

Medical Ethnomusicology: Music as a Therapy in Traditional Cultures

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Since the dawn of human civilization Music is used in therapy processes in order to reinforce and speed up their effects. Music is always an essential part in rituals aiming to heal various disturbs, in ceremonies dedicated to the preparation of various natural remedies and in rehabilitation therapy.

Descriptions of the use of music in healing rituals could be found in all the cultures of the world. The first written documents ever known belonging to the Sumerian civilization mentioned it; sacred texts of all religions described rituals of healing involving music. We can find information in Sanskrit texts, the Jewish Tanah (the Christian Pentateuch), Buddhist texts, Taoist and Confucians texts, along with oral transmitted literature of the Native Americans, Siberians, African populations, Central and South American populations, Australia's Aborigines, South Pacific populations. All of them mentioned the Music as the essential component of the healing rituals.

Considering the basics of the relationships between music and medicine the most important element is the **rhythm**. An iso-rhythmic (same rhythm) pattern repeated during the rituals stimulates in the brain of participants the production of endorphins. These "brain's natural opiates" produce a trance state in which the subjects become prone to a direct physical treatment or to a hypnotic suggestion aiming to act upon their psychical and/or physical disturbs. The music used for therapy is a basic component in the process of medical cure, combining the rhythmic cells with low tones acting as sound generators played or singed for relatively long periods of time, and short melodic motives belonging mostly to pre-pentatonic or pentatonic modes either of hemitonic or anhemitonic types. Note that this music always belongs to the not-temperate modal systems.

What Music for What Medicine

Hereby with the term “Medicine” is intended what we call today “Natural (or Traditional) Medicine”; while the general term “shaman” is referred to the category of healers (they have different names in various cultures, but the term mostly known by many people today is “shaman”, of Siberian languages origin).

Along the millennia, with development of the human culture, these healing professionals discovered by empirical experience which rhythmic, melodic and melodic-rhythmic combinations are the most effective for each of their actions. The acquired knowledge was transmitted to their assistants and heirs in order to be applied and further improved; even at the present day the shamans over all the continents are involved in this continuous process. The music is used together with spoken formulas describing all the components involved in the therapy, from the therapeutic material to the effects they are supposed to have when in use by the patient.

The spoken and musical languages are closely interlaced in their evolution. The music matches the different rhythms and changing pitches of the spoken language, and determines the latter to use the appropriate words for a given melody. In this way the spoken formulas are always singed in order to stress the significance of each word and its importance for the ritual. There is no healing process without the use of singed formulas, which means words and music together; this is a clear proof of the closed relationships between spoken and musical languages, very well known to the human race since its origins. Even if the specific knowledge was empirically acquired it demonstrated its validity along the ages.

A basic aspect in understanding the reason of this process consists in the approach to the cure and healing processes. The modern medicine acts primarily upon the disease whilst the traditional, natural one acts on both patient and disease (the so called “holistic approach”). Clearly, the latter considers the psychical and physical realms as intimately connected; a point of view of an incremented acceptance by the modern medicine.

Considering the single human being as a whole, a psychical and physical unit, the natural medicine starts the cure always from the psychical state of the patient. The effects of feed forward of the musical information on the brain-mind complex are aimed to obtain controlled feedback reactions from the organism, first of all by stimulating the production of endorphins and their action. That’s why music is used in all the stages of the therapy. The shaman has to be first of all psychically prepared before starting the ritual of healing; appropriate music favors the empathy process between the healers and patients. The former acquires almost a direct knowledge of the presenting mental state of the latter by immersing himself in a state of mind similar to that of the patient; the combination of music and words has exactly this goal. The initial songs used in therapy aimed to -and the words have the significance of- forgetfulness; primeval forms of the contemporary “relax!” command and reaction. This is valid for all the cultures of the world.

During the therapy session the shaman works mostly on the psyche of the patient. Preparing the patient to willingly accept the treatment is the main goal of the healer. The use of simple rhythmic and melodic

patterns repeated for the time necessary to obtain a trance state allows the healer to apply the physical treatment. Natural drugs are more often than not unpleasant when ingested or at a physical contact; the role of music is to mentally prepare the patient to use them.

At the end of the session the shaman suggests, always by singing, the desired beneficial effect of the healing ritual and teaches the patient the appropriate songs or melodies to perform by himself in order to maintain the effects of the treatment.

What Music for What Action

Natural medicine is using the chemical proprieties of plants and determined parts of organs of the insects, birds, animals and human body in order to create the drugs. There are specific musical formulas for each stage of the healing process, starting with the harvest of medicinal plants and their preparation for treatment and ending with the rehabilitation therapies.

In Amazonia, Brazil, for example, shamans who are practicing Ayahuasca ritual sustained that "If one can reproduce the sound, vibration, or "song" of that which you are working with, you can enter into it and change it around!". While harvesting and preparing the plants for the ritual of healing they are

singing a musical structure formed by a binary rhythmic cell  combined with a melody in a

pre-pentatonic mode (four sounds). During the ritual the basic rhythmic cell is ternary () and the

melody is combined with the rhythm cell , resulting in a polyrhythmic pattern.

These patterns are also used for similar rituals in Africa by the Dogon population, in South Pacific by

Polynesian population and Australian Aborigines. Note that () is the primary Musical Meme,

matching the heart beat; the tempo (velocity) in which it is performed allows the healer to influence the state-of-the-mind and behavior of the patient due to the correlation between heart's and brain's electromagnetic field and the resulting brain-waves generated according to specific patterns.

Similar procedures are used in midwife related actions like birth, children's nursing and end-of-life assistance; in the treatment of physically wounded patients; in venomous intoxication (insects or serpents' bites).

For example in the case of venomous intoxication a ternary rhythmic cell () is used as an

"obstinato" (continuous) background for melodies describing the actions patient have to take in order to contrast the action of the venom of one of the most dangerous spiders, the tarantula. These patterns are commonly in use by all the populations of the Mediterranean Sea area, where this spider is living. This rhythmic cell was also used in classical music for the dance called "tarantella" (the little tarantula), found in the creation of the greatest composers since the sixteenth century. In our times it is

still in use in a ritual for the cure of epilepsy in Southern Italy (where the ritual is known with the name of “taranta”).

What Music for What Pathologies

Acting primarily on the psyche, the music is the main element in the treatment of mental disturbs. The pathologies interested belong mostly to Mood Disorders class as the Bipolar and Obsessive-Compulsive disturbs. The common symptom Depression is the one most addressed by the healers.

In Chinese, Japanese and Indian cultures the cure of depression with natural medicine implies mainly the use of pure instrumental music (without words). Long duration values build rhythm patterns associated with melodies usually in pentatonic modes, mostly hemitonic in the Indian culture. The melody line is gradual and with few variations; the repetition of only two sounds is often present. These kind of patterns create in the mind the need to concentrate on few ideas at a time; a good remedy for depression and also for attention deficit disorder. The same characteristics could be mentioned regarding the Native American cultures.

Another pathology in which treatment the music plays an important role is the epilepsy, in all of its forms. Considered as a form of communication with the gods reserved to shamans or privileged individuals, the epilepsy crisis where either artificially created with drugs or were of organic origins. In the first case the music aimed to stimulate a person to have an epilepsy Grand Mal type crisis in order to contact the gods. The rhythm patterns, in an accelerating tempo (velocity), starts with binary cells (♩ then ♪♪ to ♫♪♪); when the trance is reached the patterns become ternary (♪♪♪ ♫♪♪) always accelerating to the abrupt stop at the end of the crisis. The musical form is a two-part one (AB).

In the case of epileptic subjects the treatment is based also on the alternance of binary and ternary rhythm cells; the difference consists in the longest time allowed for the initial binary cells (♩ ♪♪ ♫♪♪) regarding the ternary ones (♪♪♪) and of the repetition of the binary ones at the end of the ritual.

The melody belongs also to pentatonic modes, mainly of the hemitonic type. The general musical form in this case is a three-part one (ABA).

In present days it is still in use in Southern Romania during the ceremony of the “Calusari” and in Italy, Sardinia, in the ceremony of “Mamutones”. A Celtic equivalent, related to a religious ceremony, could be found in Scotland and Ireland (the “Morris” ceremony). A similar form it is still in use in the Central and Western Africa, where the binary patterns are predominant.

Other pathologies regard the treatment of disturbs of the genital apparatus, gastro-intestinal and stomach related disturbs, hearing and vision disturbances. The music is used in preparing the remedies and in the post-cure rehabilitation therapy.

Musical Instruments for Therapy

The rhythm being the main element obviously the percussion instruments are the principal class of instruments used for therapy. A great variety of them are used both by the healer and the patient; the most used is the big drum, able to generate low sounds that acts also as sound generators. The percussions play the role of continuous background music and are determinant in stimulating the creation and action of endorphins by/in the brain.

The second instrument as importance is the human voice, the most perfect musical instrument.

Third in importance is the wind instruments class; a huge variety of them are present, from flutes family to single and double-reed instruments.

Strings are seldom use, probably because of the relatively poor capacity of the instruments to generate lower and higher harmonics in order to match the lowest harmonics produced by the percussions and wind instruments; they are sometimes used instead of the human voice in instrumental-only music.

The Metrics

The Metrics aspect is important for the understanding of the musical structures used in healing rituals. Regular metrics (2/4, 3/4, 4/4) are used mainly in rituals aimed to collective healing processes (group therapy). In individual therapy and in remedies' preparation irregular metrics could be found (example: 3/8+2/8+3/16); often asymmetric combinations of metrics are used, which follows the spoken text.

Various researches are currently performed in order to find a scientific explanation for many natural therapies. The reality that these therapies are effective in various degrees since the dawn of mankind is a matter of fact and there are sound reasons to believe in a future use of them in science, once the reasons of their effectiveness will be found. Music is, for sure, one of them.

Suggested keywords for Audio example research on Web: Ayahuasca, Calusari, Dogon, Hopi, Icaro, Morris, Mamutones, Tarantela, Aborigines.

Further Readings (selection)

- Aristotle : *Politics, Book VIII, chapters 5-7 (360 b.c.)*
- Brailoiu, Constantin: *Folklore Musical (1936)*
- Eliade, Mircea: *Shamanism: Archaic Techniques of Ecstasy (1964)*
- Graur, Alexander:

- ***“Music Integrative Neurotherapy™ and Acupuncture: research and applications in Mood, Personality and Sleep Disorders”*** MPD - Medicamus Publishing Division, Torino, IT, 2011 (E book)
- ***“Composing for Healing- Music Integrative Neurotherapy™”*** MPD- Medicamus Publishing Division, Edgewater, NJ, USA
- Lichtental, Pietro: ***Trattato dell'influenza della musica sul corpo umano, 1811***
- Nettl, Bruno: ***The Study of Ethnomusicology, 1983***
- Shirokaogoroff, Serghei: ***Psychomental Complex of the Tungus (1935)***