Impact of Experimentation in Other Aspects of Instrumental Music

It is human behavior to combat with nature and as a result he cultivates new ideas, imagination and creativity. Man always had an alliance with experimenting his imaginations or ideas with the help of his creativity without being biased with the old technology or art. It is easy to say that experiment is a process to test an idea or try something new in order to gain experience. Experimentation is good, if conducted by knowledgeable person and helps the art to retain its spirit and charm. Experimentation is essential for all fields as new experiments result to invention of new thought patterns, new practices, new structures and new ways to act, which generally give new solutions to previous facts or thoughts. In the context of Hindustani Classical Instrumental Music, a lot of progress and development can be seen in Performing Scenario and Invention of New Instruments. Hindustani Classical Instrumental Music has its own fundamentals, which are based on prior experiments of the contemporary artists. Impact of experimentation is broadly classified in Performing Aspect, Manufacturing Aspect, Technical Aspect, Scientific Aspect, and Industrial Aspect. Out of these, performing and manufacturing aspects are already discussed in previous chapter and other aspects are discussed below.

Technical Aspect

Music today runs into innumerable genres varying from Classical Tradition, Orchestration, Fusion and other forms. Hence, the need to record diverse musical sounds have gained tremendous importance over the ages, so that music can be stored, enjoyed, cherished and replicated by the mankind for eternity. Advancement and development in the technology which we see today, is an outcome of hard work and experiments of many scientists and engineers worldwide. Technology has benefited mankind immensely. It has revolutionised the living conditions and has brought the people of different countries closer to each other by narrowing down the geographical boundaries. This has been made
possible by advancement and experimentation in communication technologies. No other science has totally revolutionised man’s lifestyle, his thought processes, his work and actions as the science of Electronics. It is necessary to say that technology developments also helped experimentation itself to enlarge its branches. Electronics and Electronic inventions have had a stunning impact in all disciplines and music is no exception. Music has been sky-rocketed with exponential speed in a short span of about sixty years into a world of sophisticated electronic gadgetry that can be baffling, extraordinary, wondrous and horrifying. Electronic media advances are bound to have a profound effect on music which is essentially a communicative medium. The confined and sheltered confines of temples, churches, king’s courts, small mehﬁls where the musician ruled supreme and his will was acted as law as far as his music was concerned, where he had a devoted audience which appreciated music, have been broken down. The musician and his music have been catapulted by the electronic media into a bewildering world of electronic gadgetry, publicity and media hype. The musician’s seclusion and his anonymity have been torn to shreds and he is face to face with a multitude of people knowledgeable and ignorant, appreciative and disdainful, his words, his music and his behavior under constant inspection.

Every invention which brings its advantages also throws up its challenges and problems. With amplification and the use of microphones both in the radio and in public concerts, new problems regarding voice production, distortion of voice, improper balancing etc. confronted the artists. Certain voices sounded musical, others sounded harsh when amplified. Musicians had to adjust their posture and volume of the voice to suit the mike. But this is not as it should be. Many a time the personnel manning the amplification systems are not trained to adjust the equipment to the needs of the musicians. Many times in India the people manning this equipment are untrained and totally oblivious to the demands of music. As a result these powerful electronic media tools become a source of despair, whereas if handled by competent people they can become a source of joy.
both to musician and listener. Positioning of the microphone, balancing, equalizing, mixing, recording and effects are all highly specialized tasks. To get the best out of performance it is imperative that we learn the importance of proper maintenance and the presence of highly skilled personnel to operate these electronic instruments.

Electronics Media can be roughly divided into these categories:

(1) Radio broadcasting

(2) Recording media

(3) Television and Cinema

(4) The Print Media

(5) Computers Technology

1) Radio Broadcasting

Till the advent of Television, the major connection between electronic media and music was radio broadcasting. With the advent of broadcasting, music (especially classical music) was no longer the preserve of small halls and princely courts. This art form was earlier available to a few selected people, who either lived near the artists and were their appreciative audience, or had the opportunity to attend and be invited to the concerts held by the kings, princes and zamindars that very often retained musicians in their courts or invited them from neighboring states. With broadcasting, the music became available all over the world in stages. This had immense effect on the popularity of classical music. More people began to be aware of classical music, they could afford to listen to it in their homes, and they could learn to appreciate it, understand it, become aware of its intricacies, and listen to various artists from all over the country singing various styles. What was an unattainable object, talked about in awed hushed tones, was brought into
every home, it lost its aura of mysticism and mystery and became something available to one and all, so that through repeated listening one develops an empathy and feel for it, a liking for it. It became a source of relaxation, a source of entertainment, something one could turn to within the confines of one’s home. Over the years, many people have developed a very good understanding of classical music and have learnt classical music by listening to the radio. Classical music received a great boost due to the radio. With the advent of regular broadcasting, many musicians started performing regularly on the radio- it became a source of income for them. Along with the main performers, the accompaniments’ opportunities also increased. They also started broadcasting. The most important aspect was that it became a source of inspiration for the less known artists who did not get event outside. They still had an opportunity keep one’s art alive, gives one the determination to practice and put up all the hardships and that is what broadcasting did to a great number of artists. The love, appreciation and awareness for music among lay people grew in leaps and bounds.

2) Recording Technique

A big step forward as a result is that it has made the musician more aware of what he is performing, how he accomplishes it, what his drawbacks are. The nuances and finer points in his music may not sound as good when recorded, he is able to listen to himself as a third person and evaluate his music critically. This becomes the most important step towards improving oneself, since many flaws get amplified through the sophisticated recording systems. The musician becomes aware of certain flaws which he may not even have known the existence of. This has had a good effect, as the musician has to be on his toes all the time in search of excellence. He has to devote his attention not only to his music but to all other aspects connected with its presentation-time limits, compactness, cohesiveness, voice quality, musicality of tone all through, clarity of expression; even when
navigating difficult passages or flights of imagination, the quality should remain musical and in tune all the time. Our classical music has been an oral tradition and has handed down from the Guru to the Shishya by the word of mouth. There are many social and musical exigencies and intricacies present in our musical system and a lot of importance is given to ‘creating’ within Raga limits this has resulted in the development so far of an inadequate notation system which only gives the bare backbone of the composition. After learning a composition at the feet of the master this notation system can serve only as a ready reckoned to refresh one’s memory. It is not possible to learn a composition to the raga from the notation unless a perfect mastery over the musical system and a complete idea of the thought processes of the person who has notated the composition. With a host of recording facilities available compositions can be recorded on tape. In addition our music can be recorded in the form of lessons, demonstrations, archival recordings, concerts and discussions. In old days, one learnt music under the Guru Shishya Parampara which involves several years of serious study, staying with the Guru, six to eight hours devoted to the study of music and rest of the time spent listening to others sing, others being taught, participating or listening to discussions on music, this meant a total dedication to music to the exclusion of everything else. Hence, it was possible for a student to pick up very well our complex and abstract music and the style of the Guru, the compositions, the embellishments, the developments of the Raga that made his master’s style unique. Due to social and financial limitations, it is not possible for a student to dedicate and devote himself totally for eight to ten years only to music (staying with the teaching faculty has also become impractical due to constraints of space and social pressures) and as a result student learns about five to six hours a week or may be even one or two hours per week. Thus, it is difficult for a student to absorb, assimilate, learn and build upon the rich treasure house that his Guru has inherited? If he is intelligent and dedicated may be he could learn about forty to fifty percent of what his Guru is willing to teach. In such a situation the
advantages of recording are unparalleled. Lessons, compositions, discussions can be recorded during the lesson and used by the student at home to complement his learning process. This requires a total mental re-orientation on the part of both the student and the teacher. The Guru should realize that he is not being taken for a ride by allowing his lessons etc. to be recorded. Loyalty and dedication to the Guru and the personal commitment that these recordings will not be misused is absolutely necessary for the Shishya. If this sort of system has to succeed complete mutual trust and conviction should be the very basis of this relationship; otherwise it will remain an exercise in futility. It is necessary to take advantage of the tremendous strides in miniature electronics which has given us such compact portable cassette recorders. In old days one’s music was considered a secret gift, not to be parted with to one and all. All this must have stemmed from a feeling of insecurity. The compositions and ragas were all guarded like esteemed possessions for fear that somebody belonging to some other Gharana would pick them up. The invasion of electronic recording media ranging from huge recorders to microminiaturized recorders, alike a fountain pen, where concerts and discussions can be recorded with or without the knowledge of the performer has changed this attitude completely. With the advent of broadcasting, commercial and private recording in classical music it become possible to keep the different styles of music distinct as communication.

In modern context, Radio, Television, Cassettes, Records and Compact Discs are in priority use. Consciously or unconsciously, one is influenced by it and assimilates important aspects into one’s own music. The three minute gramophones records, however, did yeomen’s service in the cause of popularising music. Our musical milieu is in a state of tremendous flux. Old ideas, norms and teaching methods have received a stunning blow due to the impact of electronic media and it will take time for some meaningful dialogue to emerge and grow from the rubble that it has been reduced to. The impact of recording on music is unparalleled. Today’s sophisticated equipment with mixers, synthesizers,
directional mikes, equalizers, special effects and computing techniques have fine-tuned recording into a specialist’s domain. From the humble wire recorders, gramophone’s three minute and long playing records to the tape recorder, cassette recorder, compact disc and digital recording we have come a very long way in sophistication and excellence in the equipment, the recording quality and the permanence of the recording. With the highly technical equipments at our disposal the quality of the voice can be changed, special effects can be introduced at any stage, unwanted musical embellishments can be removed – really the finished product can be totally unrecognizable when compared to the original recording. The possibilities due to the advances made in this field are quite frightening at times.

As far as the radio, cassette, long playing records and compact discs are concerned; the musician is just a voice to the listeners. With the advent of the cinema and more so television, the picture became an essential part and parcel of the telecast along with the voice. This throws up its own dimensions - viewer’s interest in addition to listener’s interest, background, lighting, deportment and visual effects all assume paramount importance. Among many musicians this brings about a feeling of self consciousness, instead of concentrating solely on the music they have to pay attention to dress, mannerisms, actions while singing and a whole host of other correlated aspects. In addition to all this the bright lights affect the sensitive turning of the instruments.

No doubt the advantages of recording system has helped tremendously in the growth of instrumental music still it has some drawbacks. The problems with balancing, adjusting lights, rehearsals, sound adjustments, mike positioning are such tedious and prolonged exercise that by the time the recording starts the musician is bored, tired exhausted in addition to the nervousness of appearing face to face with millions of people all over. The net result often is a concert which is poor relation or a mere shadow of what he is capable of performing.
3) Television and Cinema

Though cinema and the gramophone record preceded the Television, the impact of cinema on classical music was negligible compared to that of Television. Classical Music has a very low priority on television and hence performances by any artist are few. Repeated appearances on television may help to put the musician at ease and come to terms with new constraints imposed by this medium; but telecasts being few and far between, each telecast builds up all the phobias and fears. No doubt these problems are only faced by those musicians who have gone through the transition from radio and recording to television. The new generation of musicians will not experience these problems as it will be what they grow up with. A new orientation and approach on the part of both the performer and recording crew will be necessary to stop it from being an exercise in futility. This underscores the absolute necessity of highly trained crew capable of operating and maintaining the sophisticated equipment with speed; having an understanding of the music, the musician’s psyche and having the capacity to put the musicians at ease and thus enhance the quality of the performance.

4) Print Media

The hallowed saying “The pen is mightier than the sword” comes to mind as we think of print media including books, newspapers, magazine, telex, facsimile, E-mail or Internet. Since the time of William Caxton, when the printing press was invented, the press has played an important part in communication and dissemination of information and in reality the world has figuratively shrunk. With electronics in print media, information gets flashed immediately all over the world. Books and magazines on music, reviews of cassettes, playing records, and compact discs bring musicians much needed publicity through the print media. Facsimile and E-mail or internet are recent electronics inventions which evolve digital transmission of coded information over telephone lines. The written or
typed message at the sender’s end is scanned, digital coded and transmitted to the receiving end where it is digital decoded and printed. Though fast electronic printers have replaced slow mechanical ones, the time taken to send the message is directly dependent on the speed of the printer. This is the advantage E-mail and internet has over the fax. Here computers are hooked to the telephone so that the message received is immediately flash on the computer monitor. For example a fifteen minutes telephone conversation will take about five minutes by fax and less than a minute by E-Mail using internet and is available to consumers’ worldwide.

5) Computer Technology

Computers are already been used in printing notations. With pattern recognition, voice recognition and mind boggling advances in computer technology, the time does not seem far when one can sing a bandish in front of a computer and it will print out notation. Learning a bandish will mean listening to it from a computer, with the computer correcting any mistakes; it may supervise grammatically correct presentation of ragas. There are wonderful and frightening possibilities. These advances in electronic media can never take over music and musicians completely. The soul and life of our music is human creativity, sensitivity and emotions. With the advances of electronic media, the computers may be able to churn out any type of bandish and raga; but it will have to be programmed by a human being. Therein has the crux of the situation. What makes our musician’s depiction different from another’s apart from the mental aspect is the emotional and creative aspect which is unique every time. It is up to us to use these media tools to our advantages, as complement to the teaching, learning and archiving methods. Music and musicians undergoing a process of change with electronic media as catalyst and only time will tell what emerges from this constant state of flux. Change is inevitable and our old music must bow down to the demands of electronics media. Our age old tradition that has survived to
thousands of years of change and upheavals will also emerge unscathed from this ordeal by fire, richer and better, having absorbed and assimilated the necessary changes, shedding the dead wood and adapting itself into becoming an enriched whole, ready to face the challenges offered to it.¹

Development due to experimentation in technological aspect of Instrumental Music can be seen in inventions in digital musical instruments as listed below:

1. **Electronic Tabla**²

   ![Electronic Tabla Image]

   There are sixty Thekas in various taals that can be played at any tempo. The Thekas available on the Digi-60 are:

   1. Teen taal - 5 varieties
   2. Punjabi
   3. Ek taal - 2 varieties
   4. Jat taal - 2 varieties
   5. Jhap taal - 4 varieties
   6. Surfakta
   7. Jhampak
   8. Rupak - 4 varieties
   9. Pashto
   10. Lok (for folk music) - 3 types
   11. Ada chau taal - 2 varieties
   12. Addha
   13. Pancham savari - 2 varieties
   14. Tilwada
   15. Chachar
   16. Jai Taal - 3 varieties
   17. Deepchandi - 2 varieties
   18. Rudra taal - 2 varieties
   19. bhajan
   20. Garba
   21. Jhoomra - 2 varieties
   22. Matta taal - 2 varieties

¹ Tradition of Hindustani Music, p. 133-34, by Nivedita Singh
² www.binaswar.com
Many varieties of common taals have been provided including some authentic traditional Thekas. Out of these, ten can be modified by the user and stored in memory. It has a multi-functional digital display for indicating Taal number, matra number, pitch and tempo with a facility of digital tuning of pitch and fine tuning within half notes. Four ranges of tempo – from ati-vilambit to drut are provided. The tempo can be gradually increased from ati-vilambit to ati-drut without stopping the Theka. It has two settings for bayan (dagga or left hand sound) – with a deep ‘gumki’ or a shallow ‘gumki’. Memory for storing the fine tuned pitch, tempo and bayan setting. Few user programmable Thekas can be stored in memory. Operation is done on AC Mains (220V/110V) or six internal dry batteries with automatic change-over to batteries in case of power failure. Sleek and compactly housed in ABS plastic cabinet, size: 230 x 135 x 90 mm, weight approx 1kg. External speaker socket and Line-out (1/8 in. headphone socket) socket are provided to connect Sunadamala in sync. It is lightweight, operated at universal voltage from 90V to 230V AC without changing voltage selector.

2. **Electronic Shruti Box / Surpeti**

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3 www.binaswar.com
Compact, palm size model – three notes, Separate tuning controls for Sa, Pa and
higher Sa. Coarse and fine tuning knobs are provided. This is recommended for
trained musicians and teachers.

**Dhruva CD Excel II**

The latest compact palm-size model, with microcontroller technology – three
automatically tuned notes SA - PA & SA or SA - MA -SA. Built-in precision
pitch pipe provides exact pitch along with digital display. Fine tuning is possible
around each selected pitch. This is ideal for students as well as concert musicians.
ASDM (Auto-Save-Dual-Memory) automatically saves selected settings and
allows one more choice of settings to be saved.

**Dhruva Automatic**

This is especially for Nadaswaram and Shehnai artists, with three automatically tuned notes
Shadjam, Pancham and Mandara Shadjam (Kharaj). Sleek ABS plastic cabinet, size: 230 x135 x 90 mm, weight approx.1kg.

3. **Electronic Talometer**

The Talometer was the first of its kind to be invented in
India in 1978. It is a revolutionary audio-visual instrument
that can be set to all the talas of Carnatic Music (seven
principal talas viz.; Rupaka, Jhampa, Triputa, Eka, Ata,
Matya and Dhruva and five jaathis viz; Tisra, chaturasra, khanda, misra and sankeerna). In addition to these, it can also be set to the Chaapu talas.

4 www.binaswar.com
The latest model of the Talometer is a palm-size microcontroller based instrument that provides for the selection of Nadai (subdivision within an Akshara) also. It also has programming facilities for the display of specific laya patterns for use in the teaching of music as well as dance.

The features of Talometer:

- Display of talas by means of moving display of lamps.
- Digital display to indicate tempo, pitch and taala selection.
- Additional lamp to indicate last laghu (where more than one laghu is present).
- Jalra-type bell to indicate main beats (ringing sound) or intermediate counts (staccato sound).
- Tempo adjustable from very slow to very fast.
- Volume control and digital pitch control provided.
- Selective muting of audio provided. "Memory facility for pitch and tempo.
- Operation on 230V /110V AC Mains or on batteries.
- The instrument and is very compact and portable, and is housed in a sleek, attractive palm size cabinet measuring 146mm x 110mm x 70mm and weighing about 1kg.

4. **Electronic Tanpura**

**Saarang Micro III**

It is a compact palm size Tambura. Size: 146mm x 110mm x 70mm, weight - approx 1kg. One tuning knob controls all the 4 notes electronically. Panchamam (pancham) can be switched off or changed to Madhyamam (madhyam). This is

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5 www.binaswar.com
housed in sleek, attractive palm size plastic cabinet available in 4 colors (black, ivory white, grey and red) and is Ideal for beginners and music group as well as for travel.

**Saarang Magic Dx**

It has latest sampler technology with automatic tuning of 4 notes in ABS plastic cabinet in 4 colors - black, ivory white, grey and red. Palm-size: 146 mm x 110mmx 70mm. weight approximately 1kg. This is ideal for home usage, performances as well as for travel. ASDM (Auto-Save-Dual-Memory) automatically saves selected settings and allows one or more choice of settings to be saved.

**Saarang Maestro**

It has latest sampler technology, use four or five strings, automatic tuning of 4 notes, manual tuning of fifth note, packed in sleek ABS plastic cabinet, size: 230 x135 x 90 mm, weight approx.1kg. It has higher volume than Magic model and is preferred for concert applications. ASDM (Auto-Save-Dual-Memory) automatically saves selected settings and allows one or more choice of settings to be saved.

**Saarang Concerto**

Artistic Electronic Tambura in exquisitely crafted cabinet. It has features same as Maestro model and is ideal for use in concerts. Looks and sounds like a traditional tambura. It also dismantles easily for travel. Extra speaker in stem extension provides sound at ear-level. ASDM (Auto-Save-Dual-Memory) automatically saves selected settings and allows one or more choice of settings to be saved.
Saarang Melody

It has realistic Tambura sound with latest sampler technology, four-strings with automatic tuning of all four strings, rotary knob with digital display for selection of pitch, lock facility for selected pitch. It is packed in sleek ABS plastic cabinet, size: 230 x 135 x 90 mm, weight approx. 1 kg and has excellent true-to-life sound reproduction, with higher volume than Saarang Magic. ASDM (Auto-Save-Dual-Memory) saves selected settings and allows one or more choice of settings to be saved.

5. Electronic Lehera Machine

Sunadamala

The Sunadamala lehera instrument is a sophisticated electronic musical instrument designed to enable Tabla artists and students to practice independently without the help of another musician (to provide rhythmic tune accompaniment). The 'Sunadamala' is capable of producing 200 preset tunes, set to 20 taals in different commonly used ragas. A tune, once selected, repeats itself endlessly until stopped.

Other features of the Sunadamala are:

- Pitch can be set by user, variable over one octave.
- A digital display shows the selected pitch.
- Fine tuning can also be done
- Laya can be set from ati-vilambit (slow) to drut (fast).

6 www.binaswar.com
• Built-in drone provided for constant sruti (sur).
• Two types of harmonium tones can be selected.
• Separate volume controls for drone and overall volume.
• Calculator-type keyboard for selection of tunes, pitch and tempo.
• 3-digit LED display to indicate tune number/matra progression/tempo/pitch.
• Operates on 230V/110V AC Mains or on a set of four C size batteries (Built-in battery compartment provided)
• The Sunadamala is a microcontroller based instrument and is very compact and portable, and is housed in a sleek, attractive palm size cabinet
• External speaker socket and Line-out (1/8 in. headphone socket). Socket to connect Taalmala in sync.

Some Digital Instruments manufactured by Radel Electronics Pvt. Ltd. are Electronic Veena, Digital Swarmala, Digital Lehra (Nagma).

**Scientific Aspect**

The source of both science and art is perception. Realising this source, the Hindus based their music on perception, and the practice of Indian Music has been a culture of stimulating intuition and awakening the faculty of appreciating beauty, and then expressing itself in beautiful forms. The science of Indian Music has come from three sources: Astrology, Psychology and Mathematics.

The science of Hindu Music is called by the Sanskrit word ‘Prastara’, which means mathematical arrangement of Ragas and Talas. We can easily see mathematical approach of scientific aspect of Hindustani Classical Instrumental Music. For instance, Indian system of music has about five hundred ragas and three hundred different talas which are used in everyday music. The modes are called Ragas. There are four classes of Ragas. One class has seven notes. Then
there are the Ragas of six notes, omitting one note from the seven-note Raga. That gives another effect to the saptak, and has a different influence on the human mind. Also, there are the Ragas of five notes, omitting two notes from the scale - any two notes.

The science of astrology is based on the science of cosmic vibration. Everything depends on vibratory conditions, including the position of the stars and planets, individuals, nations, races, and all objects. A great deal of the secret power, which the Hindus have found in the science of music, has been derived from the science of astrology. Every note of Indian music corresponds with a certain planet; every note has a certain color; every note denotes a certain pitch of nature and also of the animal world. For instance, the science which existed in the ancient Vedas was the science of the elements: fire, earth, water, air, ether. But these words should not be taken as meaning the same as in everyday language. The element of water, for instance, signifies the liquid state, fire signifies heat or warmth. Through this science the Hindus were able to construct Ragas to be sung or played at a certain time of the day or night, or at a certain season. After these compositions have been sung or played for thousands of years, the race has developed such a sense of appreciation of these Ragas that even an ordinary man in the street cannot bear to hear a Raga of the morning sung in the evening. He may not know the form or the notes, but to his ears it sounds disagreeable; he cannot stand it. We may say it is a matter of habit - and that is true - but I have made experiments with different Ragas, and found that a mode that should be sung in the middle of the night loses its beautiful influence if we sing it at noon. Every planet has a certain influence, and there must be a certain mode to answer it. If it is not so, then music may become a pastime, but it does not do the work for which music is designed.

The psychological aspect of Indian music is also very interesting. It was only later that scientists followed with the knowledge of different vibrations, but
this scale of five notes comes naturally when a man places his hand on the reed, and a great psychological power seems to be attached to it. It has a great influence on the human nature, and this shows that the power of all things that have been derived directly from nature is much greater than when man has changed, turned and altered them so as to make a new form of art. When one hears an artist, an instrumentalist of Indian music, the first thing he does is to tune his instrument, and while he tunes his instrument he tunes his own soul. This has such an influence on his hearers that they can wait patiently for fifteen minutes. Once he finds that he is in tune with his instrument, with that note, his soul, mind and body all seem to be one with the instrument. A person with a sensitive heart listening to his song, even a foreigner, will perceive the way the artist plays, the way he tunes his spirit to that melody. By that time he has concentrated; by that time he has attuned himself to all who are there. Not only he has tune the instrument, but he has felt the need of every soul in the audience, and the demands of their souls - what they want at that time. Perhaps not every musician can do this, but the best can. Then he synthesizes and it all comes automatically. As he begins his song, it seems that it touches every person in the audience, for it is all an answer to the demands of the souls who are sitting there. He has not made a program for the music beforehand; he does not know what he will play next. But every moment he is inspired to play a certain mode, he becomes an instrument of the whole cosmic system, open to all inspiration that comes, at one with his audience, in tune with the melody of the instrument. And it is not only music that he gives to the people, but a phenomenon in itself. This is a psychological approach of scientific aspect.

Musicologists have done various experiments time to time in all three approaches of scientific aspect i.e. mathematical approach, astrological approach and psychological aspect. This study will further describe about the Music Therapy; which comes under psychological approach of scientific aspect. The curative value of music has been known from ancient times and has been in use in various parts of the world. However, its value has been tested scientifically only
after World War II. This study includes Music Therapy as a scientific aspect of Experimentation in Hindustani Classical Instrumental Music.

Music Therapy can be defined as the use of musical or rhythmic interventions especially selected by a music therapist to accomplish the restoration maintenance, or improvement of social or emotional functioning, mental processing, or physical health of an older individual. It facilitates the creative process of moving toward wholeness in the physical emotional, mental and spiritual self in areas such as independence, freedom to change. In Indian tradition, "Omkara" is the primal cosmic sound energy that created the entire universe. This is described as a humming sound that saints are able to hear during mediation. According to modern science there are vibrations of sound which we cannot 'hear' but which affect us. The human ears can only catch sound that is within a certain range of decibels. The higher frequencies which we cannot hear are called ultra sounds and those with too low frequency are called infra sounds. Insect repelling gadgets have been designed that give out high frequency vibrations which the insect cannot bear thus driving them away. When normal people are exposed to ultra sounds they have spells of dizziness and with infra sound they experience fear and alarm. Sound effects in suspense and horror movies are responsible for creating the thrills. A soundless movie fails in creating the thrills. A soundless movie could not possibly have the same impact. Thus sound has positive as well as negative effects on humans and hence music therapy has to be used with great care. With the advancement of technology it has been possible to record with absolute clarity, the sounds from nature i.e. the sound of chirping birds, wind blowing through the trees, swishing of waves in ocean, sound of water and other forest sounds. Also the addition of new electronic musical instruments and other sound-recording technology has made the experimentation through Music therapy easier. An artificial man-made environment can be given to the people with the help of new experiments of sounds which is really very useful for the people who live in cities and are very far from nature. The present
day life style leads to psychosomatic illness, such as migraine, allergies, ulcers, high blood pressure etc., and people feel more lonely & insecure also because of nuclear family system. Also the modern youth is adapting drugs or alcohol in the excuse of freedom. In all the above-mentioned problems, music therapy can be helpful to the people.

Music therapy can be used with great effect as a preventive measure and it can be used as auxiliary to the main treatment after the onset of pathological conditions. If more awareness is created about the tonic effect of music, normal people will be inclined to try music, for its therapeutic effect in the daily grind. The appropriate type of music will help to drive out negative feelings like despondency and loneliness. The person who listens is also able to participate in the music by humming along with the music or even dancing on it.

In Music therapy, the suitability of music to a particular situation is the foremost consideration than the quality or technique. The music or the musical instruments used for therapy are selected to suit the requirements of the patient rather than on the basis of the musical excellence. The wrong choice of music or musical instruments can have adverse effect as for instance, loud dramatic tunes or percussion instrument louder voice may have vary bad effect on hypertensive patients. Given below are some references from the history of Indian Music, which indicates the effect of sound and music, produced by musical instrument on the human mind.

Flute was used by prehistoric people about 50000 year back, according to archaeological evidences. The flute of Krishna is as old as human culture and civilisation. Quoting the *Kathopinsad* (Ch-1, Section 1, S 25), we find Yama (God of death) asking Nachiketa to ask for boons, including beautiful celestial women, occupying divine chariots (Ratha with Wheels) and playing santur (the word used in santurya-pointing out the antiquity of santur) which the boys denies. Both Vocal & instrumental music is for the purpose to attain all desires,
prosperity, ecstacy etc. from the divine power, so called God in India. Those who play Veena, Flute, Mridanga & other musical instruments also, do the same for the very purpose. *Brahadarnayaka Upanished* (Maiteryi brahanam sloka 7, 8 & 9) throws more light about the fact that the rishi knew the exact basic principle of sound & light waves and their effect on our hearing system. Sloka 7 says: when you strike a dundubhi, a series of sruti sound comes out of it. We do not hear each of them. We just hear the overall sound of the dundabhi. Sloka 8 says: When we blow a conch, there is a series of subtle dhvanis coming out, but we are unable to grasp them with our organ of hearing, and we just hear the sound of the conch. Sloka 9 says; when we play Vina, several subtle srutis are made in a series, but our sense organ does not differentiate one from the other, we just hear the overall sound of the Vina. It's noteworthy that *Yajnavalkya* is quoting these examples to one who point and that these are model instruments belonging to Charma vadya, Sushir vadya & Tantri vadya i.e. percussion instruments, wind instruments and stringed instruments in present time. Percussion instruments (Charma Vadya-instruments covered by skin of animal), on which we strike with a hand or a stick, specially made for the purpose, wind instruments (sushir vadyas) with a gap through which air moves producing sound),through which one blows one's breath while the stringed instruments (Tantri Vadyas) in which the string is vibrated to produce sruti mandala. Musicologists are aware of all the different type of instruments and the principle of the dhvani & srutimandala. Thus, the familiarity of voice-sounds of musical instruments plays the major-role; the quality of voice or expertise in singing or playing instruments is not as important. After having seen the use of music as a preventive health measure, we can now see how music helps in the treatment of actual disease. One obvious use is that as a deductive it can replace the administration of tranquilizer (sleeping pills). During treatment, music hopes to divert the patient attention from his discomfort or pain and helps

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7 Pre historic evidence of flute. Dr. Fredrich Seeberger, Dr. Survarna Nalpat, Ragachiktsa: A treatment with music, p. 49-55.
in making the patient more cooperative. It has also been found to stimulate motor activity and cure stammering in children.

**Process of Music Therapy**

Thus, we can say music therapy is all about inter-relationship, communication and narrative medicine involving compassion and love. Below mentioned are some fundamentals of music therapy:

1. Live music is better than recorded music. Presentation of live chorus of musical instrument may give a very positive react to the patient.

2. Music therapy is a long term process over-expectation regarding the short term result should be avoided. It also claims that somehow, it’s an indirect therapy & not suited for immediate cures.

3. Music therapy is more satisfactory in the psychosomatic disorders and nervousness.

4. Music therapy sessions should be short time, at least for twenty minutes.

5. Two basic elements are essential for the music therapy, named "Expression" and "Communication".

6. Any attempt of this therapy should not be done in empty stomach or when patient is hungry. It may be harmful for the patient.

7. To follow up treatment and reference of the patient, a sand system can be kept.\(^8\)

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\(^8\) Ragachikitsa: A Treatment with Music, Suvarna Nalpat
Some other basic advantages of music therapy are given below:

1. Music therapy is very effective, we can say that it can tranquilize or energize.

2. It has no side effect

3. Music therapy is absolutely natural and instinctive process. It is totally based on pure forces of universe, which are not artificial.

4. Economically, we can say that music therapy is low cost as compared to psychiatric treatment.

5. Music therapy is not habitual, like sleeping pills.

6. Music therapy can cater to super conscious levels and satisfy the desire for beauty and harmony.\(^9\)

Some precautions are needed before music therapies:

1. Music therapy should not be bound to any particular class of music, but to provide the music as per liking of the patient.

2. It is a therapy of tones which has physics of frequency with their colors of mixed combinations on human mind's chemistry, which differs from one to another. One cannot treat on the same pattern of sound therapy with another. So the selection of music or instruments is really very important, because it is a matter of emotional behavior of individual psychology\(^10\).

3. Music therapy is the magnetic power of tiny vibrations of music appreciated by the patient which change his/her mind's direction from

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\(^9\) Ibid
\(^10\) Helmholtz, Her Mann (1954). On the sensations Tones, D over publications, corporation, New York
negative to positive. The mental conditions of a patient cause to create biological changes in the body.

A lot of experiments have been done for music therapy, for instance:

In various countries the experiment on music therapy has proved that it allows tremendous relaxation to the nervous system of human being. In other words, music calms their nerves or reduces the mental stress and provides enlightenment. All fine arts like music, dance, painting, and architecture etc. have a common quality- that of deep emotional experiments of a collective consciousness which is social but individually and subjectively expressed\(^\text{11}\).

The case of a pregnant woman in the context is very important. She confessed that her delivery was very smooth as she was listening to the piano from a music therapist, playing in the room above the labor ward. It reveals that music stimulates the nerves of a person very mildly and regulates the flow of bland. It creates a power of concentration in the mind and spreads an agreeable massive sensation throughout his body. It reveals that sensations influenced our mind and mind influences the body.

A different kind of science of music is used for the process of music therapy for certain patients of different diseases. A research has been conducted on the recovery of patients after surgery that women undergoing hysterectomies. We listen to relaxing music and sound of ocean waves while under general anesthesia experienced less pain, where less fatigued when released from the hospital, and were able to sit up sooner after their operation those patients who did not listen to music? Women who enjoyed the music and encouraging words during the operation felt less pain. It revealed that the flow of rhythm and melody had ability to enhance the venues of mental and physical well beings. With so many advantages of instrumental music more and more doctors are taking interest.

in music therapy especially at places like Chennai and Bangalore. Research work has been undertaken in many universities with several different ragas and musical instruments and remarkable results have been obtained for music as a therapy. The well known artists Padama Vibhushan Dr. M. Balamurali Krishna has also done research on music therapy and cured several patients of their ailments by singing different ragas. Like this, music therapy in instrumental music with use of various new musical instruments & tones can be established as an effective auxiliary to treatment as the faith in the power of Nada is deeply ingrained in the Indian Mind Music Therapy daily dose works like a "Medicine" that helps to lead a relaxed stress free and healthy life.

Music has immense amplitudes in increasing memory power also. It has been noticed that people lose memory power in old age & it is very difficult to cure it even by using psychological treatment. Here the magic of music works. It is not necessary that one should listen to music only when he is under stress or anxiety. It is always preferable to have music in the background through tape recorder or radio while working at home or in the office. Now a days, some business keep people listening to music while their calls are on hold.

After analysing all above points we came to the conclusion, that music has the special capacity to stimulate our body and to generate positive affects through a perfect combination of tones. The sort of music therapy research is not very common in India, and among Indian musicologists. It required searching the social psychology of people interested in music, and how different people behave differently in a given musical situation. Hindustani Music is based on intuition like Raga-Dhyan, and the practice of Indian music has been a culture of stimulating intuition and awakening the faculty of appreciating beauty, and then expressing itself in beautiful forms.
**Industrial Aspect**

Industrialisation is the process of social and economic changes that transforms a human group from an agrarian society into an industrial one. It is a part of a wider modernisation process, where social change and economic development are closely related with technological innovation. Technology has contributed to the growth of industries or to the process of Industrialisation. Industrial Aspect covers the growth in a modern industry with all its circumstances and problems, economic and social. The process of industrialisation has affected the nature, character and the growth of economy.

The traditional Indian speculation assumes an implicitly integral relation between arts and society. It does not isolate art from human purpose. Each artistic activity is a socio-cultural action and is followed by a reaction by the people in society. Music is firmly interwoven into Indian social fabric. Since long past musicians were an inseparable part of every socio-cultural occasion. The scope of professionalism became available through the social patronage extended to musicians and the generous attitude towards them by the monarchs. They possessed privileged positions in the royal and feudal courts.

The social relativity and utility of music manifest itself through many phases as given below:

1. Music for rituals and ceremonies
2. Music for religious purpose
3. Music as a unifying force
4. Music as a tool for imparting education
5. Music as a means of amusement and recreation
6. Music in the making of an intellectual environment
7. Music as a mean of social control
8. Music as a means of social protest
9. Music as a means of social interaction
10. Music as a means of self expression
11. Music as a tool for imparting education
12. Music as a propaganda medium

The main characters of socio-economic approach are: Music, Musician (Artist) and Society.

From the Vedic age up to the Gupta period, musicians were regarded as the esteemed community of society and it was their moral obligation to render service to the society. Music was not only pressed into the service of religion but also had an important role to play a secular life as well. Musicians enjoyed tremendous social patronage during the Vedic and post-Vedic era, as they were supposed to work for the society and their art had a much closer social praxis. The musicians were aware of their social role as a separate community and they were organised as guilds forming musical-religious groups. Such groups were engaged in the elevation and propagation of music at social level and also protecting the interests of fellow musicians. The Vedic society also allowed the musicians to earn their livelihood through their art and they were divided into separate professional groups of Vocalists, instrumentalists, and dancers.\textsuperscript{12}

The situation has improved further during last twenty-five years. Growing emphasis on the arts, increasing awareness of the artist towards his profession and its problems, literacy among the artists and their consciousness about the things going around, have modulated their way of presentation to attract more and more people. The musicians have created a very special place for themselves in the contemporary social structure.\textsuperscript{13}

**Different categories of musicians**

\textsuperscript{12} Bhartiya Sangeet Ka Itihas, p.67, Umesh Joshi
\textsuperscript{13} Tradition of Hindustani Music, Nivedita Singh, p- 138
Musicians have been classified into various categories since ancient times. Mainly musicians can be classified into two categories: *common professionals* and *sophisticated professionals*. The first category deals in music for the entertainment of the people or for serving a ritualistic objective as a service in return for fee. They are employed to celebrate the deeds of their patrons and sing their praises. These attendant communities generally occupied a high or low rung in the social hierarchy depending upon the caste and status of their respective patrons. The sophisticated professional communities have a mastery over the classical norms also. Their singing and playing can be of a very high order and there are varying degrees of acquaintance with or mastery over the classical norms. Under this category the musicians knew and pursued music in its higher or advanced forms and came to be respected and patronised by the rich and the powerful and were well-remunerated. A highly refined sense of taxonomy extends to the musical world as well. In India, the term ‘musician’ is not enough and won’t give us the whole information about an artist’s social identity, making his status, role and social rank ambiguous. These days the terms musicologist, ethnomusicologist, music-composer, music-arranger, music-conductor, playback singer, etc. are used to indicate the field of specialisation of the person in music.14

It has been observed that the classification was based mainly on the following factors:

1. Competence and extent of knowledge of the musicians;
2. Particular form of music they perform;
3. Their instrument-specialisation; and
4. Ethnic origins, community or caste. (Detail follows under the next subtitle)

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14 Ibid
The status of performers may also be judged in terms of the hierarchic value of different musical performances, based on the nature of their content and style of presentation. Sophisticated professional communities like kalawant, qawwal and gandharva have a mastery over the classical norms and they are considered as soloists. The communities providing professional accompaniment like the Sarangiyas and Tabliyas were regarded to be lower as compared to the soloist.\textsuperscript{15}

Division of Labor among music professionals

The task performed by an individual makes up the role he is expected to play in the life of his community. A social role, as defined by Lundberg, “is a pattern behavior expected of an individual in a certain group or situation.”\textsuperscript{16} It refers to the obligations which an individual has towards his group. In the context of musician categories, role refers to the particular function they have to fulfill during their performances. Status determined by the evaluation of these roles played by individuals. Status is the location of the individual in the social network of reciprocal obligations and privileges, rights and duties. In the hierarchical world of music, status is determined by the evaluation of the roles played by the individuals in the form of soloist and accompanists. The role and status of a musician gives him his social identity. The single category ‘Musician’ is not able to convey the role, status, occupation and social identity and the rights and obligations concomitant with that identity remain the same.

In Hindustani Music, a performance requires a minimum of two individuals- the leader and the accompanist. From the external perspective both are music-artists of a large tradition. The leader can be called the soloist and the accompanists are of two types- melodic and rhythmic. There are two sub-classes among the soloists, namely Vocalists and instrumentalists. The difference lies in

\begin{thebibliography}{9}
\bibitem{15} Tradition of Hindustani Music, Nivedita Singh, p- 143
\bibitem{16} Foundations of sociology, G.A. Lundberg, p.31
\end{thebibliography}
the medium through which music is generated; voice being the natural instrument and others are cultures instruments.

**Vocalists**

In Neuman’s words, “A Vocalist is primarily occupied with the performance of Vocal music and is recognised by other musicians and musically knowledgeable individuals as a Vocalist to the exclusion of other musician categories”.

**Instrumentalists**

Singing is bestowed as a natural gift on all living beings but instrumental music is man’s conscious acquisition and provides a richer dimension to Nature. From the very early beginning, instrumentalists provided an indispensable accompaniment to Vocal music. Finally their artist motives began directing their efforts towards accomplishing a few phases in the development of instrumental music into a solo performance, there by ceasing to be mere accompanists to Vocalists. Among the traditional instrumentalists are Beenkars, Sitariyas, Rababiyas, Sarangiyas, Sarodiyas, Nakkarchis, and Tabla and Pakhawaj players. (Govind Vidyarthi (Tr.), op.cit., pp. 13-26) There were a few instrumentalists who had chosen novel instruments and drone some alterations in the already prevalent ones. They include qanoonvadak, ghichakvadak, qubusvadak, barbatvadak, qarnavadak, tamburvadak, naivadak, chanvadak.

In the present times, Sitar and Sarod are the primary instruments for performance of classical instrumental music. Such performers are known as Sitariya and Sarodiya, respectively, in musical parlance. Together they are considered performers of plucked instruments. In this category been and rabab players have a long social and cultural history and they are considered performers of plucked instruments and thus closely tied to dhrupad tradition... After Tansen,

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17 Neuman, op.cit. p.94  
18 Sulochna Brihaspati, op.cit., pp.211-13
his worthy descendants identified themselves as the beenkars and the rababiyas and continued contributing towards the progress of instrumental music simultaneously. With the advent of Khayal, Sitar gained prominence and Sarod was developed by modifying kabuli rabab to the Indian conditions. These two instruments are dominating today’s instrumental scene but they derive their socio-cultural history from these parental instruments-been and rabab. Violin, dilruba and vichittar veena are used for solo performance. Shehnai has been made immortal by great maestro Bismillah Khan. Flute, Santoor and Guitar are the latest additions to the instrumental world of Hindustani Music. Whereas the Vocalist derives his style from more than one gharana, the instrumentalist is usually limited to one gharana and style.

**Accompanists**

In Hindustani Music accompanists are of two major types, according to their specialisation; one who perform the role of melodic accompanists, and other who provide rhythmic accompaniment. Melodic accompaniment is generally given by Sarangi, Harmonium, Tanpura and Rhythmic accompaniment provided by Tabla and in some cases by Pakhawaj. Although both of the accompanists constitute the same social category, musically they perform two distinct roles. Traditionally, a rhythmic player is almost always a Tabla player and melodic accompanist is a Sarangi player. The role of the melodic accompanist is chiefly echoing the melodic line of the Vocalist, resulting in a heterophony display. In the present times harmonium has taken over as the main instrument for the purpose of melodic accompaniment. Sarangiyas are very few in number and the instrument is almost on the verge of disappearance.

The Tanpura player is many times a disciple of the main performer and, while accompanying on Tanpura, also provides the Vocal accompaniment through his

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19 The Origin and Development of Dhrupad and its Bearing on Instrumental Music, E.S.Perera, pp.188-89
20 Tradition of Hindustani Music, Nivedita Singh, p- 152-53
occasional participation. The rhythmic dimension in Indian music has its own vast creative universe and the rhythmic accompaniment is indispensable. The Tabla players or tabliyas have a very conscious role to play in the whole process of performance. A good and seasoned Tabla-player is an asset to the leading music-maker. Mainly the Tabla provides the Theka, the skeletal framework of a particular rhythmic cycle with composed pieces of music but, whenever given the opportunity, he performs his own improvisation within that rhythmic circle and the soloist repeats the refrain thus adding to the luster of the performance and bringing gusto to the audience too. Tabla player’s role is very crucial in the manner that a mature and balanced accompanist shall never try to overcome the main performer and shall play after having a judgment of his rhythm-sense. He will adjust according to the capability of the main performer. His role is like a tailor’s needle. Whether it is silk or cotton he has to sew in the words of Shafaat Ahmed Khan.

Soloist versus Accompanists: Different roles

The roles of soloist and accompanists provide the basis for the two major categories of musicians to be considered. The soloist will never be perceived as an accompanist. In the case of accompanists they may occasionally perform individually but usually they will have the social identity of accompanist only. The marked difference in rank between soloist and accompanists makes the transition difficult. The intermarriages also do not occur frequently between the two. Analysing the manner of recruitment of both groups, it has been said that “soloists, unified musically, are recruited from a variety of groups whereas accompanists, diversified musically, are recruited from identical groups.”

From the sociological perspective accompaniments from an interesting group of musicians and most of the time they are members of the specific occupational groups, whereas the soloists come from a wide variety of ethnic,

\[21\] Neuman, op. cit., p.94
religious and regional backgrounds. The soloists are attached to recognised and named gharanas which are specific socio-musical identities. The rhythmic accompanists follow a particular baj, i.e. a style which does not require a genealogical history although it may have one. Neuman describes soloist an artist, who inherits an artistic tradition in both style and the heritage, where the accompanist is an artist, who inherits an artistic tradition in both style and the heritage (an artisan who inherits an occupation).

The re-interpretation of traditional status and relationships in today’s changed circumstances has made the accompanists reluctant to take an explicitly subordinate role. The soloist is always in competition with other soloists and his individuality is important and often crucial for him as creative artist. There was a time when the accompanists essentially played the same musical role and in this musical sense it was largely a non-competitive role. But with the changed social conditions new trends are emerging in this soloist-accompanist set-up. The separation of the soloist and accompanists paved the way for the solution of the problem. Neuman calls this occupational caste specialisation, ‘Indian civilisation’s classic strategy. This social differentiation allowed a strict division of musical labor and hierarchical organisation of performance, though it has begun to be questioned during the last two decades or so.22

**Changing Roles with Impact of Socialisation**

With the passage of time, sociological distinctions and endogamous rules concerning musical specialists have undergone change. There are cases in which individuals have moved from one category to the other and have put rigorous efforts to establish themselves as soloists. The transition from one category to the other corresponds to the non-static form of the principle of hierarchy in traditional Hindu culture.

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22 Neuman, op.cit., p.136
The transition has been especially true of Sarangi players, who are knowledgeable about Vocal performance styles since their function is to accompany Vocalists. Sarangi is usually meant for accompaniment but now it is being elevated to solo instrument through the rigorous efforts of its few exponents. On analysing the history of gharanas enough examples are found where initially the famous Vocalists were Sarangiyas. (Rajan and Sajan Mishra in “Swar-Sadhna” From Doordarshan, 15 October, 1993 at 7:30 am.) “There was a tradition that the singers used to play Sarangi too. Vocalists and Sarangiyas have belonged to the same gharana. All great singers have been Sarangiyas initially. Kirana, Patiala and Indore gharanas of Khayal were originally that of string-instruments mainly Sarangi. Abdul Karim Khan’s father Kale Khan was a Sarangi player. Bade Ghulam Ali of Patiala was initially a Sarangi player and accompanied artists of his time. Amir Khan’s father Shahmir Khan was a famous Sarangi expert and even Amir Khan was fond of playing occasionally on the Sarangi. The Delhi gharana had a galaxy of brilliant Sarangi players, chief among them were Abdul Ghani Khan, Mamman Khan and Bundu Khan. The accompaniment of Sarangi with Thumri and other semi-classical forms patronised by the courtesans was mainly responsible for its decadence. The untiring efforts of great Sarangi maestros like Bundu Khan, Mamman Khan, Abdul Lalif Khan, Pt. Ram Narayan, Sabri Khan and Sultan Khan have contributed a lot in establishing Sarangi as an individual instrument.

The advent of Harmonium in Hindustani Classical Vocal music came as big blow from Sarangi. It is not being adopted much these days because of the difficulties involved in learning and practicing Sarangi. Harmonium is in great demand these days and most of the Vocal accompaniment is being done through harmonium. Efforts are being made for the revival of Sarangi and a few artists of present generation have devoted themselves to this instrument. Foreign audiences are taking particular interest in this instrument. For the last two decades Tabla has emerged as one of the most popular instruments in North India and more and
more young artists are opting for it. A Tabla player’s best opportunity to show his skill is when he is a soloist and at present Tabla has been fully established as a solo instrument, though it was recognised so earlier also: “Tabla players have always been recognised, musically speaking, as soloist in their own right, and Tabla solos were a common feature in the past.”

For instance, the social and musical roles of Tabla players have changed in a number of ways during the last two decades. An analysis of the factors responsible for the change is given below:

1. Tabla-players are playing academic role through teaching students privately, writing books, articles and even doing research on various socio-musical aspects of Tabla. With the introduction of the teaching of Tabla, Tabla-players are appointed as teachers also.

2. Setting up of All-India Radio provided state patronage to some in the form of secure jobs and as an opportunity for others to earn a little extra by broadcasting their items for the other.

3. The projection of Indian music in front of the western world has really given boost to the image of rhythmic accompanists besides enhancing their prestige. Tabla remains popular with the western audiences and they enjoy hearing drumming. The credit goes to the great maestros, Allah Rakha and Chatur Lal whose Tabla thrilled the western audiences paving a way for the future Tabla-players. They respond enthusiastically to the rhythmic syncopations and clear challenges between the soloist and drummer mainly known as sawal-jawab. It is important for the performers to display these techniques in front of such audiences. “It requires an extremely talented drummer and sensitive musician to build rhythmic and aesthetic climaxes of sufficient artistry to hold the attention of

23 Jim Kippen., The Tabla of Lucknow, pp.100-101
audiences who for the most part, cannot really understand the finer details of their drumming.”

4. With the rise of great stalwarts on the musical scene of instrumental genre, Tabla accompanists are getting more chances to display their improvisational capability, providing added variety to the whole performance. Now the Tabla performers are no longer passive accompanists maintaining the metric cycles only. The changes have rather been brought out largely as a result of a re-evaluation and remolding of the performance structures of Hindustani Music.

5. A steady influx of community of non-hereditary, mostly Hindu musicians generally from well-to-do high class background into the field of Tabla-playing has also contributed to their enhanced status.

6. The image of a few Tabla players as ‘superstars’ has created an excitement for Tabla and they represent a new generation of exciting, modern, stylish, jet-setting Tabla-players. Tabla-wizard Zakir Hussain has established this ‘star’ image of the present day Tabla-players. Unmatched in talent, son of the famous Tabla player Ustad Allah Rakha Khan, Zakir Hussain is the kind of player most young students of Tabla want to emulate. More than any drummer in India, Zakir’s virtuoso playing marked with speed, clarity and rhythmic exuberance has created an excitement for Tabla and people do attend the concerts merely to hear him. With his expertise, he has also gained the respect of senior Tabla players.

The above is true in general for all the accompanists, whether melodic or rhythmic. Accompanists are reluctant because of changed circumstances, to take an explicitly subordinates role. Non-hereditary families have entered the music profession and more and more artists are being generated. Suddenly there is an increased demand for accompanists. They now have a wider diversity of

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24 Wade, op.cit.,p.208
possibilities and are less dependent for their reputation on a few major soloists. There is also a clear change in the mode of recruitment of accompanists. Before the period of Mohammed Shah Rangile all the instrumentalists used to be accompanists basically. The practice of performing as soloists began at his court only. With the advent of Khayal and Thumri, the Sarangi and Tabla replaced the Been and Pakhawaj as accompaniment instruments. This also had an effect upon the mode of recruitment of accompanists for these instruments. Beenkar accompanists were recruited from the same families as the Vocalists. With the coming of Khayal, Sarangi and Tabla players occupied the status of accompanists in the art-tradition and their recruitment came from social groups different from those of soloists.²⁶

**Instrumental Music and Socio-Economic Growth**

Indian Music in its economic and cultural context needs discussion. There is still too much that is taken for granted or misunderstood. All the music theory in the world has never made an artist, but it is the individual's belief that he can do something to enhance his own and possibly someone else's outlook. Music and Musicians are not completely free from the social and economic manipulations of the market-place. Music in its social or economic context further solidifies the perception of the artist as an economic victim in whatever division of the culture the artist is subject to.

Music was largely under the patronage of princely courts during pre-independence days. With the abolition of princely status after 1947 the task of preserving the musical heritage and its propagation was taken over by Air India Radio (AIR). Though, the regular broadcast of music programs has contributed largely to bring about an awareness and appreciation of Indian music in all its variety Classical Vocal Music, Classical Instrumental Music, Semi-Classical music, Folk Music etc. About 40% of the total broadcast of AIR now constitutes

²⁶Tradition of Hindustani Music, Nivedita Singh, p- 152-53
music programs. These include Hindustani Classical Instrumental Music and all other categories of music. Besides, the regular music program, in 1950’s AIR started some of the major network programs namely, the national programs of music and the Akashwani Sangeet Samelan. Through this program, AIR brings to its listeners the best of musical talent available in the country on its network. One of the significant achievements of AIR’s National Programs and Sangeet Samelan Concerts is the integration of Hindustani and Carnatic Styles of music. Eminent artists as well as the most promising younger artists in both the styles are presented in these programs.

During Akashwani Sangeet Samelan, Hindustani Classical Instrumental Music concerts are arranged in the Southern region, likewise Carnatic music concerts in Northern region. Two major festivals Tyagraja festival and Tansen festival are covered by AIR. AIR also releases selected tracks played or sung by experts from its Archives, which records in the country, through gramophone records cassettes and DVD’s. Another important milestone in AIR’s music programs is the National Orchestra known as AIR Vadya Vrinda in Delhi and Madras. These orchestral units comprising both Hindustani and Carnatic musicians have remarkable experiments in orchestration of Indian music under eminent conductors and have a wide repertoire of a variety of compositions based on traditional ragas and folk melodies as well as thematic compositions. Musicians earn not only for money but fame too, through Radio and Television as compared to private-owned broadcasting systems in foreign countries. The popularity generated through mass-media has helped to boost the image of musicians, who are widely respected in society today. The national awards, titles and other honors, conferred periodically upon well-known musicians by Central and State-government and other prestigious bodies like the Madras Music Academy and Sangeet Natak Academy. Central and State-government are running many colleges and universities where music is a main subject. The Society for the Promotion of Indian Classical Music And Culture Amongst Youth,
often known by its initials (SPIC MACAY), is a non-profit organisation which promotes Indian classical music, Indian classical dance, and other aspects of Indian culture; it is also a movement with chapters in over 300 towns and cities all over the world. SPIC MACAY was established by Dr. Kiran Seth in 1977 at IIT Delhi. It seeks to foster the exchange of traditional Indian values and to generate awareness of the cultural traditions and heritage of India. In order to achieve its goals, SPIC MACAY organizes concerts, lectures, demonstrations, informal discussions and seminars.

The Indian Council for Cultural Relations (ICCR) is an autonomous organisation of the Government of India, involved in India’s external cultural relations, through cultural exchange with other countries and their peoples. It was founded on 9 April 1950 by Maulana Abul Kalam Azad, the first Education Minister of independent India. The ICCR Headquarters are situated in Azad Bhavan, I.P. Estate, New Delhi, with regional offices in Bangalore, Chandigarh, Chennai, Cuttack, Goa, Guwahati, Hyderabad, Jaipur, Kolkata, Lucknow, Mumbai, Pune, Shillong, Thiruvananthapuram & Varanasi. The council also operates missions internationally with established cultural centres in Georgetown, Paramaribo, Port Louis, Jakarta, Moscow, Berlin, Cairo, London, Tashkent, Almaty, Johannesburg, Durban, Port of Spain and Colombo. ICCR has recently opened new cultural centers in Dhaka, Thimpu, Sao Paulo, Kathmandu, Bangkok, Kuala Lumpur & Tokyo. The Council addresses its mandate of cultural diplomacy through a broad range of activities. In addition to organising cultural festivals, both in India and overseas, the ICCR financially supports a number of cultural institutions across India, as well as sponsoring individual performers in dance, music, photography, theatre, and the visual arts. It also administers the Jawaharlal Nehru Award for International Understanding established by Government of India in 1965.
As stated before, Industrialisation is a part of a wider modernisation process. Modernisation is a process which indicates the adoption of the modern ways of life and values. It refers to an attempt on the part of the people particularly those who are custom-bound to adapt themselves to the present-time, conditions, needs, styles and ways in general. It indicates a change in people's food habits, dress habits, speaking styles, tastes, choices, preferences, ideas, values, recreational activities and so on. People in the process of getting them modernised give more importance to science and technology. The scientific and technological inventions have modernised societies in various countries. They have brought about remarkable changes in the whole system of social relationship and installed new ideologies in the place of traditional ones.

Due to modernisation, youngsters are doing experiments by availing new technologies. Technological development has helped them to make true their ideas and concepts. As a result new instruments are taking place in Indian instrumental music. Deliberate manufacture and use of new instruments have often sounded a note of musical modernism. Attempts at using the same instruments in a different manner or with changed playing techniques are also responsible in bringing about changes in the existing sound scope. Socio-Economic changes of industrial aspect has influenced by modernism also. The very first change that takes place is in the patronage given to music. Modernism can be easily equated with a discernible heterogeneity of audience. Demand made on the artists by a heterogeneity of audience are bound to be more general, varied as well as numerous. As a solution to the adverse effects spilling over from this generality of the audience, many devices are employed to organize the audience. For example, with the onset of musical modernism, music-clubs or music-circles are formed, public concerts are organised by sale of tickets and felicitation programs and such other music-situations come in vogue. Music is a performing art; as such it is shaped by the audience–participation to a great extent. Hence, the change in patronage assumes significant. A modernist audience means patronage
which has undergone changes due to factors like urbanisation, mass media culture etc. Another modernist feature of the social-economic category is the musician’s growing internationalism. The modern generation artist moves out far and wide in search of new patronage. He adopts various approaches of music and gets experience by listening to music of other countries and analysing the same. The Indian artists are in addition also using amplifications in their instruments like the Western musicians. Whenever the artist is able to formulate his experiences, he starts doing experiments to apply his new thoughts in his own music taking care of limits and also his tradition.

Industrial Aspect has made possible export-import of musical instruments in between India and other countries. As a result socio-economic aspect of Hindustani Classical Music has grown up a lot and music has moved towards Commercialization. Many foreigners who used to learn Indian music in their country also have started importing Indian Musical instruments in their countries from India and hence also are a part of the Commercialization and growth process.