

3. Review of the literature:

The study covers a very wide spectrum of national & international literature on the subject beginning with Bharata's Natya Shastra (नट्यशास्त्र) belonging to 300 B.C., which is the earliest literature available on the subject. It is well known that Chapters 28-33 of this great Shastra deals directly with music and a detail account of Scales, Swara (स्वरा), Shrutis (श्रुति), the three Musical Gramas, Murchanas (मूर्चन), Scales obtained by transposition etc. This indicates that the foundation of the physics of Indian music had been laid down at the time of Bharata itself. Though, there is a mention of the two parental scales i.e. 'Gramas' (ग्राम) (the third i.e. 'Ga' grama having gone back in 'DEVLOK' (देवलोक), (heaven) and, therefore, not used by humans) & eighteen Jaatis, seven of which were derived from Sadja Grama (सज्जगम) & remaining eleven were obtained from Madyama Grama (मध्यमगम), but the term 'Raaga' & Raaga system came in to existence in around 400 AD in yet another very important work called 'Brihaddesi' (बृहददेशि) written by the great rishi Matanga. Thus, it can be seen that it took a long period of around 700 years in the induction of Raaga system in Indian music from the earlier 'Jaati Gayan' (जाति गायन). It is evident that the earlier Jaati system gradually must have been replaced by the raaga system and by the time Matanga had written his book, this system must have been well developed as the change is a very slow process.

The next authoritative work on music belongs to early thirteen century. It is the famous Sangeet Ratnakar of Pt. Sarang Dev. Sangeet Ratnakar deals at length with music in all the three traditional aspects viz. Vocal, Instrumental & Dance. Though, Pt. Sharang Dev was much more elaborating and scholarly in his treatment of general doctrine of music, but he did not differ much from either Matanga or Bharata. It was only that some new raagas, which were called Adheena Prashidha raagas (अधीनप्रशिद्धराग), had replaced the old raagas in his time. The next important work which deserves a special notice is that of 'Sangeet Parijaat' by Pt. Ahobal in early 17th century. It was he who had given the relations between the pitches of different degrees of Scales i.e. Swaras in terms of the length of the wire under constant tension. It was Pt. Ahobala, who had taken a further step in experimental development of the laws of Indian music. Thereafter, the most important work, which deals the 'Janya raga' (जन्यराग) & 'Janya mela' (जन्यमेल), is Chaturdandi Prakashika

by Pt. Vyankat Mukhi Swami in seventeenth century. He had, for the first time, established 72 melekarta thaats and started a system of 'swara paddhati (Loji) system' having 12 swaras, which is still prevalent in South India. The present Thaat system of North Indian music also has basically derived its principles from the system dealt in this work. Though, there have been various works thereafter, but one work namely, Nagmate Aasifi by Md. Raza (1814), is worth mentioning. In his work Md. Raza introduced some sort of the intelligent principle in the classification of Raagas and he totally rejected the Raaga-Ragini system prevalent in his time. The central principle upon which he based his system was that between every 'Raaga' and its 'Ragini' there must be some close similarity.

In the modern times, however, there have been great scholars like Sir, Surendra Mohan Tagore, Pt. V.N. Bhatkhande, Capt. N.A. Willord, Mr. Clements, Mr. M. Dencelore, who had written a number of books explaining the science & art of music. However, to a modern student of music, who may ask how and why of everything, a mere collection of the Raagas and other incidental details would not convey everything that constitute music. He would demand a rational explanation of what the art has achieved by means of delicate aesthetic feelings. The study of music in relation to laws of musical sound alone can offer such a rational explanation.

Musically, there has been a mass awakening in India and both the science and the art of music have been given their due attention by modern scholars. The Govt. of India & other private organizations have also taken number of steps by making various organizations like Sangeet Natak Academy, Sangeet Research Academy, Indian Musicological society, AIR etc. who regularly hold Seminars, talks & presentations besides organizing live concerts of performing artists etc. These organizations bring out periodicals regularly. It was only through reading these periodicals and the great works by scholars/writers like Sri G.H. Ranade, Sri Ashok Ranade, Prof. R.C. Mehta, Dr. S.A.S. Durga, which could be assessed mainly in the libraries of Sangeet Natak Academy at New Delhi & NCPA at Mumbai, the researcher got the inspiration to take up the present work of study.

The concept of the present work was deliberated for first time at length in a seminar on Psychology of Music held at Wadia College, Pune in 1975 and thereafter during a seminar of Musicology held at IIT Madras in 1980. This very concept has also been dealt in Vol. XI No. 1 & 2 March-June 1980 of Journal of Indian Musicological Society, Baroda. After examining the contents of the existing literature,

it was clear that nowhere the application of the concept, as discussed in the present study, had been dealt so far, which is indicative of the gap in the research studies on the subject. The application of the present concept was applied for first time on the Indian Raagas by the researcher himself. Though, the data about existing Raagas have been taken from the existing sources but, the derivation of their mirror image according to the concept propounded in the present research, matching of these mirror images with the available data base of Raagas, conceptualization of existence of inverse raagas relationships and the new Raagas based on the principle of inverses etc. have been done by the researcher himself and that way the present study is an original work.