3.1 Influence of music on unity

Music is the oldest form of expression even older than language or art. It begins with the voice and movements with our overwhelming need to reach out to others. In fact music is far more than words. Words are abstract symbols, which convey factual meaning. Music touches our feelings more deeply than most words make us respond with our whole being. The combination of music and speech into single expression of song has unique power, conveying feelings of great elation or almost unbearable poignancy. When we gather for common celebrations music helps us to raise the sharing of feelings to level of intensity, which words alone could not attain. Music does not produce the world outside and around us, not even when we consciously initiate the sounds we hear, music is first and foremost about us, it is our identity. Every ritual we share calls for its own music: birth, marriage, death, planting and harvesting crops, the change of seasons, the coming of spring, the suffering of illness and recovering of health.

In India the tradition of ‘OM’ is the primary cosmic sound energy that created the entire universe. This is discovered as a humming sound (Ahahat Nada) that saints are able to hear during meditation. The VAK or human speech is a manifestation of Saraswati in our culture. There are many legends about saints (Rishis) pronouncing a curse or benediction, which would become a factual event, show the great belief in the power of human sound. The Vedic chants were intoned with utmost care as each intonation and inflection of the voice could have beneficial or adverse effects. There was a great and powerful belief in the power of sound among our forefathers and so our mythological stories are full of legends that affirm their faith. Our Gods are also closely
associated with music. It is believed that the five primary Ragas of the Indian classical music owe their origin to Lord Shiva while the sixth one of Goddess Parvati. Lord Shiva is also considered the creator of Dance. Saraswati the Goddess of learning and music is always shown with the Veena.

The charismatic effects of Lord Krishna's flute are well known. Spiritual music frees us from our self, speak to as of man at peace with himself and God. It reflects the rhythm of a society standing on the pinnacles of human discovery and invention. Music is the mirror of the process of tones clearly helped to establish the principle of recognition and comparison, drawing on memory and on trial and error. All the various symbolic methods we use to investigate the nature of the world are to be found within music.

Music has been created for the building of a society, its unity and harmonious blending of the spiritual and mental setup of all the people and thus it is an integral part of personal life as well as community life of human beings. Music is the most powerful aspect to control the behaviour and temperament of the individual. Emotions, feelings and thoughts have been reported to be greatly influenced by music listening or participation. Joy is born in the process of actively participating in music making and in the process of listening to it. Emotional experiences are derived from music and it has a powerful effect on the formation of the person's moral and intellectual outlook. Musical activities lead to development of imagination and creative thinking. Singing, playing musical instruments and rhythmic movements of the body provide better sense of proportion and a happier world outlook. Shyness, aggressiveness and many other such characteristics, which are the obstacles of making unity of any individuals, can be normalized through music. Humming of musical tones, playing on any
musical instruments and aesthetic physical movements may enable a person to overcome loneliness, music has a great ability to inspire and enthuse the listener as well as the performer. Thus, it is used as an important and forceful weapon for arousing the will power of the army. William Green says, “Music is a friend of labourer” it lightens the task by refreshing nerves and spirit.

Around 500 B.C. Confucius wrote, “Character is the backbone of our human culture. Music is the flowering of character”. Tolerance, love and social harmony are the by-products of an artist’s way of life and creation. Beauty and truth are the two great disciplines when combined together as they are in music, where order is based on self restrain and a better understanding of repose will lead to the great maturity, awareness and equilibrium in our civilization. Many modern educators object to the homogenous grouping primarily on a social basis stating that, this method deprives children from having the opportunity to associate with all other children. The remedial measures applied as music education to control rather number of investigators. Normal and mentally handicapped children may show behavioral symptoms among the children have been tried by a number investigators. Normal and mentally handicapped children may show behavioural symptoms that make them maladjusted for the society. With the aim of improving their behavioral traits, various remedial measures like- music education, creative art, physical education etc, have been put in use by many investigators in different countries.

Graves in 1947 found that adolescents who take music lessons showed less emotional conflict and they appeared to be more comfortable in their relations with their parents than otherwise. In the year of 1953 Similansky, working with the mentally retarded children, found that there were significant improvements in
the adjustment rating and acting our more of their aggression with the help of group play therapy, but there was no difference in the intelligence quotient in general of the two groups. Hughes in 1955 concluded that the participation in music education is closely and positively related to social adjustment in school children. Crawford in 1961 assessed the effect of art experiences on the self-concept and self-adjustment. Simpson in 1968 studied the effect of music education in the school. He studied around 173 high school students and he found a positive correlation between the IQ and creative potentials of the experimental group. He suggested that music might be a good stimulant to the growth in general creative potentials. Further he observed that the participation of the student in music performance in a group tended to be more effective than their individual participation. In the year of 1970 Erzsebet quoted that often signing together with other improves sense of group awareness among the participants than those who do not participate in-group singing. It is also applicable in the field of playing instruments and dancing. Szabo in 1970 was working in Hungary; he reported that singing opens the door to a broader knowledge of music for all.

Group music has been an effective means of moulding characters as it evokes feelings of joy, feelings of fellowship and such feelings experience after a successful group performance. In 1970 Sokolov from the U.S.S.R. reported that chorus singing which is performed in a group it helps to breed feelings like-patriotism, civic responsibilities and collectivism. It also helps to strengthen the friendship of world growth. In the year of 1970 Slack was working in Great Britain found that music education helped in the normalization of the slow learners, their pent-up emotions and developed their abilities toward learning. In 1970 Sledzinski outlined the role of art including music in the life or an
individual and found that it shapes integrity, moulds feelings and imagination, induces creative abilities and enables to overcome loneliness, boredom and discouragement. Klitz in the year of 1970 working with 619 students including 113 mentally retarded with the IQ range of 50 to 75, 106 moderately mentally retarded with an I.Q. range from 30 to 50 under the music education program, which consisted of listening to and participating in the music performances, both individual and in groups, observed that many students showed a sense of accomplishment, recognition and achievement in a world where few such opportunities exist for them. He also observed that music if carefully selected, offers the performer an immediate sense of gratification and accomplishment, generate enthusiasm, instills confidence and motivates them to seek additional knowledge of music. A number of retardates showed dramatic behavior changes due to participation in music education program. This offered pleasurable activities, which helped to, elevate their morale.

Elord in 1972 observed the effects of participation in a combined perceptual motto and music program. She observed a great development on perceptual motto skill, general behaviour in the classroom, personal health habits, and physical education. Perceptual motto and music programme developed perceptual motto skill too much greater degree and similar gains could be made in the development of social and emotional behavior through either a combined programme or a programme in music alone. Wingert in 1972 compared of 40 minutes duration, twice a week for 18 weeks with 10 similar students who did not receive music instruction, the experimental groups showed significant improvement in the basic knowledge, communication, social behavior and also in measured intelligence. The effects of daily music instruction on the school activities of school students were positive on those who had never been exposed
to music before. Mr. Hood who found that the students having music lessons exhibited better social adjustment than other students has assessed it in 1973. He also made a comparison between the students receiving daily and weekly music lessons and concluded that the students receiving daily music lessons had significant positive effect on personality characteristics and exhibited lower rate of absence from school than did the students of control group. Mudgalaya in 1980 found that community signing had a very important role to play at every level of education.

Children have a natural aptitude for collective activities. Community singing would be more helpful and successful media for developing a sense of discipline, unity and respect for other languages and religion. It will be benefited to the children at their young age but will create a permanence of their sensitivity, which will result to create good citizen as well as good society.

Effectiveness of teaching folk songs and popular songs on non-music students could make their attitude towards music. In 1981 Frank found improvement both in quality and quantity of responses in solving the situational problems by the educable mentally retarded children through music education.

Thumri is an evocative composition with an erotic and artistic design of Indian music. Its subject matter is based particularly on the bhakti and sringar rasa (divotional). This philosophy can be traced to the tune of Ramayana in 11th century A.D and Bhakti poet Jaidave's famous compositions Geet Govinda in 12th century A.D depicting the Krishna leela in its pristine form. This concept reached its climax and pack of popularity during the life of Shri Chitanyadev in 16th century A.D. the Nam- Kirtans and Nagar- Kirtans carried the masses into
emotional ecstasies by the mere chant of “Hare Ram – Hare Krishna”. These compositions are also adequately expressed in the Vaishnav compositions of Vidyapati, chandidas, Govindadas etc in west Bengal. In our country Bhakti movement became a dynamic force in the society and the sophisticated symbolism of the love of Radha and Krishna was subtly interpreted as the devout longing of the human soul for the universal soul. One has to sense and perceive the emotional exuberance and its impact particularly during the Holy, Ras and Janmashtami festivals celebrated in Mathura and vrindavan in Uttar Pradesh, Dwarka in Gujarat, Navadeep in Bengal, Orissa, Manipur and also in many other places in our country. The relationship of Kathak dance is associated with this devotional form. The term Kathak is derived from the word Katha or the story of Lord Krishna. Even today the Ras leela of Mathura and Vrindavan is performed in the traditional style bringing into effect all the musical expressions and ethos into the Bhava physical expression of the dance form. Ras dance of Radha-Krishna surrounded by Gopies of Vrindavan is also one of the best examples for the same.

The Muslim mystics, the Sufis also came into prominence around the 10th - 11th century A.D in Persia. Their mystical doctrine of “Union with God through the Love of God” had a profound impact on the devotional cult in our country. In 13th century A.D. Amir Khusrau was the poet, philosopher – musician, who was a disciple of the Sufi – saint Hazrat Nizamuddin Aulia of Delhi, introduced the Qawali style of devotional music in India. In this musical form the singers worked themselves up, towards the concluding part of their performance to ecstatic frenzy or a sort of delirious excitement as in the Kirtans in Bengal. This is also very similar to the Tala or rhythmic frenzy in Thumri style of singing and the Tatkars in Kathak dance. Bhakti or Sufi thought and practice are co-related at
various points in our history and culture, they are also as deep rooted and embedded in the Thumri and Kathak as in Qawali and Kirtan. Wajid Ali Shah of Lucknow the last Nawab of Oudh was a great patron of arts and also composed several operas (musical compositions) based on the Ras of Radha Krishna theme and participated in them.

From the available literature it could be concluded that there is possibility of improvement in social, mental, intellectual and other aspects of life for greater initiative, confidence and due adjustment through music training in any field like Geet, Nritya and Vadya. It may be in any form as – Classical music, or folk music, devotional music, or popular music and dance, may be any kind. It has some capacity to make unity in all respect in the world.

3.2 Effects of music on nature (flora & fauna)

Effect of music in different forms on each and every aspect of human life, plants, animals and even non-living things has been studied. In ancient mythology Lord Hanuman is said to have melted rocks with the rendering of particular raga. The compelling charm of Lord Krishna’s flute is also legendary. Historically we have the legends about Tansen creating a raging fire by rendering raga Amritvarshini. There are the facts that people believe in the dynamic power of music and are proved by the popularity of such tales and stories. Investigators have also studied the effect of music on animals like – camel, House, Snake,
Hippopotamus, Rhinoceros and mulch animals like – Cow, Buffalo, particularly the Cow have been studied both by musicologists and scientists. It is said that Lord Krishna used his flute to attract the cows and then to encourage their milk yielding capacity. It has been scientifically proved that cows yield more milk when they are milked while music is played. In some institutions namely Shardagram at Mangrole, Gram Seva Kandra in Khadasili and Gram Udyog Mandir in Gadhada, in Saurashtra, Gujarat music played during milching period in their gaushala achieved favorable results, an increased milk yield. Before milching they create clean and cool atmosphere of the place. They allow the cows to move freely in the place, flowing water to drink on before one or half an hour before they play melodious music. It gives joy and feelings of fulfillment to the cows and these feeling results into more production of milk. More over during the milching process cows cooperate and allowed the milkman to milch properly. There are ample evidences that cattle do experience by the effects of music. Shri Sardaprasad Gupta has done another similar experiment from Chattrishgadh, Vhili. He has also got positive result by using music in his dairy farm. He said that after coming in from pastureland, during milking they play music and according to him the Cows get relief mentally and their nervous system become relaxed so they give more milk.

Recently, the news Channel ‘Aajtak’ has reported that, a dance expert by name A.B.Satyanarayana of Hyderabad experimented dance therapy on pregnant women. He said that, some particular movements are helpful for the breathings and there is less pain during delivery process. It is also agreed by some of his ladies students who have got benefits from these styles of dancing movements.
It has been reported by Tiwari in 1980 that Pandit Omkar Nath Thakur studied the effect of music by rendering of the raga Bhairavi on violin on a fierce Lion in a zoo. It was found that the Lion lost his fierceness and became normal as a result of the effect of the raga Bhairavi. Horses and Camels when moving in a column in the army or elsewhere have been found to be more disciplined while the music is being played. Considering from the point of view of Birds pest management, certain experiments have been conducted at the all India co-ordinate center for Bird Pest Management at the Andhra Pradesh Agricultural University campus, Hyderabad. The distress calls of the birds when played on the Tape Recorder in the field resulted in scaring the birds away from the field as such protecting the crop from the Birds damage. Distressed calls of the birds as Crow and some animals like - Jackals, Pigs etc have been tied to scare away the birds and animals from the fields and orchards and much success has been reported.

It is the experience of whole mankind all over the world that different season in a year bird’s gives vent to their feelings. In summer when it worms, grasses and water become dried, at noon from the top of the green tree Cacao sings, the tone is charming and it creates peaceful atmosphere. When crows feel about the arrival of monsoon they built their nest on the top of the tree. More over in the evening when they feel the day is ending, while flying and crying they go to their nest. It significant that before darkness of night descends, all living creatures including human being may find their safe place for rest and peace.

Similarly the effect of music on the plants has been studied. Growth of plants has been reported to increase under the influence of music. Quality and quantity of the product have been significantly affected by music. The great
scientist Sir Gagadish Chandra Bose during his research on electricity, he thought it to be an experiment on vegetation. He proved that there is life in plants and plants also feel pain and tremble when they are hurt. The scientists of all over the world accepted the truth of his research. Now where there is life in any object, there is a feeling of joy and pain. Hence if music played in nursery it affects the growth of plants. Natural music of wind, sound of flowing water and sound created by movements of living creatures, trees and plants sustains, develops and grow. The music of nature is a source for stimulating invisible life in vegetation.

It is worth noting that another great scientist of India, Shree Chandrashekhar Venkatraman studied minutely regarding sound of various instruments like – Veena, Mrudangam, Tabla, Violin etc and examined it in various matter. He has also given analysis of the same.

In the year of 1981 Thakur reported that Dr. T.C.N. Singh of the Botany Department of Annamali University (Andhara Pradesh) has successfully demonstrated an increase in the yield of rice crop as a result of music application. Apart from this, increase in the yield of peas, sarsav and beans has also been reported by him. Raga Bihag played on Violin has been found to be most effective. There are references in the literature which indicate the effect of different types of music particularly Indian Ragas on the surroundings.

Raga Deepak may cause fire while Raga Malhar may bring rain. Rain is supposed to bring peace and prosperity for mankind and hence our Vedic sages used to compose hymns and chant them in music. This practice has continued even today we find people singing prayers for the rain to come. In Rajasthan, Gujarat, the south and other states of India there is a special musical programs
requesting God of rain to bring water. There are monsoon songs and dancing too. There are also reports that music can calm storms and increase the fertility of soil.

Music and rhythm played by the army band gives stimuli and enthusiasm to the marcher of the Army, Navy and police force. During peacetime music and rhythm played in the routine exercises to keep them physically and mentally smart, prompt and fit.

Numerous studies have proved that billions of brain cells form more quickly if a body listens to music. Music has a soothing effect and a structure, which stimulates the brain. It is generally accepted that the art is the imitation of nature and nature is the source of inspiration. Nature is full of dance and melody and Mother Nature is always prepared to bestow peace and tranquility.

3:3 Importance of music

Music is a performing art. It represents the divine beauty and grandeur of creation, the art of God. The Upanishad says that God is the greatest poet and Ordainer “kavim puranam anusasitaram” and the gigantic Universe is a poetical piece composed by him (God). The intrinsic beauty and glory of this wonderful piece is expressed by music and so it can be known as the greatest art.
Music is a kind of balmy medicine that heals the aching hearts of men and animals and removes the pangs of the suffering multitude. In the antique days the primitive men and women used to sing and dance in the midst of their multifarious activities, deep cares and anxieties. They sang and danced because they found solace in their distress or disappointment or tedium in them. The people of Vedic and classical days acquired the habit of singing and dancing, to enliven their society and culture. The tradition of ancient music passed in different ways in the ancient and mediaeval times and the same is maintained even to this day with some new innovations. The people still find happiness and peace in spite of the toils, turmoils and trials in their earthly lives.

A great western philosopher said that man is a storehouse of emotions or sensations, which build him, lead him and inspire him throughout his life. A man works being motivated by the inspiration of his will. He designs a plan of his work before he does it outwardly. His will is the force centre and prime mover of everything he intends to do; it is the designer of his life, personality and character. The musicology tells us that will create music and music allures the mind of all living beings and makes them divine in this earth. But there lies a difference between the will to do work and will to music, as the former creates the nets of desires that bind man in the din of delusion, while the latter makes him free from the fetters of desires, which is no other than nescience (ignorance). The musicology states that sound are like the physique with flesh and blood, whereas vital force or mukhya prana is the soul of music. The sound represents two - fold aspects, causal and gross: the causal being unmanifested is imperceptible and the gross is perceptible and is known as 'music'. The gross sound comes out through vocal chord and enriches itself with tone, microtone, mode, melody, rhythm, and tempo and aesthetics sentiment. Its richest
ingredients, melody or raga that evolves from the combination and permutation of notes mainly knows it. In India the raga reached climax. The intuitive artists saw in their ecstatic vision the living forms of the raga and poet composed their colorful contemplative *dhyanas*. Music in India is therefore recognized as spiritual food and divine blessing to men and women. Through the practice of it they attain immortality even while they live in mortal frames. The human soul finds in it the goal of seemingly unending journey and gets tranquility, peace and everlasting bliss.

There is an organized and harmonized system behind the gigantic phenomena of the Universe and everything in it, the sun, the moon, the stars and satellites are unceasingly working through an ordered system and with a motive behind. Everything phenomenal is ruled by the inevitable law of cause and sequence (kriya-karana- samvandha), and a synthetic and universal law, which is known as the cosmic law or divine energy, again guides this law. The rhythm and tempo are the inherent categories of that cosmic energy or nature. Rhythm and tempo are one and the same organized dynamic force, which animates and regulates the sportive play of the supreme power (Mahakal) that creates, sustains and destroys everything of the changing phenomena. According to shri Ravindranath Tagore ‘rhythm is not merely in some measured blending of words, but a significant adjustment of ideas, in a music of thought produced by a subtle principle of distribution, which is not primarily logical but evidential’. He further stated that, ‘in perfect rhythm, the art form becomes like the stars which in their seeming stillness are never still, like a motionless flame that is nothing but movement.'
The idealist Philosophers consider time as an inherent category of the mind and they admit its objective manifestation. Sir Arthur Edenton said that our knowledge of the space relations is indirect, like all our knowledge of the external world a matter of inference and interpretation of the impressions, which reach us through our sense organs. We have similar indirect knowledge of the time relations, existing between the events in the world outside us. But we have direct experience of the time relations that we ourselves are traversing knowledge of time, not coming through external sense organs, but taking a short cut into our consciousness.

Importance of music in the general achievements of young people has often been reported by various music educationalists. Children studying in general education schools with music tuition experience a richer world of moods and feelings. Musical studies help them to do better in other subjects, not only because of specific ties between those subjects but because music also builds up the overall understanding, increases the pupils' joy of living and desire to work. Daily music lessons can develop very quickly in the small children a sense of rhythm and technique of clear singing, expressiveness interpretation and they train the memory and encourage accuracy. The dynamic tempo of music has a favourable effect on the child's sensibility and develops feasibility to express his feelings, enriching the child's imagination and the feelings, which he expressed through his writing and paintings. By often singing together with other he acquires a better development, sense of group awareness than those who have not had the good fortune to have such lessons.

Listening to music is a wonderful experience. It is an art, which involves both the performer and the listener. Both of them are important as far as the
psychological effect is concerned. In the year of 1883 Schopenhaure acknowledged a connection between human feelings and music, which restores to us all the emotions of our inmost nature and removes pains. Music when presented as an analogue of the emotional life is a copy of symbol of the will. In the year of 1952 Copland Sidney Licht a fellow of New York Academy of Medicines, who contributed a great deal to the results of research into music therapy wrote that, “I am convinced that listeners are physiologically and psychologically affected by such musical characteristics as- mood, intensity, pitch and rhythmical outline and this should provoke remembrance and association of thoughts more easily in a mental patient than methods using factual persuasion. In the year of 1952 Copland observed that listening to music is an emotional experience or an intellectual exercise, which depends upon receptivity and knowledge in music of the listener.

In 1970 Klitz suggested that music participation helps to increase the power of concentration and attention, facilitating relaxation, encouraging better posture and proper breathing, improving co-ordination, strengthening specific musical groups, removing frustrations and reducing emotional tensions. In 1970 Przychodzinska Kkacierzak a scientist of Poland working in music, reported that –
(1) Emotional experience derived from music has an influence on the formation of one’s moral and intellectual outlook.
(2) Music activities develop imagination and creative thinking when confronted with such challenges as to create simple music etc.
(3) Contact with music has an influence on the cognitive process that is it has the help of music on the development of child’s thinking, its role as a source of knowledge and deeper understanding of the world and finally the significance of music as an element in mustering humanism.
In 1979 Kaufman found that active participation in the recreation of folk songs by the young people counteracted the deleterious effect of passivity in the participants.

Among the different categories of mentally handicapped children, the mild and the moderate mentally retarded people may be brought to the level of average children with the of special education designed for them. The effect of music has been studied on average students and it has been acclaimed as an important tool for bringing the significant improvement in the academic field, social and cultural field, in the field of mental and physical development and other behaviors. In 1969 Cyral Burt suggested that the capacities of mentally handicapped children in music ability are as good as those average children of the same age. Further, music helps social adjustment of mentally handicapped children so that they feel themselves as a part of the society.

Various research workers like Leslie and Frank in 1981 have reported significant improvement in academic achievement and adjustment in the school of mentally handicapped children as a result of music education. India is an under developed country and the ratio of the population is second highest in the world. According to the report of World Health Organization (WHO) in most of the countries including India 1 percent of the population suffers from severely incapacitating mental disorders and 10 percent from mild mental disorders. That is to say in India there could be 6 to 7 million severely mentally ill people and 10 times more than that number 60 to 70 million are mildly ill persons. The present world population of mental handicapped is approximately 4400 million and out of this only 38 percent or 1672 million are children under the age of 15 years. Approximately one quarter of the world’s population live in the developed
countries. While remaining reside in the developing countries. India alone accounts for more than 500 million of these children. According to another study done by Seeta Sinelair, mentally retarded children comprise 3 to 5 percent of general population. This is a common condition and there are many such people in the world. Most studies from many countries show a prevalence of 2 to 3 percent of mental handicap in the general population i.e. of an IQ 70. The majority of about 75 percent of such cases is mildly handicapped, while the minority of 25 percent of the handicapped or per thousand of the general population is moderately handicapped i.e. with an IQ level below 50.

In the year of 1989 Gangeade asserted that adequate attention has not been given to mental problems and their related services in India. Drawing a comprehensive document entitled “National Mental Health Program” for India in 1982 was made the first attempt in this direction. The document stated that about 10 million citizens of India are affected by mental disorders; the figures for neurosis and psychosomatic disorders are about 2 to 3 times higher than prevailing common ratio. Thus indicating that 20 to 30 million may require proper attention. Mental retardation is estimated at 0.5 to 1.0 percent of all children, while alcohol and drug dependence rates though still low as compared to the world scene, reveal disturbing trends in some pockets. The document further mentions that the number of cases of serious mental disorders which become manifest each year can be estimated to be roughly 35% 1,00,000 or about 25,000 in the country. The methods of treatment and prevention, which is available by modern health care, can avoid about 50 % of the cases. Complete and Lasting recovery is possible in no less than 60%. Through reliable data are not available yet there is evidence to show that learning and behavior problems may be found amongst 1 to 2 percent of school going children. Similarly
psychiatric problems among older people especially in the large urban areas are assuming importance due to weakening of the traditional family structure and social support system.

Music education could provide help to these handicapped children and adults and may bring significant improvement in their school adjustment and in achievement of good result in the school, so as to bring them as per with the average student of the same age. Very little attention is being paid to improvement of mentally and physically handicapped children in India. Facilities exist only for 0.2% of such children for their development in the schools and other institutions reported by Desai in 1981. A child whether average or mentally retarded must be brought up in a congenial environment with all the mental conditions that serve to stimulate his moral functions, a child wants to be recognized for his creative needs for activity and achievement. He does his utmost attempts. It is the music, which provides keen delight encouragement, inspiration and modifies the emotions. Thus it points out the very fact that music is the sole agent of therapeutic use for the development of mentally retarded children and other class of the society.

Music therapy offers new hope for the mentally retarded and handicapped children spastics, neurotics, and insomniac, depressed, aged, blind, drug addicts and also among those who could benefit by this therapy. In western countries music therapy has become a systematic discipline with a clear-cut methodology but in India however there is a dearth of scientifically collected data on the therapeutic use of music. Mentally retarded children have the same basic needs, urges and aspirations as that of the normal ones. The desire for social approval, personal recognition, prestige and accomplishment within their own framework.
of attainment remains strong and being given the exclusive attention of a teacher may bring changes in their behavior and academic achievements. According to Seeta Sinclair in 1979 has given her view that a retarded child’s need is the same as those of a normally intelligent child. He requires lot of love and warmth, discipline that should be mild but consistent and also requires conditions in which he can develop his capabilities to the maximum. He needs a great deal of more patience and tolerance than a normal child.

Music and dance has much therapeutic potentiality in it. Dance helps the people to become aware of their body movements. When once the body awareness builds up one learns to coordinate with his or her body and produces better movements. Dance activity develops the communicative and expressive abilities; it helps to improve memory, concentration and sequencing skills through movement and rhythm patterns. It reduces hyperactivities as well as passivity. Dance therapist Tripura Kashyap says that dance could be helpful for a number of disabilities from blindness to schizophrenia. Better coordination of the body leads to flexibility and ease of movement. People find it easier to express emotions and ideas through movement. Many people do not have sophisticated movement skills; dance is a very useful media for them. Dance is an audio-visual art form. Through aesthetic movements of the body it would be able to bring out unconscious material in a very authentic manner. Different types of dance styles are applicable for dance therapy. Hand gestures, footwork, head movements, neck movements, eye movements and other movement’s props. The idea is to use a lot of creative movement to facilitate free body expression.

Dance therapy has been developed specifically for the people who are with some disabilities. These people are left out of many enriching experiences
therefore dance therapy has a deeper impact in this area. When for particular illness the medical treatments have been given up or sustained over long periods of time than dance, music and other arts therapies could step into act as stimulants. Dancing is such an enjoyable and relaxing experience that people forget to feel sorry for them. It helps them to acquire a positive body image and feel comfortably good.

Experts in this field say that the truth of music therapy is neither in the exaggerated claims by musicians, dancers and persons connected with alternative systems of medicine nor in the casual way in which professors in medicine and psychiatrists dismiss the therapeutic benefits of music. The effect can be known by a judicious blend of science and arts with therapy for a group of patients. The therapeutic program of music must be done with the teamwork of specially trained teacher, musicians, dancers, psychologists and physicians to achieve the maximum success.

3.4 Impact of music on body and mind

The entire human life is besieged with mysteries into whose warp and weft it gets entangled and puts up efforts to release itself from them. Some of the mysteries are solved in this effort, but again man goes lost into this labyrinth. Agonizing remains the life and in distress it ends. In such ups and downs of life very few moments are given to him, which he could call as pleasant. Untiring
efforts of man are directed to the activity of lengthening those moments that bring pleasure in his life. Famous Hindu poet Jayshankar Prasad says, 'A singular moment of joy is far better than a long miserable existence'. The very intoxication of which makes man plod his weary way.

What we call culture bears in its bosom such rare things that are capable of bringing happiness into his life and with their help man not only gets rid of his malady but enjoys the bliss which brings him invigorating energy.

This world is rich with the things that may gift him with that bliss, but music among them is unique in its own way. Man endeavours to express his feelings through different arts, however, music in comparison to the other fine arts is more capable of giving the desired emotions a greater exposure because the celestial sound makes him realize not only terrestrial but divine happiness and peace. The fine arts include painting, sculpture, architecture, literature etc. All these sixty-four arts have only one aim of self-expression, which is the basic goal of all art. The perpetual wish of man has been to express all his sufferings and all his pleasures. After all the artists associated with all fine arts certainly includes music in their life as well as in their own art. Music is a peaceful medium for exhibiting words, sentences, literature, poetry and self-expression. Over and above it, the other artists of fine arts will accept that when words or literature is set into music, its sublimity becomes supreme. Words or sentences formed of words first produce consonant out of sound, and then they produce words. Words give meaning. Meaning creates vibrations. Vibration again produces sound (swara) and that sound creates the words of beauty that is aesthetic. So long as word dominates we attain worldly joy, on the other hand just as the domain of sound begins, the joy that we attain is spiritual. No doubt, the power of word is of
essential here. Right from the time the vocal music came into existence, the word came to be accepted as important as sounds (swara). A mere glance into the Rigved and the Samved indicates that creation of Samved is made only with the purpose of bringing musicality associated with sound and rhythm to the Mantras of the Rigveda.

As soon as the life begins to sprout rhythm begins itself or we can say that human life comes into existence because of rhythmic waves. Wheel of time gives a seeming resemblance of rhythm. Entire living entity owes its living on pedestal of laya (rhythm), e.g. man’s movement, his respiration, tik- tik of the clock and ceaseless throbbing of veins of his body. Irregularity in the beating of his heart is an alarm of impending danger for his life. Rhythm enriches with beauty, any of the form of our life. For example flowers, fruits, plants, nakshatras (constellation), the earth in everything when it quivers there is a measure of regular beating in them. This flow of aesthetic beauty is in itself musical.

Music renders greatest help in making man free from tension. No doubt different medicinal drugs are given to liberate him from the tension. But they are effective for a certain period of time. And as soon as their power is exhausted, man retrieves to the earlier condition of uneasiness. The fact is that till the impact of drugs continues he feels less tension. But tension retrieves when he regains sleeplessness and he needs drugs again and thus he becomes addicted to drugs. Music is stabilising its place in therapeutics. It is well known as ‘music therapy’. This treatment exercises considerable influence on the individual of each and every class. The main purpose of it is to explore how the emotional instability of man could he overcome. Music is concerned with emotions. Music controls the
shattered mental state and uncontrollable emotions. This treatment does not need medicines. What is required is sweet and delicate sound of music.

In the opinion of Dr. Anthony Star, "Music is the best means to attain freedom from tension". It has direct impact on emotions and the language in no way imposes any restriction to it. Music is a rhythmic outburst of sounds pleasant to listen to and comprises of regular intervening pauses, which is a nature’s gift and has an equal impact on mind as well as body. Taking into consideration influence of music the doctors, in order to neutralize the psychological and emotional strain lay equal, rather greater importance to music, meditation and yoga along with medicinal drugs. Since it is proved that liberation from tension is possible even by music, it has increased people’s curiosity as well as liking obviously for the reason that it is a simplest and most natural procedure.

In the Indian music there are many ragas, which influence the mind on being listened to, in the same way, as is their nature. Take for example Darbari Kanada or Adana, the very nature of the harmony of the notes of raga. Darbari Kanada is such that if it is sung or played in vilambit laya the receptor’s agitated mind finds repose while catching its tunes. As against this raga Adana is unsteady (chanchal) by nature. Listening to this raga cures the depressed. The gist of it is that the nature of the ragas is that they certainly influence emotions of man.

The former Dean of the music and fine arts department of Delhi University prof, Sumati Mutatkar is of the opinion that: our Indian music consists of the ragas of all sorts of nature. We have in our music many ragas, which are solemn by nature, and they calm down our agitated mind. The ragas like Darbari,
Maikauns, Yaman etc have moods of all kinds e.g. serious, or wavering etc. The intervening pauses of the notes have greater impact on our mind. Referring to the fitness and activity of body (physique). She says- 'let some sluggish, sleepy fellow made to listen to Tarana, he will immediately get away with his slumber and his mind will soon be filled with excitement'.

Greater impetus to research work is given to music therapy in the foreign countries. The results of adapting this system have been found encouraging. An American Doctor Dr. Harls Eston has tried to provide more systematic approach to this process. He has practiced this method of treatment for about twenty years and he has arrived at a conclusion that the percentage of recovery from disease through music therapy is far better than the recovery made by allopathic treatment. Especially for the mentally sick. Music is an infallible medicine. Its very use is important. In case of the musical disorder more successful experimentation can be made undoubtedly by music than by other alternatives. And freedom from the disease is likely to be quick.

Study of Yoga too is accessible through the three branches of the science of music viz. Vocal, Instrumental and Dancing. Vocal practice leads to the exercise of Tongue, Throat, Chest and especially the Heart. In the different motions of breathing the effect of ascending notes and descending ones is bound to be exercised on respiration, muscular system, arterial system, heart, blood-vessels and it strengthens them. Over and above it, one learns how to control the process of breathing, which is based on music. Instrumental music provides useful exercise to head, neck, shoulders, abdomen etc and one attains overall exercise of his body through dancing. Looking from this standpoint music is a kind of the study of the yoga too. Music has tremendous effect on the fetus and
music has already proved its scientific nature. The example of Abhimanyu of the Mahabharata is well known to everybody. In many hospitals the arrangement of music being played through the Tape-recorder is made available at the time when the baby is about to be delivered. This results in reducing the labour pain for the mother and as the baby enters this world the musical sounds reach its mind through its auditory system, that infant is more intelligent. One more example: A certain person would never forget one specific tune though he had never heard it before. Later on he came to know that his mother used to hum it to make the unborn baby hear it. This event proved that if the mother is made to listen to the music during the days of her pregnancy, it unfailingly influences the personality of the child. As all the senses of the fetus are introvert, a thing or event leaves its impression on it. This has been proved by the scientific research.

Not only on human beings but also on inanimate and living things too the excessively positive impact is traceable. A Keralite farmer has hung up speakers at various spots in his farm. Along with watering his plants he played music every morning and evening regularly before the plants. And he discovered that his crop was richer than that of other farmers.

One more example: Pandit Omkarnath Thakur had conducted a research on the impact of music on the vegetation. He has drawn a conclusion that music makes the growth of plants better. Dr, D.C.N. Sinha, the botanist at the Annamalai University, has proved with his experiments that sound waves render essential help to trees and plants in the growth and development of the harvest. Thus the luster of music contributes in its own way towards the growth of the vegetation.
A few weeks ago news was published in the edition of a well-known Daily. It ran like this- In the city of Birmingham in England, in a high school for girls, when the students will go to take their annual examination, in the examination hall they will be made to listen to the musical compositions of Bach (a musician). The principal of this institute believes that the aim of making the students listen to Bach’s music prior to their exam is that they should not get scared any way, nor should they feel physical nervousness and lethargic. The Editor while counseling the central secondary Board of Education stated that in our own country too there may be pupils who must be feeling nervous before the commencement of the examination, they can be rescued from it. And the results will be no doubt pleasing.

Music is both an art as well as science. It deals with the expression of ones feelings and emotions through sound in melody in harmony through its composition and execution. On the other hand, it is a science concerned with the systematic management of sound at all levels in the universe. The term music has been used equivocally in wider sense as synonymous with sangeet and it has been defined in the Sanskrit Texts as follow-

“Gitam, Vadyam tatha Nrityam, tryam Sangitamuchyate” (Sangit Ratnakar). According to Sangit Ratnakar, singing playing musical instruments and dancing are the three components of music. Music is the combination of the three arts, viz singing (Geet), playing musical instruments (Vadya), and dancing (Nritya). These three arts are generally referred to as fine arts and are closely connected with each other in such a way that it is almost impossible to separate them.

In the study of the Indian music there are two major components, which have to be understood.
(1) The structure of melody and
(2) The structure of rhythm.

Melodic structure involves the understanding of various aspects such as the Nada, Shruti, Swara, and Raga etc. The other structure of rhythm involves the perception of the Tala and Laya.

Objective determinations of music are mainly three elements - Sound (sabda) Tune (kala) and Speech (vak). These may be known as material causes or primary material and medium of music. In the Sanskrit language sound is known as the Nada.

Nada

According to the Indian Philosophy of Vedanta the word for sound is Nada Brahma alias Shabdha Brahma. Some scholars explain it as ‘Nada Eva Brahma’ means the Nada itself is the Brahman. Further the NADA is a manifestation of sound which is (Sat, Chit and Anand) of the Brahma. Pandit Sarangdev and Kallinath have described the Nada as energy of the Brahma and the propitiation of the Nada leads to the attainment of the Brahma, which can also lead to the Moksha, which is the ultimate goal of human life. The Nada is the concept of boundless delight ‘Anand’. It assumes three artistic forms and aesthetic feelings – Brahma, Vishnu and Shiva. The three supreme powers of the world –creation, preservation and destruction. A single movement called the Shakti makes this emanation possible. The energy is also known as Nada.
Matang has given the principal definition of the Nada in his book ‘Bruhaddeshi’ as –

"Na nadem vina geetam na nadam vina swarah,
Na nadam vina nrityam tasmannadatamakam jagat”.

There is no song or music without the Nada; there are no musical notes without the Nada. There is no dance without the Nada; the world is filled with the essence of the Nada.

Brahma is known to be the form of Nada, so are the Lord Janardhana i.e. Vishnu and Maheshwara i.e. Shiva. Shakti (power) is also the form of the Nada. Air arising from the location of throat (kantha) and moving about up and down, produces the intensity of the Nada. Nada is made up of a dual verbal component. The former NA is spoken of as air and the latter Da is known as fire (energy). The word Nada is derived from the Sanskrit root Nadant – means to make inarticulate sound. It is fivefold like: - Sukshma (Subtle), Atisuksham (very subtile), Vyakta (distinct) and Kritrima (artificial). The subtle Nada dwells in naval, very subtile one in the hearts, distinct one in the throat, indistinct one in the region of cerebrum and the artificial one in the month.

In the swaradhyaya chapter in ‘Sangeet Ratnakar’ Sarangdev has described the indistinct Nada as –

"Phalanyudyanti jeevasya poorvadidalgamina,
Chakram sahrsapatram tu brahamrandhre sudhadharam”. 2:138
"Brahamrandhrasthito jeevah sudhaya sanluupto yada,
Tushto geetadikaryani saprakarshani karyet". 2:143

"Esham sheshu patreshu chakreshvanyeshu crasthitah,
Jeevogeetadisansidhem na kadachitvapnuyat", 2:144

The indistinctive Nada, which dwells in cerebrum or brain (Brahma Randhra) is known as Sahasradalpadama or Shunya Chakra and it is the basis of all types of thoughts, virtues and visions. Other charkas are situated in different organs of the body. The Yogis (saints) can achieve the param – Brahma by gaining control over these charkas, which can be achieved through sangeet or music. Pandit Sarangdev in “Sangeet Ratnakar” as as used in Music has defined the term Nada –

"Nakaram prananamanam dakaramanalam vidu,
Jata pranagnisanyogatten nadoabhidhiyate”.

The letter Na is the indicator of prana (life) and the letter Da of Agni (fire-energy). The word Nada originates from the combination of these two letters. Speech and all the communication of the whole world are dependent on the Nada that is why it is said that Nada is the supreme power.

The chief and the only property of music is sound or Nada. The western scientists say that sound is nothing but a sensation caused in the first instance by certain oscillatory motions of the particles of a body and the effect of these motions being transmitted through some medium generally atmospheric air to the ear where they produce impressions on the nerve corresponding to the nature of
original motion, which causes sound. The Indian music has its deep root in spirituality and thus the Nada has been explained in terms of musical sound. Nada is considered to be of two types. (1) Ahata Nada and (2) Anahata Nada. The sound produced from striking it is Ahata Nada secondly produced and unstuck sound is called Anahata Nada. The former being an object of sense perception and the latter a matter of mystic experience of yoga in which sound and light are fused together. The Nada manifests itself in the human body so there is direct perception.

Pandit Shubhankar has classified Ahata Nada or stuck sound in his book ‘Sangit Damodar’ into three groups-

(1) *Animate sound*

(2) *Inanimate sound* and

(3) *Mixed sound.*

Animate sound is produced by living beings. Inanimate sound produced by lifeless object and Mixed sound produced by human and non-human agencies. Anahata Nada or struct sound is beyond human experience and it makes a continuous sphere of bundles infinite dimensions. The Ahata Nada can be termed as musical sound. The scientists have given three names to the musical sounds according to their functions i.e.

(1) Pitch of the sound

(2) Intensity of the sound and

(3) Timbre (character) of the sound.

Immanent sound in the human body is grouped into five types on the basis of its quality of development from the root of the naval to the cerebrum and the
buckle cavity of the mouth through the heart and the throat, Muni Matanaga and pandit Sarangdev regard them in the following table:

<table>
<thead>
<tr>
<th>Table No. 1</th>
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<tbody>
<tr>
<td>1. Navak (Nabhai)</td>
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<tr>
<td>2. Heart (Hridaya)</td>
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<tr>
<td>3. Throat (Kantha)</td>
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<tr>
<td>4. Palate (Moordha)</td>
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<tr>
<td>5. Mouth (Asya)</td>
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The manifestation of Ahata Nada is accounted for by the desire of self-expression. This desire however is the cause of speech and therefore of singing, music and dance.

**Shruti**

The word Shruti originated from the root (Dhatu) ‘shru’ meaning to hear and thus *shruti* means any sound that is capable as being distinctly heard by the ear. Nanyadev as – “Shruyat eti Shruti” has defined it. Matang Muni has analyzed the shruti as – “Shru Sravne chasya dhatauki, Pratyaya smudbhava shruti shadbah”. According to him, that which is heard unknown is Shruti. It may be one or many. Those who believe that it is one, they explain that since the Shruti is the outcome of the Nada, which is produced through the combination of bodily fire and air. In this respect there is a possibility that the Shruti is only one. Others accept that the
shruti is to be twofold because of the division into the swara. Vishvavasu who has shown it as- Sound itself is known as the shruti on account of being perceived by the sense of hearing. Shruti is situated in the intervals of the swara. Some accept the three fold Shruti on account of its relation with the three sthanas i.e. the Nada which is being produced from heart (Hriday) known as Mandra, from the throat (Kantha is known as Madhya and from head (Mastak) is known as Tara Sthanas. Some authors accept the fourfold Shrutis divided according to the Vata, Pitta, Kapha and Sannipata. The great scholar Tumbru who has explained this as quality of voice or sound is known by its nature. The high voice that is dry (Ruksha) is known as Vataj (originated from vata), the deep, full and clear voice should be known as pittaj (originated from pitta), the creamy, soft and sweet voice is the kaphaj (originated from kapha), the voice which is the combination of these three qualities of voice should be known as sannipat. Others accept the ninefold shrutis and this concept are based on the use of the swaras occurring in the holes of the venu (flute). Thus the number of the Shruti on the flute is nine.

Kohala has said that some scholars speak of twenty-two Shruti; some speak of them as being differentiated into sixty-six and others propound their infinity. Pythagoras is said to have divided the octave into fifty-five intervals but Euclid of a later period as a result of mathematical researches considered a tune or interval into twelve parts. Later the Greek scale divided the octave into twenty-four small intervals.

Though, as a matter of fact, the Shrutis are countless but there has been a consensus of opinion since time of Bharat Muni that they are twenty-two in numbers. These twenty-two shrutis can be distinctly heard. Shruti is not only the
smallest audible sound but it is the accurately audible sound that is heard in accurate relationship to some other.

Svara

The Sanskrit explanation for note is the Svara, which is sound, voice, tone in (high or low) accent- *udatta, anudatta* and *swaritta* or a note of the musical scale. Abhinagupta defines the swara like – the sound that is produced by the influence of the sound arising as a result of striking (a vibrating string) at microtonal position (shrutis-sthana) and is thus essentially resonating, sweet and creamy sound. Thus on any interval point (sthana) the attacking part (abhigata) of the sound is the Shruti and the resonant part is the swara. Similarly Pandit Sarangdev defines the swara in the following way. Immediately consequent upon the shruti, creamy and resonating the sound that delights the listeners’ mind by itself is called the swara. When a string picks the very first sound produced in the shruti it is called the swara. So the shrutis is essentially free from resonance whereas swara is characterized by resonance. The swara can also said to be a developed shrutis. It is known that the twenty two shrutis in groups of four, three and two go to make the seven swaras, *Sa-* (3), *Re-* (3), *Ga-* (2), *Ma-* (4), *Dha-* (3) and *Ni-* (2).

Svara means the sound, which is the progenitor of the raga. The swara is also known as colour or delight. Kohala has also explained that the swara is the delightful sound and it is said to be infinite on account of its combination with the *Jati, Bhasha* (dialect, language) etc. it is combined with syllabic unit and verse. So for practical purposes ancient, medieval and modern authors and experts in the art and science of music have unanimously accepted twelve
principal sounds they are known as swaras or notes. The swaras have emanated out of the shrutis.

Swaras are of two kinds - Shudha and Vikrita. Shudha swaras are seven in number and are named Shadaji (Sa), Rishabha (Re), Gandhara (Ga), Madhama (Ma), Panchama (Pa), Dhaivat (Dha) and Nishad (Ni). Vikrita swaras are the notes Re, Ga, Dha, and Ni, which sometimes become flat, or komal when they come downwards from their original place and Ma becomes sharp or tivra when it goes higher from flat. So, we get five notes in two different forms Tivra and Komal.

Raga

Raga has been defined in Indian Text as - "Ranjayati Iti Ragah". That which can be enjoyed with the melodic pattern of tones (swara sannivesh) is called Raga. These may be easily be analyzed and worked to be group into the structural and functional definitions. In the structural sense it is the most developed tonal form, the stages being micro-tones, tones, simple molecular tonal motion, mixed molecular tonal motion, finally melodic patterns shrutis, swara, varna, alankar, gamak, sthayi, raga etc.

Bharat Muni used the word raga in compound terms such as Jati raga, Gram raga etc. And he uses it in the general sense of emotional color or aesthetic enjoyment or pleasure. It is Matang Muni for the first time who has used it in the technical sense that particular sound (formation) which is embellished by musical tones and the movement of tonal patterns is thereby delightful to the people's mind is called Raga.
Matang Muni has derived the word RAGA from the root ‘Raja’ to color. He brought out the meaning of this derivation grammatically as well as by referring to usage. Kallinath also agreed on the above point yet he seems to have acquired a different meaning in usage such as - when one says that, I like this raga or I do not like this raga. The implication of this sort of comment is clear that raga means tonal configuration more than its literal meaning, the art of coloring (rakti), which refers to its function.

Indian music, as already emphasized, is essentially melodic. The music of the fold and the tribes, religious and sacramental chant or classical art, all these have given us the concept of raga, which is the fundamental basis of the Indian music tradition.

The raga is a matter of notes. This is just as much true as poetry is a matter of words or pictures a matter of paint. It is such a long way from being the whole truth that it appears slightly naïve if uttered seriously. A raga is also a stringing together of notes in a ripple, slide and a run of colors. It is an inter play of feeling an incandescent suggestion of meaning. A raga is all things and yet is something else.

In understanding the psychological dynamics of melodic integration firstly it is the necessity of the recognition of the fact that it is the emotional excitement that is the cause of music. It is necessary to communicate with fellow beings, the necessity to relieve deep psycho-physiological tensions. This at first appears as an obvious platitude. The immediate psychological process that motivates musical creation is the emotional tension of the musician as well as the listener.
The musical creation is at once the result of and the relief or manifestations of deeper infra-conscious drives. Psychological state is reflected in the neuron-psychological tensions and the desire for consequent adjustment of the organism. The state of an organism at rest but ready for action is known as the tonus, this is the normal unexcited state of the neuromuscular system of the organism, a prolonged existence in a tense state is harmful for any organism whichever tries to return in the condition tonus as soon as the cause of tension is removal, otherwise the organism would become neurotic.

This basic process of organismic behaviour is immediately applicable to musical states of the human organism. Since musical production is an emotional state, it is necessarily a state of tension. The organism therefore always tries to return to a state of tonus from excitation and the resolution of tension to tonus is a very basic process in the neuron-psychology of music. It is also been suggested that the cortical activity may also be defined in terms of this tonus. The alpha rhythm in the Electro encephalogram is the usual condition of the brain, which is disturbed by certain neuromuscular activities. This is a fundamental scanning mechanism, which perhaps is a part of the process of melodic integration or tonal gestalt. It should be remembered that tones have no emotional value apart from being perceived. The pleasantness or unpleasantness of tones is also referred to as the consonance or disconsonance value. Mainly there are four factors like – Smoothness, purity, blending and fusion that are necessary for the judgment of pleasantness. Recently Mr. Ehrenzweig has put forward a very interesting theory of unconscious perception. He has also shown how infra-conscious forces influence our perception of tones specially what we call tone – color or tone quality. This is a very fruitful approach, which has to be experimented systematically. Even taking all this into account we are not well in possession of
all of consonance. In the final process there is resolution of tension due to
dissonance into tonus.

As one of the guiding principles we may take the fact that music follows
the path of tension reducing. Tones that are constant with one another or the tonic
are pleasant and restful. Similarly tones that moves towards the tonic create
greater desire for rest and hence create maximum tension, again the vakra gati
(tortuous movement) creates greater tension and confusion than the tension
which disturbs and confuses the conscious are created by the use of dissonant
tones by the employment of tortuous movements and by the avoidance of resting
places. More accurate result can be obtained through the study of three factors.

(a) Tonal level.
(b) Tonal quality.
(c) Tonal movement.

Rhythm

In music the time is a vessel through which tone flows. Without time we
have no music. It is just as without space we have no visual arts. Elementary
musical effects of meter and rhythm take place from the temporal succession. It
is not something external, the different accentuation of beats at all, but in the
empty intervals between the beats in the places where time merely clasps. This
type of time nourishes the rhythmic life of music. To understand the nature of
rhythm in music one has to see how time is divided. Rhythm is a particular
arrangement of beats of time. Though time is measured by break up of these
beats mainly yet we use outside adjuncts like – clapping hands, beating together
of sticks, striking a metal plate (kashar) or playing on a drum. A very common way of dividing the flow of time familiar to all of is as the ticking of the clock or clapping of hands. All the ticks are uniformly repeated and here we have the simplest breaking of the stream of time.

Rhythm, like melody, has been raised to a high degree of sophistication. Besides the division and distribution of time in Tala and in the art of drumming the composition and their relation to the Tala the cross rhythms and syncopating in actual performance and further facts are fascinating but it is very difficult art. So it is said that the first necessity in music is the control of rhythm, without it the song and dance will go out of control like wild Elephant without the check of the Ankush or the Elephant driver' Shruti hook.

"Talastalpritshthayamiti dhatordhani smrita,
Geetam, vadyam tatha nrityam yatastale pratishthitam.
(Sangeet Ratnakar, chap 2-5)

According to Sangeet Ratnakar singing, playing of instruments and dancing are dependent on Tala. The ultimate basis of everything living or dead is vibration, the vibrations when organized and ordered into manifold creation i.e. projection designed in a systematic form may be called rhythm. Synonym for rhythm is the Laya, which is the pace of movement of the Tala. It is the speed at which a Tala is played. The Indian scholars of music have named rhythm as the Laya. It is nothing but a natural harmonious flow of vocal and instrumental sounds and also a regular succession of accents. The flow of time has to be celebrated; this celebration is called the laya or tempo. So if the unit of celebration is large we feel the passage of time is slow and it is known as
vilambit. Thus the laya is the process of the celebration of time. Rhythm plays an important role in human life. Regularity is the order of the nature. The planets move around the sun in regularity. Human life, plant life and animal life are bound in their growth and development by strict rules and regularity. Rhythm pattern affects the human mind. The slow motion or rhythm or tempo creates calmness and balanced attitude of mind, whereas first motions can instate the feelings of bravery, excitement and courage etc. Speed of rhythm is measured through the Tala and the Tala is a measure of time in music, which is an important factor of every school of music like – vocal, instrument and dance. It regulates the relative duration of musical sounds and as such seems to have considerably engrossed the artist’s mind. When accompanying in the dance, vocal and instrumental music the Tala maintains the balance which is the most essential character of the accompanies. The Tala has its own divisions, it moves in bars (khanda) and each beat in it is divided into small fractions. The word Tala is derived from the Sanskrit root Tal. Parshvadeva has defined the Tala as –

"Tal shabdasya nishpatti pratishtharthen dhatuna,
Sa Tala kalamanam yat kriyaya pariklpitam".

Bharat has described sangeet as– ‘Swara Talapadatamkah’ a composition, which is comprised of the swara, the Tala and the pada i.e., tone, matra and verse respectively. The Indian Tala or time measure is more difficult than the melody or the raga itself. The raga must be sung strictly in the Tala. A person cannot know in any sense of the Indian music until he or she is the master of techniques of the Tala. Every type of music is dependent on the Tala. A rendering of musical composition without Tala is like offerings without any hymn – mantra.
The laya and Tala can be understood as the constant interval of time continuously maintained in repeated stress of any kind. Laya is a continuous movement in space of time. Tala puts a limit to it by dividing the time at a certain desired interval. The constant interval between two ticks of a second is its laya; the minute, which measures sixty seconds, is the Tala (time cycle). While the second is time unit the matra (beat).

Music is kind of aesthetical experience. Aesthetic activity may accompany practical, moral, religious, intellectual and social activity and enhance our enjoyment of them. The raw materials for musical experience are tones. Each tone has its own qualities of timbre, pitch and loudness. These qualities constitute the sensuous material of music. We may call these small patterns of tonal material as musical elements because out of them or with them larger patterns are woven. On which one simply hears these elements come and go and responds to them with feeling of pleasantness or unpleasantness. It is something like enjoying the changing colors of a kaleidoscope. This dramatic change of tensional structure of music may be called its aesthetic form. It may be noticed that the fine arts are associated with two senses out of our five senses. These two senses are visual sense and auditory sense. In the other senses like tactile, olfactory and gustatory there is no scope of aesthetic imagination in it, but the visual organs of hearing lead the man to artistic and transcendental imagination and to the creations of fine arts.

Fine arts associated with our sense of seeing through the eyes are called visual arts. Such arts are mainly painting, sculpture, architecture and dancing. On the other side fine arts associated with our sense of hearing are called auditory arts or aural arts. So the main aural arts are vocal music and instrumental music.
Dance comes in both the category like – visual and auditory. Regarding the essential material of fine arts it can be noticed that sound is the basic element of music and literature. But literature is concerned with the meaning of the words composed of sound uttered or unuttered. Thus music is formed only with the sonic property of sound. These properties consisting of pitch, timbre, volume etc. Whether in the east or west all the aestheticians in the field of musical art can be broadly divided into two classes. One holding the view that music is autonomous world of sonoric beauty no relationship with worldliness and the other class preaching that music is closely related to all human feelings and the world around us. According to autonomous school of thought the essential beauty in music is identified with the sound patterns in progression. The alleged feelings associated with them are somewhere customary, somewhere conventional having no universal ground and most often, fancifully or arbitrarily attributed to the feeling.

Kant the well-known German philosopher and Johan Friedrish Herbert, the well known aestheteician, pronounced more distinctly regarding musical aesthetics that ‘music is music and to be beautiful indeed means nothing’. Eduard Hansticke the German philosopher asserted in his work that music could express no indefinite feeling. It has nothing to do with the nature. Natural sounds are quite irrelevant to musical scale. Music originates slowly from the fertile imagination of the composer: Its essential beauty is ‘sound’ in motion. Genuine enjoyment of music represents intellectual contemplation of the progressing sonority and a careful guard against emotional outbreak, which makes proper intake. Hanslick further said that though music cannot represent any human emotion and feeling, it could, of course, represent the dynamic aspect associated with any sort of emotion or feeling. Musical tempo slow or fast can be related to mental dynamics. Regarding the beautiful-ness in music Hanslick finally explained it in
a rhetoric language. In his word ‘music is a vital spark of the divine fire’. Similar is the utterance ‘Nada rupam param joti’. Divine fire is Nada as stated in ‘Sangeet Damodar’ by Shubhankar.

Plato, the great philosopher referred to the art of speech and narration before commenting on music. A propagator of the theory of imitation, he suggested that the speaker will have to imitate for proper effect, claps of thunder, the noise of wind and hails and axles and pulleys, the notes of trumpets, flutes, pan-pipes and all instruments, even the cries of dogs, sheep and birds. Suitable pitch and rhythm with necessary variation will add to the correct diction and cadence. Speeches and tales must resort to a minimum of such kinds of music. Plato divided the components of music into (1) the words (2) the tune and (3) the rhythm. According to Plato there should be two fundamental temperaments (a) swift and energetic (b) slow and mild. Mr. Glaucon, who was a close associate of Socrates and had sufficient understanding of music, suggested that the Greek musical modes and the Indian THATAS require a separate study. Plato had his fundamental principles on the rhythms – “we must not peruse complexity nor greater variety in the basic movements but must observe what are the rhythm of life that is orderly and brave and after observing them require the foot and the tune to conform to that kind of man’s speech and not the speech to the foot and tune. The details were left over for music experts’ consideration. Plato asserted that the rhythm and tune should be in accordance with the words and not the reverse. According to him the qualities should not be only on music but also of painting and similar other craftsmanship’s like weaving, embroidery, architecture and likewise the manufacture of household furnishing.
Socrates and Plato along with Glaucon wanted to introduce music education in the state. According to them education in music is most sovereign because, more than anything else, rhythm and harmony find their way to the innermost soul and take strongest hold upon it. Plato commented that a true musician must be able to recognize the form of soberness, courage, liberality, high-mindedness and all the combinations that contain knowledge of them belonging to the same art and discipline on the whole music should bring forth a coincidence of a beautiful disposition in the soul and corresponding harmonious beauties of the same type in the bodily form. The next contention of Plato is that music and beauty led to the philosophy of love as opposed to extravagant pleasure, which leads to the ultimate pain. The consummation of music culture is the love of the beautiful. Aristotle also pleads for music education as it is in harmony with human soul. Melodies and rhythms contain representations of anger and temperance and all the moral qualities. Musical expressions most closely correspond to the true nature of these qualities to the true character and soul. There can be diverse kinds of melodies, which produce diverse types of affectations. Aristotle quoted some examples, such as Mixolydian makes men mournful and restrained. While the plerygian makes men enthusiastic and the similar power. Some of the rhythms are of stable character while some others are of emotional nature and of the latter some are vulgar connected with cheap wish, which are always avoidable in education.

Aesthetician Kant says that art of tone that is music expresses as itself by means of sensation without concepts and leaves behind no root for reflection of thoughts. Still music moves the mind more diversely. Inspite of being transient, it has an in tenser effect. In his view music is more a matter of enjoyment than a culture. A more or less mechanical association causes its effect. He also thinks
that music is a language, a language of the affectations through the law of
association. But the aesthetic ideas inherent in a piece of music are not concepts
or determinate thoughts. The form of the arrangement of musical sensations
comprising harmony and melody express the aesthetic idea of an integral whole
of an unspeakable wealth of human self and that sonorous wealth itself is the
affection in a piece. Thereafter, it is a matter of test, which constitutes the
judgment of an individual.

Hegel thinks that music is a romantic art and there is new kind of
objectivity that enters into its sensuous element that is sensuous sound in its
mode of expression and communication. Musical elements are ever passing and
unstable in character as these arise and vanish in the ether. This kind of
obliteration makes music romantic. The form and content of music are subjective
in character and communicate the inner life. The sensuous material in music
vibrates in it and always is in movement. This vibration and dynamism constitute
the life and spirit of music. Music relinquishes and obliterates the external form
of perceptible visibility. According to Hegel music can express the object-free
inner life or the abstract subjectivity. The main task of music consists in making
resound not the objective world itself but on the contrary the manner in which the
inmost self is moved to the depths of its personality and conscious soul. The
effect of music is also the same. It directly addresses the soul. Pure music leads
us to object, free inwardness and makes us introvert.

Music can be regarded as a universal language though the character of note
formation differs from culture to culture. The effect of music according to Hegel
precedes not to the intellectual realm but to the movement of heart and inner self
in an abstract way. Music in accordance with the quality of its content, from and
simultaneously in accordance with the aptitude and temperament of the listener may have varied kind of effects such as emotional, sensuous, melodious, harmonic, rhythmic, erotic, joyous, intellectual, painful, devotional, patriotic etc. Yet the peculiar power of music is elemental. Music fills the void of a particular duration of time. It involves the subjective feeling both of the performer and the audience and thereby acquires a subjective unity. According to Hegel a single note may be animated by feelings and become the expression of it. But music as a whole is constituted by the relationship and inner connection of notes, the relationship of succession in melody and that of concordance in harmony. Fragmentary notes may have their sources in nature but artistic relationship is the achievement of art. According to Hegel's observation and liking of vocal music, he admires that the human voice is the finest and the most perfect instrument which unites in itself the qualities of both wind and string instruments because in the human voice a column of air vibrates for note production and through the vocal muscles there comes to play the principle of tightly stretched strings. Consequently the musical voice can be perfectly synchronized with both wind and string instruments. Besides this the human voice is the direct expression of the soul itself, of course, the voice must be made so prefect as to produce the perfect note without any kind of unwanted noise.

Melody, according to Schopenhauer has significant internal connection from beginning to end. Melody records the secret history of human feelings and passions. Human will strives, is satisfied and strives again. Human passions move from wish to satisfaction, from satisfaction to newer wishes and so on. Melody expresses such multifarious efforts of will. Satisfaction is expressed by return to the keynote. Tension of kind or languor is expressed by a delay of this return. Quick melodies depict cheerful moods and slow ones can depict sadness.
Quick dance music represents only the easily attained shallow pleasures. The change of half tone e.g. the use of minor tone instead of the major can produce an anxious feeling. Thus there are infinite possibilities of melodies corresponding to inexhaustible transitions of human will. Further, according to him music is a universal language and its universality is not of abstraction but of definiteness. It resembles geometric figures, which are universal, definite and perceptible forms of various possible objects of experiences. This is also an analogy only to express certain inherent truth. In short, music exhibits itself as the metaphysical to everything physical in the world and the thing in itself to every phenomenon. All possible music deviates from perfect purity. The quality-tempered scale is artificial to some extent and it has been attained through age-old trail and error of the placement of notes. Every system of scale formation has to try hard to conceal this discord. A complete, pure harmonious system of tones is not only physically but also arithmetically impossible. Yet, even through this imperfect system music achieves its highest results. It is similarly possible in human life also. The metaphysical side of music is not arbitrary. It has rather a sound basis to the physical aspect of music. All the notes of the octave have relation to one another. This relation depends on their respective vibrations. Coincidence of vibrations produces consonance as opposed to dissonance resulted from irrational relation of vibration.

Rhythm comes from the relative duration of the notes and pitch depends on the relative rapidity of the vibrations of the notes. Herbert Spencer formed an obvious hypothesis set forth on the principles of psychology that music being one of the faculties of human nature; its root must have remained in his pre-existing archaic elements. Muscular contractions of our vocal organ caused from diverse sensations, emotions and passions affect our voice in the forms of fluctuation of
pitch, timbre, volume and also in the degree of rapidity and slowness of tones emitted in the automatic and continuing succession during vocal rendering. Music is a development of this tonal element or vocal expression. Arising out of passions corresponding to muscular stimuli, music attains its developed art form by virtue of aesthetic endeavour of the composers through their refined sensibilities. The technicalities confirm to the grammar only while the spirit of music is directly corresponding to the inner sensuousness of the musician.

Spencer has pronounced a pragmatic theory regarding the formation of music. Immediate pleasure should never be the end of music. Musical effect transcends mere enjoyment. The delight of music obviously ministers to the welfare of individual and society. Music not only originates from feelings but affect feelings of the listeners. As words are the signs of ideas, tones and tunes are the signs of feelings, the feelings associated with beautiful music are not always gross and familiar as found in the music of the savages but refined and apparently unfamiliar in our day-to-day life. Therefore the function of music is to facilitate the refined development of our feelings, emotions and passions. Music should be regarded as aid to the achievement of a 'high happiness' of an inexperienced felicity of an unknown ideal life.

The great poet shree Rabindranath Tagore has strongly suggested that music is not only a conglomeration of notes and rhythms but the main purpose of the music should be the expression of human feelings such as joy, sorrow, surprise, anger and all other sundry emotions.

Indian music in general and particularly the musical culture have evolved and advanced immensely in course of time. Aesthetic awareness has surcharged
to day's performances. Music lovers of the present era are aware of the fact that dry grammar cannot make an artist. Imitation and pedagogy have been replaced by genuine creativity. Our music is mere combination of notes. Until we instill feelings into it we cannot be proud of our musical culture. Apart from this music and dance, other arts are being regarded as means to the welfare of humanity and not for temporary entertainment only. Music is defined in terms of seven variables medium - tonality, timbre, form, content, and realization. Chromatic fusion of all these becomes an instance of music with the actual values of the variables. They include the relations of tonal patterns of musical diction to the emotive stereotypes and turn these into aesthetic stereotypes by virtue of their property, organic unity, deterrents, oppositions and harmony among themselves and other aesthetic properties.

These in their tonal effects make the music more or less musical and then not only tow musical acts can be comparable the phenomenology gradation of the seven variables becomes logically justified. Music affects the brain through the ears, then stimulates and refreshes the brain with its sweet concord. Rhythm and melody find their way direct to the secret recesses of the soul. No other science than this fined their way direct to the secrete man milder, gentle, better behaved and more reasonable. It is the most valuable means of upbringing the youth, it eliminates willfulness, impropriety and coarseness from human thoughts and action. It adds, on the other hand, firmness, moderation and harmony to the character and leads ultimately to happiness. Music strengthens mind through concentration of will force through the medium of sweet and beautiful combination of musical notes.
The concept of music therapy has emerged from the correct intonation and right use of the basic elements of music such as Nada, Shruti, Swara, Raga, Tala and Laya. Thus if man translates into his life the above examples, he will make his life more meaningful and peaceful.