatively short periods of treatment (Gasser et al., 2015; Ross et al., 2016). The potential implications for the treatment of disorders such as anxiety, depression, and PTSD are profound. In a study by the National Center for Health Statistics, Pratt, Brody, and Gu (2017), reported that during 2011-2014 about one in eight Americans aged 12 and over reported taking antidepressants in the last month, a nearly 65% increase from 2002-2009. One fourth of those people reported long-term use (10 years or more). Furthermore, as a result of protracted military deployments, incidences of combat-related PTSD are becoming more common. The U.S. Department of Veterans Affairs (2018) reports that between 11% and 20% of veterans who served in Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF) have PTSD each year, and Reisman (2016) reports that veterans now account for 20% of all suicides in the U.S. This data indicates an increased need for more effective treatment methods.

Further research into the safety and effectiveness of pharmacological (psychedelic) treatments is needed before they can be approved for clinical use. However, non-pharmacological methods for exploring the unconscious, such as GIM have been shown to be



effective in the treatment of these conditions (Bonny, 2002; Clark, 1995; Summer, 2010). Clark (2017) addressed the opportunities for renewed collaboration between GIM-trained music therapists and researchers in psychedelic-assisted psychotherapy. She stated, “Applying known ways of assessing music in receptive, passive settings such as GIM could be of great interest to the researchers who may not know about current bodies of information and practice especially in the field of music therapy” (p. 6). Music’s ability to facilitate ASC’s and PE’s in a clinical setting can help develop sorely needed new treatment options for those suffering from debilitating psychological conditions.

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***THESIS APPROVAL FORM***

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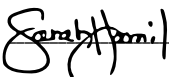
**Student's Name:** Paul Battles

**Type of Project:** Thesis

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In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

**Thesis Advisor:**  \_\_\_\_\_