

Music and Trance

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Dedicated with grateful admiration to Dr. Felicitas Daniels Goodman on the occasion of her ninetieth birthday. Ad multos faustissimosque annos! Or in Polish: Sto lat! (May you live 100 years!).
– J.J.P.



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In order to stimulate a satisfying and rewarding discussion of the topic “music and trance,” it is important to begin with a definition of terms. In

Music and Trance, Rouget (1985: 63) offers this definition of music: “any sonic event that is linked with this state [trance], that cannot be reduced to language – since we would then have to speak of words, not music – and that displays a certain degree of rhythmic or melodic organization.” This rather broad definition encompasses sounds as diverse as rustling leaves, drums, tinkling bells, chanting recto tono (i.e., on a single note), and even most complex vocal polyphonies. The key elements to consider here are rhythm and melody.

Trance, on the other hand, is one of a large group of altered states of consciousness (ASCs) of which human beings are capable (Goodman 1990: 9). According to Ludwig, an ASC is “any mental state(s) induced by various physiological, psychological, or pharmacological maneuvers or agents, which can be recognized subjectively by the individual himself (or by an objective observer of the individual) as representing a sufficient deviation in subject experiences or psychological functioning from certain general norms for that individual during alert, waking consciousness” (Ludwig 1969: 9-10). In relationship to music, Rouget uses the word “trance” to mean simply that kind of ASC, which is obtained by means of noise (sonic events), agitation, and in the presence of others (in contrast to “ecstasy” which is attained in silence, immobility, and solitude; Rouget 1985: 7). At the same time, though he examines in great detail the complex relations between music and trance, Rouget denies that music “directly” causes trance states. Music is rather only one of many components causing trance states. Often it is an essential element, but other cultural factors enter the picture, too. These factors vary from society to society. Moreover even the same factor, like music, will function differently in different societies, so that it is very difficult to generalize about music and trance. In one society, the trigger for trance may be

soft music, in another it may be loud sound. In one society, quick rhythms may induce trance, while in another slow rhythms are preferred.

The Neuroscience of Trance Music

On a biological or neurological level, the relationship of music and trance is easily explained. The one thing that human beings have always had in common is biology, namely, the human body. Contemporary cognitive neuroscience has helped us to understand not only the potential for the human nervous system to enter ASCs but also that this potential is of great antiquity. “It seems likely that Australopithecines (1.4 million years ago) hallucinated [that is, went into trance], highly probable that Neanderthals (100,000-35,000 years ago) hallucinated, and certain that at least some of the anatomically modern human beings of the Upper Paleolithic (35,000 - 8,000 years ago) also hallucinated” (Clottes and Lewis-Williams 1998: 81).

In general, ecstatic trance can be induced neurologically in one of two ways: “from the bottom up” (primarily by means of the nervous system) or “from the top down” (primarily by means of the brain; d’Aquili and Newberg 1999: 23-27, 99-102). Inducing a trance “from the bottom up” involves the brain and the autonomic nervous system which has two components: the sympathetic or arousal subsystem and the parasympathetic or quiescent subsystem. The autonomic nervous system connects the brain with the rest of the body and plays a key role in generating basic emotions like fear, joy, and shame. The sympathetic or arousal subsystem helps human beings adapt to beneficial and harmful stimuli in the environment principally through the “fight or flight” response. This subsystem can halt digestion, increase the heart rate and blood pressure, increase respiration, decrease salivation, and the like. The parasympa-

thetic or quiescent subsystem maintains homeostasis and conserves the body's resources and energy. This subsystem controls such things as cell growth, digestion, relaxation, sleep. In other words, it deals with vegetative functions and maintenance activities. By stimulating (hand-clapping, drumming, rattling, and the like) or quieting (as happens in normal sleep, chanting, reciting a mantra, and the like) the senses, it is possible to produce a brief but intense ecstatic trance experience.

In a simplified presentation of their research published after d'Aquili's death, Andrew Newberg (Newberg, d'Aquili, Rause 2001) offered some specific reflections on music and trance from the context of neuroscience. In a New York City Church, a concert combining music with the recorded howling of wolves eventually stirred one audience member (who was soon joined by others) to stand up and howl along with the wolves. "The stimulation of autonomic and limbic responses, triggered by the rhythms of the wolf music, is the force that called Bill and his fellow audience members to rise out of themselves and into a larger and more exhilarating state of being" (Newberg, d'Aquili, Rause 2001: 79). The repetitive rhythmic stimulation of the howling of the wolves stirred a trance in these audience members "from the bottom up."

In another example, Newberg presents the hypothetical case of a person returning home tired on a Friday night from a hard day at work (Newberg, d'Aquili, Rause 2001: 114-115). The worker draws water for a leisurely bath, lights a few candles, pours a glass of wine, and tunes the radio to a favorite station. As the worker relaxes in the tub, a soft romantic ballad plays on the radio. The slow rhythms eventually stimulate a trance "from the top down," that is, the rhythms stimulate the body's quiescent system which in turn prompts the hippocampus to cause a slight deafferentation of the orientation area of the brain and brings on a mild trance. The type music may very well differ for different people, but the

music's effect will be the same. This in a very simplified form is the basic neuroscience behind a trance to which music has contributed as one element.

Music Across Cultures

There are a number of sound features that are fundamental to music across cultures. Among these are pitch, tempo, repetition, rhythmic patterning, rhyme and alliteration (Trehub 2003 from whom I draw the following observations). Research on the musical interests and abilities of pre-linguistic infants has demonstrated that they are as sensitive to these sound features as adults who have had years of informal exposure. In general, infants and adults are capable of discerning the smallest pitch and tempo differences that are musically meaningful in any culture.

Adults have observed that toddlers routinely invent songs before they can reproduce the conventional songs of their culture. School age children also create songs and chants that share features across cultures such as repetition, rhythmic patterning, rhyme and alliteration. Trehub believes it is reasonable to conclude “that the rudiments of music listening are gifts of nature rather than product of culture.”

Music, however, parts with language when it comes to meaning. Musical pieces are not meaningful in the same way that verbal utterances are. Music communicates emotion and feelings but not meaning. According to Trehub, music lacks semanticity. Sensitivity to culture-specific details of tone and harmony structure seems to emerge between 5 and 7 years of age. Though musical training can aid in this learning, incidental exposure suffices to generate perceptions similar to those of trained musicians. But experiments also show that in this matter, culture specific

exposure is relevant to adults but not to infants! Much has been learned from infants and much more remains to be learned.

Investigations of mother-infant interactions have provided intriguing insights into the social and musical beginnings of human beings. All over the world, mothers contribute various kinds of music information to their pre-linguistic infants (Fernald 1991). They speak in a melodic tone of voice to infants who cannot understand what they are saying. (One can sometimes witness such tonal communication between mothers and infants in the baby-food aisle of grocery stores). Mothers also sing a great deal to children. They utilize a special genre of music like lullabies or game songs with features that are common across cultures: simple pitch contours, repetition, and narrow melodic range (Trehub and Trainor 1998). Lullabies are performed in a very expressive and highly ritualized manner (see the Supplementary Video 1 in Trehub's 2003 article on-line). Already from the neonatal period, infants prefer renditions sung in a maternal style (that is from mothers of other infants) to non-maternal renditions of the same song. Further, infants are entranced when they can see and hear the singer. They enter an altered state of consciousness, a trance, as reflected either in extended periods of focused attention or reduced body movement (e.g., they may go to sleep). See the attached illustration of Liam Muhammad al Hindi entranced by the singing of Sarah Brightman

FIGURE 1. Liam Muhammad al Hindi (Omaha, NE)



Photograph by Diane Jacobs Malina

Liam Muhammad al Hindi (Omaha, NE) was 18 mos. old when this picture was taken. It marks an emotional transition. You could see his pleasure or excitement building until he would close his eyes, cross his arms over his chest in a struggle to hold inside, to contain intense pleasure or high spirits. He was never able to contain the emotion. His eyes would open, his arms would fly out and he would do some little dance with his feet as joy flowed throughout his entire being.

Infants are much more interested in maternal singing than in speech. In fact, experts believe that it is the music in speech that underlies its appeal to pre-linguistic infants.

Music and Trance

We have already noted Rouget's denial that music directly induces trance states (see above). The research on infants and music just reviewed may help us to understand his position. More, it may help us to understand a broader picture regarding trance in general. In 1968, Erika Bourguignon (1973) conducted a foundational anthropological study of ASCs. She compiled a sample of 488 societies (57%) from Murdock's Ethnographic Atlas and made a fresh investigation of the data in the Human Relations Area Files, an exhaustive collection of ethnographic reports available in many libraries on microfiche and CD-ROM. Her sample included all parts of the world and traditional societies at various levels of technological complexity. ASCs were found to exist in ninety percent of the 488 societies. By region, ASCs exist in eighty percent of Circum-Mediterranean societies (the low), and in ninety-seven percent of the 121 North American societies in the sample (the high).

In the light of this evidence, anthropologists agree that ASCs are universal human phenomena, experienced in at least one of a wide variety of forms by all human beings "Societies which do not utilize these states clearly are historical exceptions which need to be explained, rather than the vast majority of societies that do use these states" (Bourguignon 1976: 51).

The physician-anthropologist Arthur Kleinman (1988) offers an explanation for the West's deficiency in this matter, as one society, which not only does not use ASCs but frequently vehemently denies that they are of any value. "Only the modern, secular West seems to have blocked individual's access to these otherwise pan-human dimensions of the self" (Kleinman 1988: 50). What is the Western problem? The advent of modern science in about the seventeenth century disrupted the bio-psycho-

spiritual unity of human consciousness that had existed until then (Price-Williams 1975: 87). According to Kleinman, we have developed an "acquired consciousness," whereby we dissociate self and look at self "objectively." Western culture socializes individuals to develop a meta-self, a critical observer who monitors and comments on experience. The metasef does not allow the total absorption in lived experience, which is the very essence of highly focused ASCs. The metasef stands in the way of unreflected, unmediated experience, which now becomes distanced. This distancing renders the Western self vulnerable to pathology like borderline or narcissistic personality disorders which appear to be culture bound to the West (on culture bound syndromes, see Pilch 2000: 152).

Thus, infants bear witness to this human potential prior to the emergence of the superego, the metasef, in the process of development. Infants and young children still possess the ability to become totally absorbed in every aspect of their lived experience. The photograph of Liam Muhammad al Hindi above is a perfect illustration. Dr. Goodman describes the experience in her own life eloquently if with understandable sadness at what she lost around the age of twelve (Goodman 1990: 3-4). In her later years and subsequently in her career, Dr. Goodman rediscovered through research and experimentation how to reclaim and rejuvenate that gift for entering trance, the "magic" of her youth as she called it, a pan human potential. The Cuyamungue Institute which she founded continues her work and research, and it is as part of this ongoing research that I offer these reflections on this topic of music and trance.

Inducing Trance with Music

In the ritual used by members of the Cuyamungue Institute, members use either a rattle or a drum to induce trance. Dr. Goodman's research dis-

covered that shaking a rattle (or beating a drum) approximately 220 times a minute for a fifteen a minute period provides the optimal sensory stimulus to the nervous system for inducing a trance “from the bottom up” to use the phrase of d’Aquili and Newberg. Two personal friends with whom I attempted to share the gift that I learned from Dr. Goodman and the Institute found this mode of sensory stimulation jarring and disturbing. It would and could not induce an altered state of consciousness in them. The one, L.H., is a trained musician (a pianist) and says such rattling quickly gets on her nerves. The other, L.B., has a long-standing and well grounded personal practice of contemplative prayer most often performed alone and in silence. When I played the rattling tape for her during a communal prayer session, she quickly asked me to shut it off. That sound was disturbing, agitating, grisly to her ears. She requested a different sound.

My alternate suggestion was the sound track from the 1980 film “Somewhere in Time” starring Christopher Reeve, Jane Seymour, and Christopher Plummer. Composed by John Barry (the “James Bond” score is among his other hits), the nine cuts on the CD from the soundtrack also include “Rhapsody on a Theme of Paganini” by Rachmaninoff. This music is Barry’s all-time best selling score. L.B. found it very helpful in enhancing her prayer session. She said that this quiet sensual music was more in tune with her body. Her prayer sessions tend to have a moderate kinesthetic quality. In fact, they are characterized by deep emotion felt and expressed in her body.

Why is this score so helpful in LB’s practice of prayer? I propose these possible explanations. From a neurological perspective, L.B. induces trance “from the top down.” Among other strategies, she often selects an image from the Christian scriptures (e.g., “The bent woman” described by Luke 13:11-17) and reflects upon it intently. Thus LB’s prayer in

trance begins in the brain and then travels through the rest of her body. From the perspective of the music that LB uses, John Barry composed his score shortly after the death of his parents. Since music has no semanticity, the emotion Barry appears to have instilled into his music is calming, soothing, and peaceful. It can easily trigger the quiescent dimension of the nervous system coinciding with LB's preferred mode of entering prayerful trance. In other words, there is a good match between LB's strategies and the music that appeals to her, both of which stimulated trance "from the top down."

This music has served me personally in a similar way, even before I learned about altered states of consciousness and ways of inducing them. Some time after viewing the film, I had made audio-tape copies of this score, one of which I kept in my car to calm me during any rush hour traffic in which I might have had the misfortune of getting caught. The music helps me to manage and maintain a healthy level of blood pressure and pleasant mood in very stressful conditions. The music is in a romantic musical style, pleasant, performed mainly by the strings, and creates a soothing and calming mood. I also made a copy for use in personal prayer or reflection sessions, which was the copy I shared with LB. Though I have viewed the film more than once, I would say that the music works its effect apart from anything that I remember about the film's story line. (LB never saw the film.) As the research indicates, the music communicates emotion rather than a message.

Ethnomusicology and Trance

Two ethnomusicological studies confirmed some information gained from other sources and also contributed additional insights to my reflections: Kartomi's report on "Music and Trance in Central Java" (Kartomi

1973) and Baklanoff's study of Black Baptist Footwashing Ritual (Baklanoff 1987). Kartomi observed and analyzed five types of Central Javanese village music used most often in association with dance: Ebeg (an enacted folk drama); Tiowongan (a rain dance by females to the rice goddess); Pentjak (a dance of self-defense); Pradjuritan (a military trance dance); and Kotekan (rice-block stamping music, very popular but no longer associated with trance).

The investigation concluded that subjects of trance behavior in Central Java perform in a culturally conditioned way. "Even in trance, the individual holds strictly to the rules and expectations of his culture and his experience is as locally patterned as a marriage rite or an economic exchange" (Benedict 1934: 77). The music used in Central Java is similar to other music in their culture, yet it does have some differences. In general, however, "The trance dancer abandons himself to the despotism of the regular metre, the magic-motto-like repetitiveness of the melodic phrases and, in the case of instrumental ensemble, to the strange dissonant sound of the musical combinations" (Kartomi 1973: 166). The notion of "abandon" has already been highlighted by Kleinman. The person who wants to enter a trance state must suspend restrictions and plunge without reserve into the totality of lived experience at a given moment. This is aided by the trait of music known as "absorption," a trait recognized by some hypnotherapists as naturally facilitating the connection between music and trance which good hypnotic subjects are capable of making (Kelly 1993: 84). In selecting music with a strong potential for assisting in inducing trance, a subject should pay special attention to its "absorption" character. Some music, like rattling to some ears, is jarring and repulsive and does not seem capable of absorbing the listener into its tones or melodies. Indeed, Trehub's research with infant discovered that "infants are more precise in perceiving diatonic melodies

– those conforming to keys of major or minor scales – than melodies that violate the conventions of known musics.” Infant perception of intervals is more precise when these intervals are consonant or pleasant sounding, like the perfect fourth, or the perfect fifth.

To assist in inducing a trance state, music must be mesmeric in effect (Kartomi 1973: 167). Music that best assists in inducing trance has regular pulsation and repetitive tonal patterns based on a restricted number of pitch levels. At the same time, it must not sink to musical boredom. Since 1940, The Ecumenical Community at Taizé, committed it self to prayer and reflection. In the 1970's as youths became interested in and attracted to the Community, the members decide to open the group to work among many people in many places while maintaining the central location in Taizé. In the 1980's, because of the international membership in the community, members sought simple music and prayers forms that would facilitate rather than impede prayer. Beginning with Chorales and Psalms from the sixteenth century, the community then added psalmody created by Joseph Gelineau (1962). Eventually, Jacques Berthier (1978) experimented still further and decided upon repetitive structures, short musical phrases with singable melodic parts that could be readily memorized by any one. Latin was the original language, but others were added later.

The music of Taizé is simple and absorbing. The lyrics whether in Latin (e.g., “Veni Sancte Spiritus”) or in English (“Jesus remember me, when you come into your Kingdom”) or any other language are brief and mantric in character. The congregation or community repeats these brief refrains while a cantor (or choir) sing verses. Sometimes the congregation or community might begin to harmonize the refrain. Of the sacred music familiar to me, the songs of Taizé seem best suited to assisting in inducing trance and promoting richly rewarding prayer experiences. Just

as the Javanese in trance believe that they are in contact with their deities and spirits, such as the goddess of rice, their ancestors and spirits of the dead, and animals, so too do modern devotees of Taizé prayer (or similar methods) believe this music is most capable of bringing a person into the presence of the Deity.

Kartomi makes another important observation: “The music serves primarily as a communication of mood (from musician to trance dancer) through the music’s associativeness and mesmeric continuity; not only does it assist a subject into a trance state but it lends colour to and is part of the traumatic experience itself. It builds up and sustains a state of undifferentiated emotional excitement. Music has become one with ritual and is not a separate aesthetic category. For its purpose, Central Javanese trance music is highly potent and effective” (Kartomi 1973: 166). Researchers are agreed that music communicates emotion rather than a message. Kartomi notes that resulting emotional excitement is “undifferentiated.” This would seem to be a logical conclusion from music’s ability to absorb a listener. However, a tone poem, such as Smetana’s “The Moldau (The Vltava)” from “Ma Vlast” for which the composer wrote explanatory notes does seem to have been intended to convey images, but perhaps secondarily the images would stir emotions.

Kartomi raises another issue of importance for our reflection. “It is probable,” she writes, “that, in practice, aesthetic value judgments are to some extent culturally determined, or at least culturally coloured” (Kartomi 1973: 166). She has in mind the question of whether someone who has heard the music but not witnessed the folk trance dance would be able to render an adequate appraisal of the music’s aesthetic value. This is certainly true of the Javanese trance events she has studied. One would have to know the social connotations and the mood of the actual performances.

On the other hand, given the subjective interpretations that are possible in listening to music alone (i.e., without a dance performance, or perhaps even just a live instrumental or vocal performance), it would seem that all kinds of music could accompany trance or serve to assist in inducing it depending upon the listener. Meyer (1967: 126) offers this observation: “What we ‘know’ and ‘believe’ has a profound effect upon what we perceive and how we respond.” During a nine year period (1954 to 1963), I was an organist in a Roman Catholic Community of Religious Men (Franciscans). My major assignment was to play “background” music in the keys of F and G to help the Friars sustain pitch during their recto tono choral chanting of Latin Prayers (the Divine Office). Initially, I tried to read and recite the prayers along with the choir but could not concentrate on that and playing at the same time. So I began to listen attentively to what was recited while I concentrated on playing the organ. As the prayers became more familiar and in fact memorized, one or another would trigger a thought, which would in turn induce a reverie, a small trance that was further enhanced by the music. On many occasions a strong emotion would also emerge. “O quam bonum et quam jucundum habitare fratres in unum – How Good, how delightful it is to live as brothers all together!” (Psalm 133:1). The process actually became a feed-back loop. What began for me as a distasteful assignment eventually became transformed into a very satisfying occasion of prayer. Since we recited these prayers at four different times during the day, with the longest stretch of time extending for about an hour at 5 p.m. in the afternoon, the practice became a habit and left its imprint on personal life.

Conclusion.

This brief reflection on music and trance was inspired by the pioneering research of Dr. Felicitas Daniels Goodman and stimulated by the on-

going research of The Cuyamungue Institute. The Annapolis (MD) Group in which I am a regular participant is hosted by Judy Lazarus and Joan Scott. Both of these pioneer members of the Institute are warmly encouraging and supportive of ongoing research in trance and comparative religion. In a book to be published this year (Pilch 2004) by The Liturgical Press (Visions and Healing in Acts of the Apostles: How the Early Believers Experienced God), I designed a ceremonial rite for experiencing the realm of God in altered states of consciousness (Appendix Three). This rite is based on the ritual developed by Dr. Goodman and used by the Annapolis Group at its weekly session.

In my book, I also included a discussion of the relationship between rite and trance (Appendix Two) in which I focused particularly on the Roman Catholic Liturgy as designed and intended already in antiquity to facilitate worshipers' entry into trance. The "Holy, Holy, Holy" sung or recited by the congregation are the very words reported by the prophet Isaiah (Isa 6) as what he heard the angels singing during his call by God to be a prophet which he received in the smoke and incense-filled Temple. It was a pleasant surprise in my research for this article to discover a study of the Sipsey River Association of the Primitive Baptist Church (founded in 1872; see Baklanoff) who three times a year celebrate a feast known as "Footwashing" rooted in the story of Jesus washing his disciples' feet at the Last Supper (see John 13:14-15). The aim of this celebration is to achieve an altered state of consciousness induced by rhythmic sensory stimulation initiated by music, body movements, sermons, and alcohol consumption (Baklanoff 1987: 381). This group further reinforces the observation of Kartomi above that trance inducing music becomes one with the ritual and no longer remains a discrete aesthetic category.

Music might not directly induce trance, but it is recognized as key among the cluster of elements that contribute to inducing trance. For the most part, music works a neurological effect on the listener. Cultural associations that accompany the music also play an important role in stimulating a trance experience. The ultimate choice of music, however, will rest with the individual, or better yet, the community since most of the reports reviewed about music and trance were communal experiences.

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