STUDIA UBB MUSICA, LXIII, 2, 2018 (p. 67 – 84)
(RECOMMENDED CITATION)
DOI:10.24193/subbmusica.2018.2.07

CHAMBER MUSIC EXPLORATIONS FOR MEDITATION

JANOS ZSOLT IMRE[1]

SUMMARY. Music evokes a wide range of feelings, from excitement to relaxation, enjoyment to sadness, fear to relief, and even mixtures of these. The following paper presents exploratory compositions and related research prepared for fulfilment to create chamber music for meditation. The paper is divided in three parts. The first part is focusing on background research about meditation. It includes an overview of meditation including a short history, its origins, the effects of music and its benefits in meditation. The second part briefly discusses the music elements and its influences. The third part of the paper describes and analyses the musical compositions. Each piece is deliberated in detail, to provide an understanding of the creative process and devices used in preparing, framing and composing the pieces. The pieces are written for string quartet and percussion instruments. The result of this work is the creation of new pieces that fulfill the purpose and a practical illustration of compositional processes.

Keywords: music, music explorations, effects of music, music for meditation, elements of music.

Part I: History and Overview

The Meaning and Benefits of Meditation

The word *meditation* is used to define practices that self-regulate the mind and body. It is one of the oldest and most widely practiced mind–body therapies.[2] The term *meditation* carries different meanings in different contexts. The Cambridge Dictionary defines meditation as the act of giving your attention to only one thing, either as a religious activity or as a way of becoming calm and relaxed.[3] On the other hand, Wilson and Cummings

[1] *Master of Art, York University, Graduate Program in Music, 4700 Keele Street, Toronto, Ontario, Canada, M3J 1P3. E-mail: tici1@yorku.ca*

[2] Baime, Michael J. *Meditation and Mindfulness*, in *Essentials of Complementary and Alternative Medicine*, New York, 1999, 522.

[3] The Cambridge Dictionary, *"meditation",* accessed December 15, 2016, http://www.dictionary.cambridge.org/dictionary/english/meditation.

define meditation as a state of complete mindfulness, living in the 'here and now'.[4]

Meditation is a practice of concentrated focus upon a sound, music, object, visualization, the breath, body part, movement, or attention itself in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth.[5] Meditation techniques are classified by the way in which they focus attention. These two main categories are 'focused attention' and 'open monitoring'.[6]

With 'focused attention', the mind is directed at a single object during the meditation session. This object could be the breath, a mantra, part of the body, an external object, sound etc. Examples of meditation styles based on focused attention are: Chakra Meditation, Guided Meditation, Zen Meditation, Transcendental Meditations.[7] [8]

With 'open monitoring', instead of directing the attention at any one object, the meditator cultivates an objectless awareness, monitoring the content of ongoing experience, without judgment or attachment. All perceptions, internal (thoughts, feelings, memory, etc.) or external (sound, image, etc.), are acknowledged and seen for what they are. Examples of open monitoring meditation styles are: Mindfulness Meditation, Vipassana Meditation, Taoist Meditation.[9] [10]

Although it is not essential to play music while meditating, several meditation styles are practiced to the accompaniment of music. Certain types of music can affect human emotions, mood, and mental perspective, and can create an ideal atmosphere for the individual to focus on the act of meditation. Examples of meditation styles that use music while meditating are: Mindfulness Meditation, Guided Meditation, Sound Meditation, Zen Meditation.[11] Meditation is used to clear the mind and to achieve a state of thoughtless awareness without decreasing effectiveness and alertness. All meditation methods serve one goal to slow down and stop the continuous activity of our minds. Musical elements such as the pulse, rhythm, melody and instrumentation can aid in achieving this state.

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[4] Wilson, V. E., and M. S. Cummings, *Learned Self-Regulation.* Toronto, York St. A. & M., 2015.
[5] Consumers, Dorland's Medical Dictionary for Health. *The Free Dictionary,* accessed Nov. 7, 2016, http://medical-dictionary.thefreedictionary.com/meditation.
[6] Raffone, A. and N. Srinivasan, *The exploration of meditation in the neuroscience of attention and consciousness. Cognitive Processing* 11, Published online, 2010, 1-7.
[7] Raffone, A. and N. Srinivasan, *The exploration of meditation in the neuroscience of attention and consciousness, Cognitive Processing* 11, Published online, 2010, 1-7.
[8] Appendix A.
[9] Ibid.
[10] Cahn, R. B. and J. Polich, *Meditation states and traits: EEG, ERP, and neuroimaging studies, Psychological Bulletin* 132, 2006, 180-211.
[11] Appendix A.

Meditation can also incorporate a *mantra*. Mantras are an essential part of some meditation practices. The term mantra can be defined as a word, group of words, a syllable or a sound that is often repeated to anchor the mind in the present moment, to sustain it from wandering off, and to aid concentration during the meditation. A mantra may or may not have descriptive structure or literal meaning. The most basic and important mantra is Om, which in Hinduism is known as the source of all mantras, the sound of the universe.[12] John Coltrane recorded an album based on the *Om* mantra.[13] In reciting a mantra, such as *Om*, the meditator tends to diminish the mental chatter, decreasing the continuous activity of the mind. The goal of the mantra is to help the mind to become more unified, less scattered, more attentive and present. Mantras can be incorporated in music, as well. Using a repeated series of notes can provide a mantra effect. These sound or sonic mantras could help the meditator concentrate during the meditation practice. In music, a repeated melodic or rhythmic figure called an *ostinato* can be reflected as a mantra. Examples of music that uses mantras or music patterns as a mantra include: Steven Halpern – *Om Zone VII*,[14] John Coltrane – *A Love Supreme*,[15] Arvo Pärt – *Spiegel im Spiegel*,[16] Maurice Ravel – *Bolero*.[17]

The benefits of meditation could be physical, mental, emotional or spiritual. Meditation can benefit individuals with or without severe medical illness or stress. Nonetheless, meditation helps to maintain a healthier body, improves the immune system and energy level, improves breathing and heart rates, reduces blood pressure, and can diminish heart and brain problems.[18] Studies show that individuals who meditate have demonstrated less depression, anxiety, and stress. Meditation can also help to calm the mind, to improve concentration, lead to a deeper level of physical relaxation, increase creativity, increase self-actualization, and enhanced personal and spiritual growth. Listening to music while meditating can help balance the emotions, and can improve concentration. Music can produce pleasant feelings and those feelings supplied by music while meditating can help to reach a deeper state of meditation.

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[12] Khan, H. I., *The Mysticism of sound and music,* Boston, Shambhala, 1996.
[13] John Coltrane, *Om.* Impulse! 39118. 1968. CD.
[14] Steven Halpern, *In the Om Zone*. Halpern Inner Peace. 8030. 2007. CD.
[15] John Coltrane, *A Love Supreme.* Impulse! B001097002. 1965. CD.
[16] Arvo Pärt, *Arvo Pärt Portrait.* Angèle Dubeau & La Pietà. Analekta. 28731. 2010
[17] Maurice Ravel, Ravel: Bolero. Arthur Fiedler & The Boston Pops Orchestra. Sony M. 00004TCP7. 2000. CD.
[18] Khobragade, Y., Khobragade, S., and Abbas, A. bin L. Michelle. *"Hypertension and meditation." Int. Journal of Community Medicine and Public Health* 3, 2016, 1685-1695.

A Brief History of Meditation

Meditation has been present in human life for thousands of years. It is often found in a religious context. The earliest form of meditation dates back anywhere between 5000 – 3500 BCE. Researchers suggest that it was common practice for older civilisations to use repetitive, rhythmic chants (nowadays commonly called mantras) in attempts to pacify the gods.[19] The earliest written records on meditation can be found in the Hindu tradition. These records contain scriptures which describe the meditative traditions of ancient India.[20]

Other forms of meditation developed between the sixth to fifth centuries BCE, through Taoism in China, and Jainism and Buddhism in India and Nepal.[21] All these religions practiced meditation in an attempt to achieve enlightenment and spiritual development.

When the Common Era (current era, A. D.) started, the practice of meditation would spread quickly due to its relationship with multiple religions. Meditation began to spread to other countries in East Asia mostly through Buddhism. After transmitted to China, Buddhism spread to Vietnam, Korea, and Japan, where it become known as Japanese Zen.[22] While Buddhism reached other countries, each region enhanced their own interpretation, and established their own way of practicing it.

Various forms of meditation have been present for centuries in all major religions. There are indications in the *Tanakh* (the Hebrew Bible), that Judaism contained a central meditative tradition *Hitbodedut,*[23] while later, in Islam, the practice of *Sufism* included meditative techniques, and its followers practiced controlled breathing and the repetition of holy words.[24] In Christianity, many practices are considered forms of meditation. Forms of introspective thinking can be found in counting rosary beads and the *Adoration*, which focuses on the *Eucharist*. Also, Christian monks who spent most of their lives in monastery cells contemplating God, can be considered to practice a form of meditation.[25]

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[19] Everly, G. S. Jr. and J. M. Lating, *A clinical guide to the treatment of human stress response*, New York. Springer, 2013.
[20] Ibid.
[21] Ibid.
[22] Harvey, P., *An Introduction to Buddhism*. *Teachings, history and Practices*, Cambridge, Univ. Press, 1995.
[23] Kaplan, A., *Jewish Meditation,* New York, Schocken Books, 1985.
[24] Bowker, J., *The Concise Oxford Dictionary of World Religions,* Oxford:,Oxford University Press, 2000.
[25] Benson, H., *The Relaxation Response,* New York, Morrow, 1975.

During the 18th century, meditation (and Buddhism) became a subject of discussion for intellectuals in Europe such as the German philosopher Schopenhauer and the French writer, philosopher Voltaire.[26] [27] Meditation found its way into Britain through translations of scriptures from various Buddhist schools in different parts of east Asia.[28] At the beginning of the 20th century Asian Buddhist masters and educators of the Zen, Tibetan and Theravada traditions and principles emigrated to the United States and Canada in order to promulgate their beliefs and their meditative practices.[29]

An enormous interest in meditation began after the Second World War. Many soldiers who served in the Pacific during the war had intimate contact with local cultures. When they returned home they brought meditation with them and the practice of meditation increased. The number of meditation centres started to grow exponentially during the 1970s. Today, dozens of websites offer meditation practice and meditation techniques for millions of practitioners around the world. However, after decades of scientific study and research, the exact mechanism at work in meditation remains unclear.[30] In the 1960s and 1970s numerous academics, scholars and scientific researchers started to investigate the effects of meditation and its benefits.

Spiritual and secular forms of meditation have been the subject of scientific analysis, resulting in thousands of published books and scientific articles on the subject of meditation.[31]

The Effects of Music in Meditation

The influential effect of certain music lies in its capacity to alter moods, to evoke feelings, and to create distraction. It is connected to our emotions, and has the capacity to evoke emotional arousal. Music influences the human body, which can be measured. The mood responses created by music can be detected. Moreover, the elements of music, rhythm, harmony, melody, and timbre have a substantial effect on humans. The Indian classical musician and master of Sufism, Hazrat Inayat Khan, suggests that music can help to achieve the goal of meditation.

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[26] Abelson, P., *Schopenhauer and Buddhism,* Honolulu, University of Hawaii Press, 1993.

[27] Beales, D., *Enlightenment and Reform in Eighteenth-Century Europe,* London: I. B. Tauris & Co. Ltd, 2005.

[28] Ruth, D. St., *BBC UK, Religions.* accessed November 15, 2016 http://www.bbc.co.uk/religion/religions/buddhism/history/britishbuddhism_1.shtml

[29] Fields, R., *How the swans came to the lak,.* New York, Shambhala, 1981.

[30] Everly, G. S. Jr. and J. M. Lating, *A clinical guide to the treatment of human stress response,* New York, Springer, 2013.

[31] Murphy, M. and S. Donovan, *The Physical and Psychological Effects of Meditatio,* Petaluma: Inst. Of Noetic Sciences, 1997.

> "There is nothing in this world that can help one spiritually more than music. Meditation prepares, but music is the highest for touching perfection".[32]

Music has been part of meditation practices for thousands of years. Its curative power date back to ancient times and it was known as an influential instrument for health, healing, and wellness.

> "In ancient times, schools have taken music as a source of their meditation. Those who meditated with the help of music, they drive much more benefit from it than those who meditate without the help of music".[33]

Ancient cultures acknowledged that the power of sound, such as chanting, drumming and other ways of producing sound, had a deep effect on the human mind.[34]

In their published study about the effect of music on human behaviour, psychologists Irving A. Taylor and Frances Paperte concluded that:

> "Music, because of its abstract nature, detours around the ego and intellectual controls and, contacting the lower centre directly, stirs up latent conflicts and emotions which may be expressed and activated through music; … if the structural dynamics of the music impinging on the sensorium is similar to the prevalent structure the two will unite and thus fusion will allow music to affect emotions directly".[35]

The authors point out that a human's emotional state may be altered through music. The mood quality of music can match the mood or the emotion of the person. The expression of an emotion or mood, may be achieved by selecting the music that corresponds to that emotion or mood. As well, altering a mood or emotion, is accomplished by selecting music that effectively juxtaposes with the mood being altered.

Music is one of the most universal sensory stimuli for human beings. The American philosopher Suzanne Langer, suggests that in some cultures, music can express more specific feelings that language fails to communicate.

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[32] Khan, H. I., *The Mysticism of sound and music*, Boston, Shambhala, 1996, 99.
[33] Ibid.
[34] Balick, M. J. and R. Lee. *The power of sound: Ethnomedical tradition and modern science, Alternative Therapies* 9, 2003, 63-72.
[35] Taylor I. A. and F. Paperte. *Current Theory and Research in the Effects of Music on Behavior, Journal of Aesthetics* 17, 1958, 251-258.

> "The forms of human feeling are much more congruent with musical forms than with the forms of language, music can reveal the nature of feelings with a detail and truth that language cannot approach".[36]

In '*Emotions expressed and aroused by music',*[37] philosopher and ethnomusicologist Stephen Davies notes that in music we acknowledge motion, pattern and dynamic structures that can influence or stimulate us emotionally.

> "We hear in music a terrain shaped by ongoing interactions between its parts, which vary in their pitch, complexity, teleological impetus, energy, texture, inertia, tension, and so on".[38]

Psychoacoustics is the branch of psychology concerned with the perception of sound, and its physiological effects.[39] According to Leeds, in this field the terms music, sound, frequency, and vibration are interchangeable, because they are different approximations of the same core.[40] Music creates psychological effects on humans, by appealing to the limbic system, which is the centre of sensations, emotions and feelings in the brain.[41] This includes how we listen, our psychological responses, and the physiological impact of music and sound on the human nervous system. However, music, sound, and vibration alters the frequency of our brainwaves, and has a direct effect on the activity of our mind and body.[42] As music attracts our attention, it can support meditation practice, can help to clear our minds, and can prevent the mind from wandering.

Furthermore, music has been found to generate a relaxed mood and stress reduction, making it a plausible way to accommodate coping with pain and anxiety.[43] The vibrations in music have the ability to modify muscle tension, heart rate variability, blood pressure, and the respiratory rate. Music may act directly on the autonomic nervous system when the stress response is interrupted and anxiety levels are reduced.[44]

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[36] Langer, S. K., *Philosophy in a new Key,* New York, New American Library, 1951, 235.
[37] Davies, S., *Emotions expressed and aroused by music,* in *Handbook of Music and Emotion,* ed. Patrik N. Juslin, and John A. Slobod, Oxford, University Press, 2011.
[38] Ibid, 55.
[39] Stevenson, A. and M. Waite, *Oxford English Dictionary,* New York, Oxford University Press, 2011.
[40] Leeds, J., *The Power of Sound,* Rochester: Healing Arts Press, 2010.
[41] Murrock, C. J., *Music and Mood, in Psychology of moods,* ed. Anita V. Clark, New York, Nava Science Publishers, 2005, 141-153.
[42] Ibid.
[43] Ibid.
[44] Ibid.

Music is an effective device for altering mood, helping relaxation, promoting calmness or restoring balance to the autonomic nervous system. The psychophysical elements of music play a substantial role in human physiological and psychological functions, thus creating alterations in mood. Nevertheless, the most fundamental elements of music captures ones focus by shifting attention away from something that is unpleasant or stressful to a more positive stimulus.

In his book '*Flow*' psychologist Mihaly Csikszentmihalyi concluded that keeping order in the mind from within is difficult.[45] Outer stimulation is essential to keep attention directed. The distinct structure of music requires commitment to experience present moment awareness. This unique characteristic makes music a potent distractor and a cure to focus the wandering mind.

The most common and effective method of meditating starts with focusing on the breath. Listening to music while meditating, and focusing on the sound, or on the elements of music, can result in thoughts flowing away without any conscious effort. The tone of the instruments can act as a bridge from the everyday world to a calming, pleasing, and relaxed state. The elements of music are beneficial as they can help balance the emotions, reduce the level of stress hormones, and release tension. According to Khan, while meditating, music can help to tune the mind and soul and help to accomplish a spiritual insight and altered consciousness.[46]

In conclusion, music can make us to feel uplifted and energized. It can elevate or depress, and it can reduce or educe stress. It stimulates our body to lower blood pressure, decrease heart rate, to diminish stress hormones, reduce muscular tensions, and to help us achieve a state of meditation and relaxation.

Part II: Musical Elements

The Elements of Music and its Influences

In the literature of music psychology, the term *psychophysical* has been used to refer to the physical properties of music, (tempo, range, melody, rhythm, dynamics, harmony). Musicologist Mark Reybrouck claims that the term psychophysical, within the field of music, is the connection between acoustic level of musical stimuli and the level of meaning and their

[45] Csikszentmihalyi, M., *Flow: The Psychology of Optimal Experience*, New York, Harper and Row, 1990.
[46] Khan, H. I., *The Mysticism of sound and music,* Boston, Shambhala, 1996.

perceptual processing.[47] The psychophysical elements of music have been found to have a considerable influence on listeners regarding the emotional content of music: tempo, rhythm, melody, harmony, articulation, dynamics, consonance, dissonance, range and timbre.[48]

The elements of music, with its set of rules for combining sounds in an infinite number of ways, plays a significant role in the psychological and physiological functions between the brain and body.[49] Nonetheless, the psychophysical elements of music have notable effects on our minds and bodies during the meditation process as well.

> "The *Yogis* regulated the rhythm of the circulation, of the heart and of every action of the breath, with the help of vibration, of music, of both tone and rhythm".[50]

The power of music can change moods both consciously and subconsciously, and has a substantial effect on humans.

> "Music creates order out of chaos; for rhythm imposes unanimity upon the divergent, melody imposes continuity upon the disjointed, and harmony imposes compatibility upon the incongruous".[51]

Music, in general, is based on organized and repetitive patterns that create order. The order that music brings to our experience is rhythmic, melodic and harmonic. Music tends to sculpt us, in our thoughts and our behaviour patterns, into conformity with its own inherent patterns of rhythm, melody, morality and mood.

Music is a compound blend of rhythm, harmony, melody and timbre that notably affects the human body in two ways: directly, as the effect of sound upon the cells and organs, and indirectly, by affecting the emotions, which then influences various bodily processes. [52]

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[47] Reybrouck, M., *The Musical Code between Nature and Nurture,* Ferrara, Springer Science. 2008..

[48] Gabrielsson, A. and Patrik N. Juslin, *Emotional expression in music performance: Between the performer's intention and the listener's experience, Psychology of Music* 24, 1996, 68-91.

[49] Murrock, C. J., *Music and Mood in Phychology of moods, ed Anita V. Clark,* New York, Nova Science Publisher, 2005, 141-153.

[50] Khan, H. I., *The Mysticism of sound and music*, Boston, Shambhala, 1996, 50.

[51] Menuhin, Y., *Theme and Variations,* New York: Stein and Day, 1972.

[52] Tame, D., *The Secret Power of Musi,* Rochester, Vermont, Destiny Books, 1984.

Rhythm

"Motion is the significance of life, and the law of motion is rhythm".[53]

Music involves the organization of sounds within a rhythmic framework. While listening to a melody, most often, consciously we pay attention to the notes of the melody, and subconsciously we absorb the rhythm of the melody.[54] Most of the time, humans, consciously, do not pay attention to their body rhythms, but subconsciously these rhythms drive them in their every moment.

> "The words *thoughtful* and *thoughtless* signify a rhythmic or unrhythmic state of mind, and balance, which is the only upholding power of life, is kept by rhythm".[55]

Rhythm is the form of motion and is the most fundamental, crucial, structural, and organizational element of music. Rhythm is the pulse or the life force of music. Pulse, duration and tempo are features of rhythm that move music.[56]

The finest place to learn the artistry of rhythm is the human body. The human body cannot function without rhythm. The whole construction of the human body is based on rhythm and pulsation. Our body's rhythm is so natural that it is barely noticeable. The rhythm keeps our body's mechanism together, whether the beat of the heart, of the pulse, of the head and the circulation of blood is all based upon rhythm. Rhythm affects the human mind as well.

Inhaling and exhaling is a natural, balanced pattern, a breathing beat. Breathing keeps the mind and body connected, and instrumentally keeps rhythm in every moment of our lives.[57]

As we know, music can change moods both consciously and subconsciously. The most subconscious element of music is the rhythm, and is the basic dynamic, and driving factor that stimulates action.[58]

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[53] Khan, H. I., *The Mysticism of sound and music*, Boston: Shambhala, 1996, 151.
[54] Gaston, E. T., *Dynamic music factors in mood change, Music Educators Journal* 37, 1951, 42-44.
[55] Khan, H. I., *The Mysticism of sound and music,* Boston, Shambhala, 1996, 155.
[56] Stevens, C., *Music medicine: the science and spirit of healing yourself with sound,* Boulder, Sounds True, 2012.
[57] Ibid.
[58] Gaston, E. T., *Dynamic music factors in mood change, Music Educators Journal* 37, 1951, 42-44.

In her work, *'Music and Mood'*, Carolyn Murrock concludes that consistent rhythm gives a secure feeling while inconsistent rhythm commands attention and creates apprehension.[59] Entrainment accounts for changes in brain waves, heart rhythms, respirations, emotional tones, timing, pacing, and other organic rhythms of the human body according to musical rhythm.[60]

Within the study of chronobiology, entrainment occurs when rhythmic physiological or behavioural events match their period to that of an environmental oscillation. As the natural rhythm of the human body is inherent (natural), the human brain can be entrained to match the rhythm of the music. A constant entrainment can bring an individual from one emotional state into another emotional state, through a gradual change in the rhythm of the music.[61]

The human heart typically beats at approximately 65-80 beats per minute. When individuals are exposed to music at a higher tempo than their own intrinsic heartbeats, that music will have a stimulating, arousing effect to intensify the general mood. Conversely, when individuals are exposed to music at a slower tempo, one that is less than an individual's intrinsic heartbeat, it will have a relieving or calming effect.[62]

Entrainment involves synchronizing the rhythm, or pulse, of the music resulting in both psychological and physiological effects on the human body.[63]

Melody

"Melody speaks the language of the heart".[64]

Melody can be described as a succession of musical notes that form a distinctive sequence of sound. Melody is the conscious (concrete) element of music as it produces a distinct pattern, generally, allowing the listener to sing or hum along.[65].

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[59] Murrock, C. J., *Music and Mood in Phychology of moods, ed Anita V. Clark,* New York, Nova Science Publisher, 2005, 141-153.

[60] Ibid.

[61] Murrock, C. J., *Music and Mood, in Phychology of moods, ed Anita V. Clark,* New York, Nova Science Publisher, 2005, 141-153.

[62] Weber, S., *Music: A means of comfort,* in *Music Therapy in Palliatice Care: New Voices*, ed. David Aldridge, London, Jessica Kingsley Publishers, 1999, 95-104.

[63] Murrock, C. J., *Music and Mood in Phychology of moods, ed Anita V. Clark,* New York: Nova Science Publisher, 2005, 141-153.

[64] Stevens, C., *Music medicine: the science and spirit of healing yourself with sound,* Boulder,Sounds True, 2012, 53.

[65] Murrock, C. J., *Music and Mood, in Phychology of moods, ed Anita V. Clark,* New York, Nova Science Publisher, 2005, 141-153.

Melody has the ability to express a mood, a thought, an idea, or an emotion, and is a nonverbal communication that can stimulate a wide range of emotional responses from consonance (happy, calm, euphoric, relaxing, soothing) to dissonance (sad, fearful, anxious, panicky, angry, alarmed, edgy).

The direction of a melody can also have an influential effect on human emotions and feelings. Ascending melody passages are commonly felt to increase concern and tension, while a descending melody passages often produces a calming effect.[66] Researchers have found that the tension of the larynx is influenced by melodies featuring a descending series of notes. Since the larynx is affected by the ongoing stream of one's emotions and thought processes, its reactions to music are possibly indicative of an effect of music upon the *psyche*.[67]

> "The effects of tones upon the larynx indicates, melodies cause a constant saga of tensions and relaxations to occur within many parts of the body".[68]

Melody is also a combination of pitches. Pitch is the number of cycles the sound vibrates per second; the degree of highness or lowness of a tone. The vibration rate per unit of time can alter moods. Every emotion develops from the intensity of vibrations. As melodies are based on vibration, they activate us emotionally. Rapid vibration is viewed as stimulating and slow vibrations are considered as relaxing.

Harmony

> "Harmony is the expression of the soul's desire for balance and connection, helps us to discover the power of togetherness".[69]

Harmony, refers to the way musical notes and pitches are blended together to form an amalgamation of sound. Harmony supports the melody and gives the music texture and/or mood. The natural force of harmony is balance.[70] Harmony helps us to learn the power of togetherness. We notice harmony within ourselves in the balance of body, mind and spirit.

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[66] Lefevre, M., *Playing with sound: the therapeutic use of music in direct work with children, Child and Family Social Work 9*, 2004, 333-345.
[67] Tame, D., *The Secret Power of Music,* Rochester, Vermont, Destiny Books, 1984.
[68] Ibid,137
[69] Stevens, C., *Music medicine: the science and spirit of healing yourself with sound,* Boulder,Sounds True, 2012, 81.
[70] Khan, H. I.,*The Mysticism of sound and music,* Boston, Shambhala, 1996.

Harmony is grounded upon consonance and dissonance. In music, dissonance wants to be resolved. It is resolved, tension is released. All music can be measured as an interplay of tension and release. The interplay of consonance and dissonance creates balance.[71]

David Tame claims that researchers have revealed that consonant and dissonant chords, different intervals, and other elements of music all exercise a reflective effect upon human pulse and respiration.

> "Upon their rate and upon whether their rhythm is constant, or interrupted and jumpy. Blood pressure is lowered by sustained chords and raised by crisp, repeated ones".[72]

Tension and relief may be manipulated through the organization of music stimuli. The interplay of tension and release can stimulate an individual's awareness. Consonant and dissonant interchanges in music can help reinforce a meditator's attention and concentration. This mixture of consonant and dissonant harmonies also helps music to reflect emotional occurrences and contribute to its effect on mood.[73]

Timbre

Timbre defines the perceived sound quality of a musical note, or tone. This term is applied mainly to the sound of musical instruments. The distinctiveness of a musical instrument is conveyed by its timbre. The tone of each instrument has its own timbre. Researchers have shown that instrumental timbre contributes to emotional judgments in music.[74] Aspects of timbre, such as attack and frequency spectrum, contribute to the perception of particular emotions in music.[75] Nevertheless, the colour of a musical instrument may affect and influence the human mind and body.

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[71] Stevens, C., *Music medicine: the science and spirit of healing yourself with sound,* Boulder,Sounds True, 2012.

[72] Tame, D., *The Secret Power of Music,* Rochester, Vermont, Destiny Books, 1984, 137

[73] Lefevre, M., *Playing with sound: the therapeutic use of music in direct work with children, Child and Family Social Work 9*, 2004, 333-345.

[74] Balkwill, L. L. and William F. Thompson, *A cross-cultural investigation of the perception of emotion in music: Psychophysical and cultural cues, Music Perception: An Interdisciplinary Journal* 17, 1999, 43-64.

[75] Gabrielsson, A., and P. N. Juslin, *Emotional expression in music performance: Between the performer's intention and the listener's experience, Psychology of Music,* 1996, 68-91.

One of the oldest instruments in the East used for meditation is the *Vina*.[76] The first Vina, was a bamboo stick with attached gourds. They were crafted in such a way that the sound waves deeply penetrated the mind and body. The Vina can make a dull, monotonous sound called a drone that is capable of creating a meditative atmosphere.

The *Rishis,* (Hindi saint) used it for their yogic practices because they thought the sound could help their concentration.[77] Khan claims that string, wind and percussion instruments each have a distinct and particular effect on the human body.

Smith and Noon, in their study, investigated the relationship between different types of contemporary music and mood states. They concluded that music that consists predominantly of brass, percussion, electronic sounds, and bass is frequently associated with feelings of unrest, amplified energy, and increased strength.[78] Whereas, music that consists mostly of harps, string instruments, bells, and wind chimes affects the heart and soul, and is frequently associated with feelings of relaxation, calmness, and peacefulness.[79]

A musical piece can be analyzed by considering its elements. These elements can be controlled and manipulated while creating the piece, and help to depict the final result. It is exciting to realize that music can be crafted in such a way that it has a direct effect on the activity of our bodies.

Music can help create an ideal atmosphere for meditation and can support the goals of meditation. There are many types of meditation techniques used around the world and as a result, various types of music are also used. Generally, music that pleases the mind is simple and clear melodically, rhythmically and harmonically. Music that contains warm flowing melodies and slow moving harmonies can have a calming and relaxing influence. Music that contains regular rhythms that correspond to a normal, healthy heartbeat can help sooth the mind.

To be continued

[76] Khan, H. I., *The Mysticism of sound and music,* Boston, Shambhala, 1996.
[77] Ibid.
[78] Smith, J. L., and Joe Noon. *Objective measurement of mood change induced by contemporary music, Journal of Psyhiatric and Mental Health Nursing* 5, 1998, 403-408.
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Appendix A: Types of Meditation

A brief description about the meditation types mentioned in the paper.

Chakra Meditation - the practitioner focuses on one of the seven chakras of the body (centers of energy), typically doing some visualizations and chanting a specific mantra for each chakra.

Guided Meditation - is a process by which one or more participants meditate with the help of a meditation teacher, or by listening to a guided meditation recording, helping to guide the meditator's attention to achieve a meditative state.

Mindfulness Meditation - is the practice of intentionally focusing on the present moment, while calmly acknowledging and non-judgmentally paying attention to the sensations, thoughts, and emotions that arise.

Sound Meditation - the type of meditation that is focusing on sound. Firstly, starts with meditation on external sounds, such as music, whereby the practitioner focuses all his attention on just hearing, to calm the mind. The final goal is to hear the internal sounds of the body and mind.

Taoist Meditation - the main characteristic of this type of meditation is the generation, transformation, and circulation of inner energy. The purpose is to calm the body and mind, unify body and spirit, find inner peace.

Transcendental Meditation - a technique for detaching oneself from anxiety and promoting harmony and self-realization by meditation, it involves the use of a mantra.

Vipassana Meditation - in general emphasize starting with mindfulness of breath in the first stages, to stabilize the mind, then the practice moves on to developing clear insight on the bodily sensations and mental occurrences, noticing them moment by moment and not clinging to any.

Zen Meditation - is a Japanese school of meditation emphasizing the value of meditation and intuition, revolves around observation of your thoughts and how mind and body operate.