

BOOK REVIEWS

PSYCHOLOGY OF MUSIC

R.C. Mehta. Editor, Published by Indian Musicological Society, Baroda, Dec. 1980, pp. 104, Price: Rs. 40/-.

The title **PSYCHOLOGY OF MUSIC** contains selected papers read out at the seminar on the topic conducted at Poona by the Indian Musicological Society with the cooperation and collaboration of the Deptt. of Experimental Psychology, Poona University, from 12th to 15th January 1975. It is indeed a dimensional spectrum of research-knowledge. There are as many as eleven papers included in the format of a book.

The first paper entitled **UNDERSTANDING MUSIC & SCOPE FOR PSYCHOLOGICAL PROBES** contributed by Ashok Kelkar begins with the description of the musical culture as a part of the aesthetic culture formed by the totality of customs of a particular society; it is, so to say, bipolar, the maker of music on one hand and the listener on the other. He holds that musical culture is formed by the norms of musical taste (receptivity), music-making (creation and rendering), musical ideology and finally musical activity. With regard to an understanding of music he observes: "...Broadly speaking, problems connected with musical technique and the Sastras categories of technique will be the most amenable to experimental probing, while problems connected with the social psychology of musical taste, ideology, and activity will yield to questionnaire and interview methods." (p. 13) However, psychological research in musical taste would not be a smooth-sailing affair. The learned scholar does touch upon the points before he proceeds to underline the necessity of rescuing the study of music from 'anecdotalism, and antiquarianism, amateurship and impressionism' (p. 17). The second paper dealing with Affective Analysis of North Indian Ragas reviews some important considerations necessitating a methodological inquiry. First, experimental psychology should start with relevant valuational assumptions. Affective analysis is hemmed in by difficulties and a proper conceptual decision should be regarded as a precondition. Secondly, 'music' is too broad a category to justify undifferential application of similar methods irrespective of the nature of music involved. Without an eye on ethnomusicological particularity, any method would be of no avail. It may here be pointed out that affective analysis must include both the originator and receptor of the stimuli from both physiological and psychological viewpoints. Hindustani raga, for example, because it is realized

in a performance and not in a recital, is a dynamic, quite improvised and unpredictable entity, and cannot be analysed haphazardly. Methods applied to analysing Western music would not have any utility in case of Hindustani raga which differs from Western music in content, instrumental symbolism and written versions. The question almost Sphinx-posed by mood-music relationship is by nature ethnocentric rather than universal; besides, relationship is bi-levelled rather than mono-levelled. New methods are therefore to be evolved. The paper is indeed thought-provoking.

A CONCEPTUAL FRAMEWORK FOR ANALYSIS OF AESTHETIC BEHAVIOUR, by Shyamala Vanarse, discusses wider issues of artistic and aesthetic behaviour under five headings: the nature of aesthetic behaviour, the form of aesthetic behaviour, the nature of aesthetic stimulus, the artist as a person. Each of these contains, so to say, parts of a jigsaw puzzle. For instance, whether aesthetic behaviour is an extension of everyday behaviour or it is a special category of behaviour; whether dynamics of art derives from defence mechanism and fantasy, and forms of neurotic behaviour; whether creation of art or its appreciation may be distinguished; whether the nature of aesthetic stimulus is a wild-goose chase similar to quarrel over existence of beauty in the subject or in the object; whether the artist's personality has any area of investigation; and a host of such issues have been brought forward with regard to what may be described as intuitive perspicacity. That there cannot be a ready-made solution is therefore indisputable. However, the writer holds that the following sketch can be easily transposed to the idiom of the art critic.

- I. Context : 1. Physical characteristics, 2. Socio-cultural characteristics
3. Aesthetic characterisation.
- II. Stimulus : 1. Physical properties, 2. Second Order Properties
(a. Relational properties, b. Stylistic properties)
- III. Organism : Capacity (artistic talent, appreciative skills), Training
(technical training, Social Learning) Personality Structure
- IV. Response : (a) Inappropriate responses
(b) Appropriate responses
Verbal Responses (report, criticism, exclamation etc.,
Non-verbal (changes in responses, changes in arousal,
cognitive changes, changes in feeling quality
(p. 28)

The paper evidences learning and expertise, and does provide guidelines for experimental psychology vis-a-vis issues relating to music.

Arvind Mangrulkar, a well-known art-critic, takes up this issue in

his paper APPRECIATIVE RESPONSE TO MUSIC with reference to the enjoyers' appreciative response to Indian music in mehfils or concerts. An appreciative response not only expresses the listener's appreciative response, but also encourages the artist-singer in no small measure. A mehfil, so to say, is a family union of sensitive, appreciative listeners, leaving out of account those groomed for a particular gharana in convention. Music consisting as it does of three sources, viz., (1) Tone (svara) (2) Rhythm (laya), and (3) Form, evokes rapturous response from different mental make-ups in relation to those constituents. The inter-play of svara and laya gets into a togetherness creating a feeling of immensity and living. A sculpturesque form results. Every little detail of svara, laya and tala conjoined with words goes towards creating cumulative perception. A dimensional dialogue between the artiste and the listener is termed by the writer INTERVAL. This 'Interval Theory' does not imply a 'respite or rest, or silence, or hush in time leading to the snapping of ties; it is something more. A piece of performance giving the feel of its meaningfulness both to the artiste and to the listener may stop a while opening up new vistas and avenues during the rapport. According to the writer: "the musical INTERVAL THEORY explains the nature of the appreciative response in Indian concerts of music" (P. 32). In all fairness, however, the theory does not seem to be well termed. Besides, the rapport between the artiste and the listener is only intuitively perceptible. There remains a halo of mystic luminescence about it, that is all.

A STUDY IN THE PSYCHOLOGICAL RESPONSE TO RAGAS, an abstract of Research Report II of Sangeet Natak Akademi, is an empirical evaluation of psychological responses to a few ragas of Indian classical music, especially attempting a comparison of the mood 'created' with the mood 'intended'. Research findings are based on the responses of 228 individuals, both males and females of various age groups, having different types of educational background and varied training in classical music. Measurement techniques were two: 1. Semantic differential technique, 2. 'Make-a-choice' technique. A processing of the intersensory and synesthetic notings yielded a few conclusions. Rag Bhairava has empathy, compassion, vitality, positiveness, courageousness, tranquillity. The moods were discovered to tally. B.C. Deva and K.G. Virmani deserve all praise for their painstaking effort in this respect. They have rescued the ragas out of the clouds, so to say.

Jaidev Singh discusses Nada in its four aspects: 1. Metaphysics of Nada, 2. Nada in Yoga, 3. Nada in the philosophy of Grammar, 4. Nada in music. The term NADA implies the stir or impulse at a higher level and sound at a lower level. Indian metaphysics regards Nada as the cause-vibration perceptible to the Divine Mind without a medium. Light is but sound of a particular frequency. By its condensation energy becomes nuclear giving rise to forms and shapes. Metaphysical interpretation is available in almost all schools of Indian Philosophy and the writer has drawn upon the Sanskrit sources for an intensive study of Nada in Indian philosophy. Nada

in Yoga is also not without philosophical background. The term functions as a mantra. It is pointed out that mantra and Devata are one and the same. Devata is invoked by Mantra Japa which has three aspects, viz., sound, rhythm, and content. When sound and rhythm are properly maintained the content or the meaning is automatically revealed to the mind for sound and sense, vak and artha, are inseparably connected. Nada is a special Yoga, called Nadanusandhana Yoga, attributed to Shankara, is attainable through four stages: pranayama, ghata, paricaya, and nispatti. A Sadhak, an aspirant, by becoming steady, listening with the mind absorbed, and bringing attention on to the void, attains to Nispatti. Nispatti is described as a stage characterized by loss of Sankalpa-Vikalpa (grasping-singling out). Reaching the stage the Sadhak begins to see life steadily and see it whole. The Jiva, soul, attains communion with the Supreme Self. Philosophy of Grammar regards Sabda or Nada synonymous. Bhartrhari's VAKYAPADIYA is drawn upon to point out that Sabda or Nada is the essential nature of Brahmana. It unfolds itself into Sabda, artha and prakriya (sound/word/object/meaning, and production/creation respectively. Sabda then is metempirical. The philosophy of Grammar has the theory of Sphota, formed from 'Sphuta' meaning to burst, to appear in a flash. It is thus a linguistic sign bearing meaning. Speech and meaning are according to Bhartrhari non-distinct and inseparable. The sphota is not an arithmetical sum; it may be described in the framework of modern psychology of Gestalt. Nada, in music and in its highest sense, is the consciousness-power unfolding as the phenomenal world. However, the reader is left with the feeling that Nada is only sketchily dealt with.

MUSIC AND SOUND IN YOGA, by Vimla Musalgaonkar, also throws light on Nada. The Yogi makes his body laboratory and reining in his mind (cittavrttinirodha) realises truths. The Indian Yogi of yore knew through self-realisation a good number of things which modern science has made available now. For instance, he knew that various forms of energy are incontrovertible and that light travels faster than sound. What is Sphota in grammar, Dhvani in poetics, is Nada in Yoga. The term Yoga has a spectrum of meanings and connotations such as acquisition, union, meditation, contrivance, physical fitness, practical use, astrology, remedy, treachery, substance, a means to an end, armour, action of mantra and diligence. Derived from the root 'Yuj', Yujir, the term Yoga, according to Panini, means profound meditation, combination and self-control. The word Nad, in musical literature, implies: the sakti of the Divine, sound in general, musical sound. In music literature it is of two kinds, *ahata* and *anahata*; that is, caused by impact, and not caused by any impact (spontaneous). Gita (song) and Vadya (musical instrument) are the nature of nada, that is musical sound. The entire word depends upon nada for a 'word' is composed of letters, and a 'speech' of words. Nada (na+da) means prana (soul) and fire; production of sound arises from vibration that is motion which is generative of heat. According to Sarngadeva, there are

twenty-two perceivable sounds, (Srutis). Sarngdeva gives a practical demonstration of these. Srutis, in short, are only the series of sounds revealing a *svara*, a musical note. The relationship between the *sruti* and the *svara* is that of the manifestor and the manifested. The *svara* is a continuous tinkling echo, smooth and pleasant, process of aesthetic joy. Music is directly concerned with the body which the Yogi turns into a workshop for spiritual *sadhana*. Yogis have given subtle and comprehensive description of the nature and power of *Nada-tattva* which is the stepping-stone towards awakening of *Kundalini* by piercing through various *cakras* (*cakra-bhedana*). *Nada* thus embraces the concepts of *sabda*, *dhvani* and *sphota* in its concreteness (colour, form, shape). The paper is most comprehensively conceived. The theme touched upon is challengingly worth further pursuings.

The paper following is written in the Maharashtrian language, entitled *DIVYASAKTI RAHASYS*, that is: mystique of spiritual prowess. It concentrates on *Nada* in the contexture of the whole philosophy of *Yoga-sampridaya*. The salient features have been concisely and lucidly described. However, a majority of readers would have liked its English translation appended.

Manas Raychaudhuri's *MUSICAL CREATIVITY REVISITED* is a close-up findings with regard to creative artists, musicians and literary persons subjected to empirical studies with a view to ascertaining whether original, exceptional and creative products occur by chance or they result from a particular configuration of psychological attributes. The paper begins with a bird's eye-view of researches on artistic and musical creativity conducted in western countries, which is quite interesting as well as revealing. It draws attention to the fact that despite age-long tradition of the Indian art and artists there have been very few attempts to explore scientifically the psychological make-up of creative artists. Musical artists have been considered "pupil of God"; and, music has been regarded as a holy vehicle of communion with the soul, a kind of *Yoga*. Now, the attitude is fast changing and experimental studies on artistic activity and art have been undertaken. Sri Raychaudhuri made a fresh probe into the psychological world of gifted musicians in India, aimed at re-examining and re-integrating the efforts put in by other researchers like Som Nath Bhattacharya and any Raychaudhuri. In all 30 professional musicians, nominated and selected by a panel of musicologists and critics, served as subjects. The data were collected in individual sessions. Psychological measures comprise Structured and Direct-tests of personality and associated areas, scanning, Ego-Permissiveness. The measuring-scales utilized the world over were made use of. A scientific processing of the data obtained was distilled into a number of conclusions with regard to a number of interrelations and functions, which are highly sophisticated. The affective dynamics of the musician, his impulsive life and control, his perceptual openness (selectivity and ideational equipment), his narcissistic omnipotence, and his motivational

determinants were for the first time scientifically looked into. The paper has two very informative tables appended to it and the references are quite massive.

Somnath Bhattacharya, a very big name in Indian Musicology, deals with musical creativity in his paper intitled **PSYCHOANALYSIS & CREATIVITY: WITH SPECIAL REFERENCE TO MUSICAL CREATIVITY**. Both psychoanalysts and academic psychologists have been studying the topic of 'creativity of art—activity over several generations. Since Freud, psychological concepts have continued to be modified, discarded and added to metapsychological concepts of his. What is the hidden motive urging an artist/artiste to create? The writer has taken synoptic view of the very many theories propounded by almost all the reputed psychologists—Freud, Abraham, Galton, Brills, Bychowski, Fenichel, Kohut, Alexander, Bergler and a host of others. The inference drawn by the writer tend to the view that sublimation of libidinal impulses, compensation for inferiority, strong auditory and kinesthetic imageries, environmental factors etc. go a long way towards building up creative artistic sensitivity. Towards this aim the paper seems to hang loose and the question posed by the writer remains hardly well-focussed.

All things considered, the in-depth and multi-dimensional studies contained in the format of a book constitute a take-off towards developing Indian Musicology in the context of the international standards. The book under review seems to get up to an encyclopaedic level. Sri Mehta, who has edited the papers, has acquitted himself most creditably for the book does not seem to include disparate matter. It is a well-knit presentation of a theory. The price is quite moderate.

—Dr. Tara Charan Rastogi

THE MUSIC OF INDIA : A SCIENTIFIC STUDY

B. Chaitanya Deva. Munshiram Manoharlal Publishers Pvt., Ltd., 1981, pp. 278, Price Rs. 80/-.

The book, though dedicated to non-conformism and adventures in ideas, is a solid contribution to Indian Tradition. The title is the revised and rewritten work which formerly appeared with the caption **PSYCHO-ACOUSTICS OF MUSIC AND SPEECH** (Madras). Indian Musicology derives from the profundities of the Vedic texts delving into which the writer addressed himself to research in the study which has stagnated over the decades. Research in music is no better than gravedigging because today's art goes almost by default. Attention is kept rivetted to the works of the ancient writers like Bharata and Sarangdeva. Now there is imperative need to cultivate a scientific attitude by experimenting and scientifically recording the phenomena in nature with a view to deducing general laws behind

them in respect of music. Experimental approach thus spans a wide range, embracing the knowledge opened up by Psychology, Parapsychology, Sociology, Physical studies, and such others. Even intuitive knowledge can be made use of. The scholars of yore had praiseworthy logical concepts about sound and music. Sound, according to them, is a quality of air; some regarded it as originating in akasa and later vibrating around. This vibration of air particles is the Nada, they held. To give a few terms, the series of air movements and waves are called the vayusanatana. The audible sound was termed dhvani and the transcendental sound, the sphota. The srutis contain theories of music and their contribution to the international musical thought can be hardly disputed. Indian musicologists like Narada, Matanga, Sarāṅgdeva, Venkatamakhin did make solid contributions to the science of music. Today what is needed is 'the application of newer knowledge and newer technique to music and to open newer roads in musicology.' The book under review points to the needs of the hour and give a look into exploration of possibilities in musicology. The tonic drone in melodic music invites attention and its psychological and neurophysiological dynamics in terms of historical change should be properly looked into inasmuch as any change, big or small, implies a non-conformity with tradition. The writer has gone deep into the concepts and practice of the srutis manifesting in various ragas opening up the possibilities for the application of Indian aesthetics to music-experience, the nature of the stimulus and the response, musical structure articulating into a melody, rasa-raga relations, raga-rupa and musical perceptions. Musical experience is a continuum for none knows where the physical ends and the mental begins. Musical activity is a form of communication which may be studied in three stages: (a) encoding, (b) message and (c) decoding. Encoding is the formation and sending of the message, and decoding is the receipt, perception and understanding of music. Why is music produced at all—is quite baffling a question which, studied in the light of depth-psychology, seems to point to the unconscious sources in the human mind. The well-springs of music and speech lie in a basic undifferentiated vocal material. Speech is a conscious articulation; music has peripheral non-conscious articulation as well. All vibration that is Nada is the result of the movements of the prana through six cakras. The chapter entitled **SOME PROBLEMS IN SCIENCE AND MUSIC** discusses musical scale and raga form. Decoding is the process of reception and perception, and also reaction to the stimulus. It is a totality formed by sensation, nervous conduction, conscious and non-conscious perception and the emotional response to music. The writer makes two major points: (1) commonness between the encoder and the decoder is the meaning, which spans wide regions of the physiological peripheral nervous, central nervous, conscious/unconscious degree of perception. This makes one touch the aesthetic state, that is rasanubhuti. (2) the emotional value, because of its being highly speculative and personal, is difficult to assess. A systematic study of the 'meaning of music' yet awaits research. The actual materials of music and their behaviour have not been studied to the extent they deserve. The chapter

entitled POSTULATIONAL METHODS AND INDIAN MUSICOLOGY seeks to disentangle the rational concepts in terms of which Indian music is discussed. The first need is therefore to reduce the basic relational concepts to an axiomatic form especially when the subject matter of musicology does hardly lend itself to postulational treatments. The discussion that follows centres on the musical value of *tivr madhyam* and the *musical value of scale*. Depending upon the musical environment and emphasis the emotional value of the note changes, which points to the fact that the musical environment is most important. The scale of Reference may be defined as an ordered arrangement of musical intervals within an octave. The emotional content of a note or a set of notes may be viewed against two backgrounds, immediate and remote. The 'immediate' background comprises the drone and the musical environment. The emotional value of a note is in fact partly determined according to the degree of dissonance between it and the drone. The musical environment is determined by the tonal scheme of a raga with a psychological pattern of its own. The chapter 'TONAL STRUCTURE OF TAMBURA' based on psychoanalysis of artistic vision and hearing studies the tonal structure of the most important drone in Indian Music. It is analytically proved that the frequencies of the tambura string may be considered as a densely ordered set. That is, no change can be found between one tone and another.

Examining the psychological dynamics of melodic music, the writer accounts for the great change that has occurred during four hundred years in the structure of Indian Music. The discussion is pursued further. There is a good deal of processing in respect of polychords, monochords, ideational-idealation, socio-psychological factors, ascending scales replacing descending ones, measurement in relation to the tonic or the drone, dynamics of music history, neuro-physiological bases. It is all most analytical and very interesting as well.

Some aspects of psychological factors (conscious and unconscious) motivating music dynamics evolving through social forces and the resultant transformations are taken up in the chapter captioned TRADITION & NON-CONFORMITY IN INDIAN MUSIC. The writer makes a praiseworthy logical point with the observation that tradition and non-conformism are not exclusive of each other; rather, one cannot be conceived without the other. Tradition is the soil out of which everything sprouts to bloom. Racial characteristics and individual talents go towards generating the phenomenon which may be described as Tradition Non-conformity, or Past-Present continuum. In Indian Music, it is striking enough, non-conformity has rarely led to a revolution; mostly non-conformity has brought on innovations. Intra-individual necessity for innovation drawing upon extra-individual factors and intra-social activities have always been at work. For instance, Amir Khan belonging to a family of Sarangi players came out with beautiful music because of his father's coming under the direct/indirect

influence of the Bhendi Bazar gharana of singers. Shivputra Komkali created a new tradition by his taking inspiration from folk music. Intra-social influences may also result into an impact. The mutual influences of Karnatak and Hindustani music have resulted into a whole new set of scales; South Indian music getting familiarized to North Indian regions. Extra-social influences such as the Central Asian music cultures manifesting in the Sufi way and the orthodox Islamic attitude too had a far-reaching influence. A number of ragas not known to the Indian tradition tended to become popular: Hejaj, Turuka Todi, Yaman, scales like those of Bhairav, Todi, Purvi, Marva etc. are all entrants. In like manner, western musical dimensions seem to cast a halo around. Whether western orchestration can give us tone-mass and colour-dimensions is a facet that yet remains unexamined. It is needless to speculate what the centuries ahead have in store for Indian Musicology.

THE VIBRATO IN INDIAN MUSIC is devoted to studying musical scales. In-depth discussion brings to the fore following generalisations:

1. Vibrato is a periodic pulsation of the fundamental of a musical or speech tone. There are analogous modulations of intensity and formant.
2. It is not easily perceived unless the music is slowed. It may be described as a preconscious musical element
3. It is present in all types of music: vocal, instrumental, adult, child, folk.
4. It is also present, though less than in music, in emotional speech.
5. Even apparent grades in artistic quality do not influence the presence or otherwise of vibrato.

The most important and significant point about the vibrato is that it is not a fully conscious tonal reality. It is a semiconscious (inarticulate) tonal ornament. And it is there in all forms of music. Vibrato is consciously perceivable in the graces called *kampana* (shake) and *andolana* (swing). However, whatever is essentially important is the fact that a period by period analysis of the acoustic stream, which may reveal hidden patterns. This theme runs into two more chapters which span a very wide field. All phenomena are space-time bound. Perception therefore becomes a matter of memory, which, for a lack of proper term, is described as aesthetic awareness. How is aesthetic awareness related to phenomena, and what is the process of relationship? These are baffling questions. The writer feels that aesthetic awareness can never be measured or metrized. However, a high degree of approximation in the matter of measurement and metrization may be obtained by taking *Sruti* as an indicator. The transition from tone to tone is intuitively studied, by C.R. Sankaran, in his theories of alpha and alpha-phonoid.

The theory, originally developed in the context of speech elements like consonants and vowels, was extended to any vibratory phenomenon. A transition from one tone to another may be expressed in mathematical terms and that the two tones (analogous to consonants and vowel) are mutually exclusive only arbitrarily. And, then it follows that the termination of one tone and the beginning of the other cannot be positively indicated. The term tone covers a wide area of tonal phenomenon, from acoustical to acoustico-articulatory-psychological continuum. Tonal progression is physical, physiological and psychological at the same time. This continuity-discontinuity seems to be at the foundation of the theory of sruti, and in that it is only a pointer and not a measure. The word Sruti is by and large an additive measure of various pitch-relations in music. The logic that follows ends with the observation that 'we have to develop a calculus of continuous pitch movements and also that the sruti phenomenon is an infinite series suffering approximations for adjustments of octave relations.' (p.102-103). There are a good number of theories with regard to the sruti in Indian music out of which two concepts which have been experimented upon are worthy of note: (1) An arithmetical series worked out by Guru Baksh Singh and tuned by him on the harmonium, (2) an arithmetical series worked out by S. Ramanathan (Madras) and Ramanathan (Tiruchirappalli). The latter has constructed a sruti vina with a set of strings capable of being tuned to any desired intervals. These experiments were conducted to examine whether the 22 srutis which were tuned did in fact tally with their calculations. The writer opines that such experiments though quite pilotary in themselves must continue because their auditory judgement is found to be satisfactory.

The 10th chapter deals with TRANSITIVE ELEMENTS IN MUSIC. A note without a hearer, says the writer, has neither pitch, loudness nor tone colour. As modern physics too recognises the role of the observer, this 'renewed awareness', as it is called, is fast becoming a branch of psychoacoustics. What is, then, 'Transitive'? William James has pointed out that our perceptive elements do not consist solely of what we consciously are able to cognate. 'Every organism receives external and internal stimuli, infinite in number. Not all of these are 'consciously' defined and acted upon. Like a sharply focussed photograph there is a region of 'focus of attention' and all the rest is vague and 'out of focus, lending a halo, a necessary quality to the centrally focussed element of perception as *substantive* and the halo, peripheral element as *transitive*. In music the substantive elements have been named as 'notes', 'scales', 'chords', etc., as if these were real and constant. In the extraordinary fluidity of music there are only 'landing places' and foci of attention. But every tone has its 'halo' which lends it a beauty and flash. The transitive and peripheral elements of a tone give the necessary richness. In Indian music we have called these elements as gamaka-s (graces). When in music, a tone moves from its own pitch towards another, so that the second sound passes like a shadow over it, this is called gamaka. Note that

the sound passes like a shadow. It is not light. In short, a gamaka is out of conscious focus; it is transitive.' (p-120). Their notable feature is essentially noise. Musical noises too have a musical purpose. In programme music, for instance with effects of thunder and lightning or symbolizing machines in action, noises play a prominent part. From this point of view a noisy gamaka, such as a glottal catch and a sudden vocal release, is an important adjunct to musical beauty. An acoustic phenomenon in the shape of a noise acts like a rhythm. The writer holds that it is invidious to make a distinction between musical sounds and noises. Parallel to this is the spurious distinction of vowels and consonants in speech. Rhythm and noise are both essential acoustic material in music. Deva then proceeds to deal with the psychological and psychophysiological aspects of Ragas and their time quite exploringly. 'It would require a very intensive psychoanalytical study to reveal the roots of these tunes which are but the origins of ragas; they are the tonal archetypes. Various seasons with their biological associations inspire the music of the first order. Biological associations and psychological implications. Music is highly conceptual and also ethnopsychological. Our scientific approach should consist of the study of music of the various people, their festivals and their life habits in general. Many a raga and even musical notes bear ethnic and place names; for example the notes Gandhara, Nisada, Dhaivata bhoj, Cencu Kambhoji, Yerukala Kambhoji, etc. In understanding the psychological dynamics of melodic integration, the first necessity is the recognition of the fact that it is the 'emotional' excitement that is the cause of music—the necessity to communicate with fellow beings, 'the necessity to relieve deep psychological tensions.' (p. 126).

The subject is continued in the last three chapters as well. Dimensional depth of Raga and Rasa in the perspective of present-day knowledge in science and humanities is logically processed. This logical processing, coupled with the musical-expertise the writer has, leads to the inference that 'music does not express a particular emotion but creates certain parallel states of mind ... consonance or dissonance, straight or odd rhythm, fast or slow tempo, high or low pitch—these create tension and relaxation and engender an excited or a calm state of mind or certain tonal forms which have no referents.' (p. 140) Drawing upon a series of researches conducted on the subject at the Laboratories of the Sangeet Natak Akademi, New Delhi, Shri Deva lays down the inferences drawn: "1. It is necessary to compare the traditionally intended mood and the mood of the raga as reported by respondents. 2. A commonness in the responses of the younger and the older generations is clearly revealed . . . We see that essentially the mood by the raga has no generation gap." (187-188).

Under the caption RAG-RUPA he studies the aspects of a methodology of raga classification and suggests a very careful scrutiny of the raga-ragani system with a view to discovering potentialities that yet elude being tapped properly. He seeks to develop a definite and objective method, eliminating personal impressions and vague statements. His method describes

Raga forms, compares and classifies them, taking in view historical developments and composers and gharanas, etc. An exploratory mathematical study of Indian music patterns illustrated with tables is pursued with acumen and subtlety. Methods for mathematically defining raga patterns are quite interesting and bespeak of great talents. Besides, the interrelations of the tonal strength in the ragas is logically taken up.

The last two chapters are MELODIC PERCEPTION, and PERCEPTION OF RHYTHM. How is it that a set of notes is held together to become a tune and what is the mechanism that binds them together are indeed difficult questions posed, and then answered. The author has acquitted himself quite creditably by bringing into discussion the conceptions about perceptions that seem to provide a frame for sensations and rhythms as a pattern in time of sound and light waves. The book thus profoundly evaluates the experiments with regard to musical aesthetics, concepts and theories of ragas; methodology so far pursued, dynamics of Indian music and brings into focus, perhaps for the first time the role of non-conscious elements in music. Probity and erudition running through the entire book are quite stimulating for further studies and experiments on the issues raised. In view of the matter projected in the book its price is quite moderate. However, a paperback edition would of course attract a wide readership.

—Dr. T.C. Rastogi

The Winged Form, Aesthetical essays on Hindustani Rhythm, Sushil Kumar Saxena, Sangeet Natak Akademi, New Delhi, Rs. 35.

Most books on Indian music contain analysis of melody. The book under review tries to do the same service for rhythm as an independent art. It tries to analyse the key concepts like laya, matra, zarab, bol, theka and sama in the concept of both aesthetic discourse and experience.

In his analytic brilliance, there are few books on Indian music that can match the rigour of the philosophical-aesthetic approach of Dr. S.K. Saxena, who besides being a reader in philosophy, specialises in Tabla and Kathak. His view of rhythm in terms of self-emanation, completion and fulfilment is the most satisfying explanation of the complexities of Tala in Indian music. He makes elaborate use of Gestalt psychology to explain the intricacies of rhythm.

Dr. Saxena has interesting views about Tarana. This form provides an interesting field for the study of structure. Here one can study continuity and flow; discreteness; and successiveness; and buoyancy and artistic abandon. The author also studies these formal features in relation to Kathak dance.

The author has many bright things to say about Sama—the climactic point of the rhythmic cycle. It is an exhilarating experience that occasionally the percussionist withholds daintily from an actual contact with the Sama, while at another time he upgathers at it like a sleeping flower. Dr. Saxena calls this 'wanton heed and giddy cunning' of musical creativity.

When Dr. Saxena talks about aesthetics of rhythm, he is persuasive and readable. The following passage is characteristic of the way he can describe rhythm in contemplation: "Not only the set onward lapse of even inner emphases which rhythm directly manifests, but the effects of a tense expectancy or blushing self-withdrawal, or of fancy's tipsy turns willfully accentuated are all easily achievable by a good display of tala."

When Dr. Saxena acts as a metaphysician of rhythm, he uses difficult terminology, and occasionally fails to communicate. The most difficult chapter in the book deals with "our Rhythm and Croce". The stimulating part of this book deals with aesthetics rather than metaphysics of Indian rhythm.

—Chetan Karnani

Vaidika Parampara mein Samagana : Hindi Translation of Rajyeshwar Mitra's Bengali work *Vaidika Aitihiye Sāmagāna* by Madan Lal Vyas. Published by : Anand Prakashan Sansthan. Varanasi, Pages : 258; Price : Rs. 50/-

Samā-Veda Samhitā is a compilation of verses, nearly all taken from the *Rg-Veda* and set to music or *Sāman*. *Sāman* is a metrical hymn or song of praise addressed to Indra, Agni and other Vedic Gods. As these verses had to be chanted at Soma sacrifices by the *Udgātri* priests, these are modified in various ways.

Now, what is the form of *Sām-gān* ? How is it sung ? What are the variations ? What is its relevance to Vedic tradition ? Shri Rajyeshwar Mitra tries to answer all these questions in his book "*Vaidik-Aitihiye Sām-gān*."

This book discusses mainly the musical technicalities of *Sām-gān*, such as, different parts of *Sām-gān*, scale, notation system. The chapter "*Samswar aur Gita-bidhi Nirnaya*" contains detailed information with regard to these technicalities. At the end of the chapter he has given a present notation form of *Vāmadevya Sām* in *Nāradiya* style. He has also mentioned the rich content of *Sām Veda*. References of melodious *Pavāman* stotras, stories of *Loukik Sām* have been made in the book.

Notations of Vedic music was not similar to *Loukik* music, Vedic

music was in descending order. Even according to the author, Loukik Sangeet of Vedic-age was different from to-day's Loukik-sangeet. According to him, because of its descending order Sām gān could not gain popularity and became obsolete in course of time.

Sām was chiefly mantras—set to music intended to be sung with the accompaniment of Dunduvi and Veena. Singers were not the composers. As it was sung during the sacrifices, different parts used to be sung by different priests. They were called Prastotā, Udgātā, Pratihartā and the last part they used to sing in chorus called Nidhan. Rules of singing Sām were very rigid. Sām generally consists of three lines (Tri-RKs) called Stotra, again some stotras constitute stomā. The first part or Yoni-mantra forms 'Purbārchika'. On it was based 'Gram-geya'. From last part of Gram-Geya starts Aranya-geya, i.e. Uttarārchik. Udgātā used to sing it. They were well-versed in various permutation-combinations of Sāmans. As Sāmans were drawn from Rg-Veda, three RK-swars—Udātta, Anudātta, and Swarita were given prominence in Sām gān, though six notes were being used. The original division of meters of the mantra was to be maintained during singing. With this rigidity also goes the pronunciation part. Emphasis was given so much on the correct pronunciation of Swarās and varnas that any mis-pronunciation of these could even destroy the Yajmāna. We are to remember that all the Vedas were collected, classified and compiled in a written form, at a very later date. And it is said, this work was done by Vyas Rishi. Language of Sām is Sanskrit—a stylised form which developed later on. To-day, original vedic language is not traceable. Some traces of spoken word also is found e.g. Agni-Ognai, in Grām-geya and Aranya-geya part. So all the technicalities were preserved through traditional Guru paramparā style.

Sām used to be sung separately as well as along with stories. These stories were taken from Brāhamanas. These story-linked sams are called Loukik Sām and each of them is known by the name of that Rishi who composed it or who somehow was related to the sacrifice.

It is a valuable source book for research scholars, and serious students of music. This comprehensive analytical study shows the place of Sāmgān in Vedic tradition. As there is no text of Vedic music available since Hindu-age, the author maintains that the tradition of Sām gān is actually lost in India. Though in some parts of India, till now, it is being practised occasionally.

Last, but not the least about the translation. Translation of any technical work requires a great expertise in the subject as well as good command over the language. The Hindi translation 'Vaidik Paramparā Mein Samgan' introduces the original Bengali version to a large reading group.

—K. Banerjee