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MODE AND RAGA

By HAROLD S. POWERS

IF I were asked to describe or exemplify the essential characteristics of a specific South Indian raga, I should have no difficulty in doing so. I should further be able to describe or define the essential features of the concept Raga, though necessarily at some length. But the interests of most musicologists are illustrated by the question most commonly asked: "Is a raga anything like a Church mode?"

It is difficult to come to grips with a question of such enormous generality. The theoretical nature and practical functions of the Church modes changed during the long history of liturgical chant, and different observers see in them different characteristics. On the other hand, few of us have the necessary intimate, first-hand, practical musician's acquaintance with any non-Western music (such as that of India) which is not available for study in written form.

In 1895, Gevaert wrote:

. . . the Graeco-Roman melographers and, after them, the authors of liturgical chant worked in general with traditional themes, from which they drew new songs by a manner of amplification. A theme of this sort was designated during high antiquity by the word *nomos* — law, rule, model. As in architecture, invention in music consisted in constructing new works with the aid of materials taken from the common domain. This manner of proceeding is not peculiar to the ancient Hellenes; it is found everywhere where homophonic music has been elevated to the conception of modal unity, to the awareness of a fundamental law of harmony. Like the *nomos* of the Greeks or the *Saman* of the Vedic priests, the *raga* of the modern Hindus is a simple melodic scheme serving as canvas for an infinity of songs. The *nomoi* are in a way the roots of the musical language; each of them is the common element in a distinct group of melodies.¹

In 1956, Egon Wellesz writes:

The melodies from the *Heirmologium* and *Sticherarium* are composed of a num-

¹ Fr. Gevaert, *La Mélopée antique dans le chant de l'Église latine*, Paris, 1895, pp. 123-24.

ber of formulae characterizing each of the eight modes. The formula technique of composition is . . . the fundamental principle of composition in the Near and Middle East; it can be traced from India to the countries of the Mediterranean basin. The task of the Byzantine composers consisted in setting the formulae of a mode to the words and in linking the formulae together by bridge-passages.²

These two scholars, writing more than sixty years apart, express essentially the same two-fold view: 1) that the essence of mode lies in its mosaic, formulaic character; and 2) that this character is common to Christian chant and Near Eastern and Indian monophony.

Nor are they the only modern writers to express such views. In fact, it is remarkable how well a general definition of the Arabian or Indian music principle applies as a general description of the mode principle, and vice versa. Lest, however, the striking resemblance of procedure and general principle be taken to imply a similar correspondence of systemic detail, I take this opportunity to point out not only common features in the Church-mode and raga systems but also certain difficulties that lie in the way of pursuing the analogies too closely.

I take as a starting point A. Z. Idelsohn's general definition of mode and concomitant characteristics, as given in his book *Jewish Music*, published in 1929. I include here not only most of the portion quoted by Reese in *Music in the Middle Ages*, which is quite applicable to Christian chant, but also certain other passages more particularly relevant to Indian music.

"In the first place, Oriental music — whether Semitic, Altaic, or Hindu — is based on the modal form.

"A mode . . . is composed of a number of motives (i.e., short musical figures or groups of tones) within a certain scale. The motives have different functions. There are beginning and concluding motives, and motives of conjunctive and disjunctive character. The composer operates with the material of these traditional folk motives within a certain mode for his creations. His composition is nothing but his arrangement and combination of this limited number of motives."³

Later he writes: "The next element is the emphasis upon ornament. Oriental music is unthinkable in long sustained tones."⁴

² E. Wellesz, in *Dumbarton Oaks Papers*, IX/X (1956), 162.

³ A. Z. Idelsohn, *Jewish Music*, New York, 1929, pp. 24-25. See also Gustave Reese, *Music in the Middle Ages*, New York, 1940, p. 10.

⁴ Idelsohn, *op. cit.*, p. 25.

Somewhat later there follows a list of the scales found in Arabic music, after which Idelsohn remarks: "On each of these scales several modes are based."⁵

And finally: "The Oriental musicians and laymen are fond of improvisation. Even set tunes are largely varied and modified. The improvisation occurs in a certain mode, and the improviser has to operate with the traditional motives therein."⁶

Let us consider the comparison of raga with mode under three main headings: 1) the use and transmission of the two musics in question; 2) improvisation and ornamentation; and 3) the relationship of motive and scale in modal structures.

Most of the differences in application of the raga-concept and the mode-concept are due not to the geographical remoteness of Indian music but to a difference in the temporal distances, from the observer's point of view, and to different social uses for the respective musics. The known aspects of Gregorian and Byzantine music are primarily reconstructed; the Church modes no longer exist in Europe as a living system for artistic creation. But the "golden age" of South Indian music was only just coming to a close as Gevaert was writing, and its traditions are still very much alive. The average reasonably cultivated South Indian can attend a performance of music in the traditional system at least once a week in even a medium-sized town, and either he or his wife is likely to be something of an amateur musician. Members of a concert audience will have no difficulty in recognizing and appreciating skillful expositions in their favorite ragas.

It is fortunate for our knowledge of Indian music that it is a living art; for the Indian sol-fa letter notation is far from able to tell us much about the practice of any Indian music whose tradition has disappeared. For example, one can see from old treatises that ornamentation in detail not only is, but always has been, obligatory and essential to the characterization of a raga; and yet, with one exception, no old treatise gives us anything but the bare skeletons of actual music, and even those skeletons only as illustrative examples.

In addition to the inevitable apparent differences between a dead art and a living one, between a reconstructed system and an operative system, there is bound to be difference resulting from the manner of trans-

⁵ *Ibid.*, p. 26.

⁶ *Ibid.*

mission. The experimentation with and development of neume and staff notation in the West have no counterpart in India until very recent times. And even today in India the transmission of the musical tradition is for the most part by ear and by rote, very much as it must have been in the early, pre-notational stages of the Christian chant; the Indian letter-notation, when used at all, is simply a reminder, not a guide.

Then, we must note that the modal chant, as we know it, is not only composed but also sacred and, what is more, liturgical. In India the classical music based on ragas is in large part improvised, either instrumentally or with meaningless syllables. Where pre-composed text and pre-composed music do occur, they are non-liturgical. It is true that in the South the basic repertory consists of songs in the various ragas, with devotional texts, but these songs are not used liturgically in the temples. They were originally a purely personal expression of the poet-composer's devotion to his deity, and are now heard almost entirely in completely secular surroundings, in concert halls or at marriage concerts. The artists employ them as vehicles of virtuosity.

Before going on to deal with improvisation and ornamentation, I must make it perfectly clear how I intend to use the two terms. First, I exclude from consideration any question of spontaneous composition. Any new music, whether derived or original, which is then handed on in substantially the same form, thus becoming part of a traditional repertory, can hardly be called an improvisation, at least as far as subsequent practice is concerned.

Apart from this, I would like to distinguish two main manners of improvisation. In one, a given melodic or, in our day, harmonic sequence is taken as a basis and improved upon, by means of embellishments, substitutions, or interpolations; but the original piece, as a whole, is still to be discerned behind the improvised version. I would suppose that many of the existing elaborate versions of certain melody-types in the Gregorian repertory might have arisen in some such way,⁷ and that this type of improvisation would have been common in the growing period of Christian music. An example from a harmonic system is the improvisation by jazz musicians on stock tunes or chord sequences. Whether pre-composed or improvised, this is essentially variation technique.

A second manner of improvisation, which I will call "free improvisation," consists in the permutation of short plastic motifs, combining them

⁷ Cf. Dom P. M. Ferretti, *L'Esthétique grégorienne*, passim.

in various orders one with another. Probably many of the centonate melodies in the Gregorian repertory arose in some such fashion.⁸ From more familiar musical styles one might cite the manner in which cadenzas to classical piano concertos were improvised, since one may suppose that such improvisations were similar in principle to the written-out cadenzas that have come down to us.

In the same way, I would like to suggest two principal distinctive usages of the term "ornamentation." The first consists in the decoration and embellishment of an existing whole melodic line; if improvised, this amounts to the same thing as our first category of improvisation, a sort of variation technique. The performance practices in such pieces as the slow movements of the Corelli violin sonatas, of which we presume the Geminiani versions to be typical, may serve as an example.

The second usage of the term "ornamentation," which I will call "ornamentation in detail," is more specific. Here the reference is to particular categories of ornamented note or small group, such as trills, mordents, *Schleifer*, turns, and so on, irrespective of context in any particular whole melody. Such ornaments in detail are ordinarily functional, serving to stress the position or tendency of a particular note, and are more or less obligatory. One might mention the use of the mordent to stress a chord tone, or the use of an appoggiatura or trill to bring out a leading-tone function.

In the paragraphs to follow I deal with the small-scale usages of each term, that is, with free improvisation using short melodic formulas and with functional ornamentation in detail.

As far as we are able to know, free improvisation with modal formulas did not exist in the Church modes. I know of no reference to anyone's having been particularly skillful at, let us say, improvising in the first mode or bringing out particularly beautiful aspects of the sixth mode. The art of free improvisation would not seem to have been the cornerstone of modal practice.

But Indian improvisation has even been formalized. Most treatises have a section describing how an improvised exposition of a raga ought to be presented. However, there is sufficient variation in terminology and method from one treatise to another to warrant my simply outlining a contemporary practice.

⁸ Cf. Ferretti, *passim*.

The most important South Indian style of raga exposition is called *alapana*; it is sung to meaningless syllables, and comes in four main divisions. In the opening division of an *alapana* one is required to give a few of the raga's most characteristic phrases, phrases preferably unique to the raga concerned, in order to leave no doubt in the hearer as to the identity of the raga. The second division is devoted to exploiting phrases of the raga within definite pitch-areas; one generally begins in the lower part of the central octave, then develops the upper part of the central octave, and climaxes with an extensive exploitation of the lower part of the high octave.

In the third portion of the *alapana* the artist demonstrates his virtuosity in rapid passage-work; here, the characteristic phrases are often smoothed out to quasi-scalar passages wherever this does not completely destroy the feeling of the raga. In the final portion the artist relaxes in both pitch and speed, finishing on the drone-tonic common to all ragas.

There is a vague resemblance here to the over-all form found in most Gregorian compositions, in that there is an initial rise from a lower to a higher tessitura, a medial sustaining of the higher level, and a return into the lower pitch-area at the end. But this may well be an almost inevitable way of organizing large monodic forms, whether improvised or composed. More specific might be a possible parallel to the function of the opening division of the *alapana*, with its requirement of definitive motifs. It is certainly true, in Gregorian modal chant, that the most striking melodic figures, with the most easily recognizable individual configurations, tend to be used at the beginnings of pieces.

Functional ornamentation in detail also seems not to have been a feature of liturgical song in the Christian churches, though this apparent lack may again be simply a result of our having chant music in a still somewhat ambiguous notation long after the initial growth of the tradition had passed its height. This contrasts strongly with Indian music, where even the simplest syllabic melody is profusely inflected with slides, shakes, and mordents.

The Indian treatises always include a section on *gamaka*, which is the Sanskrit term meaning "ornamented note." Such passages are, except in a single treatise, always subjectively descriptive. The ornaments are listed and characterized, occasionally classified, never analyzed. There are a few attempts to describe the method of production by means

of vocal analogies, but there is only one treatise,⁹ from the 17th-century Southern group, that attempts to specify the ornaments by a description of their mechanical production on the *vina*; the author of this treatise also invents a notation to symbolize his various ornaments. Unfortunately this line of reasoning was never followed up.

Here is an example from a pre-13th-century treatise:

Some words have to be pronounced in the manner of monkeys jumping from branch to branch in a tree. Some other words should be like the kissing of a child by its mother; others should resemble the blooming of plants on a mountain-side; some words should be pronounced like the panting of those that carry heavy loads, or like the notes of an amorous cock or mare or woman. Others should resemble the still flight of kites which draw in their wings dazed in mid-air, or the carrying by a tigress of her cubs in her mouth without hurting them, or the gait of an intoxicated elephant.¹⁰

I have been able to work out, for South Indian music, a general scheme which accounts for the distribution of ornaments in terms of purely musical function, terms necessarily but unfortunately less poetic and colorful than the above. This scheme is applicable to the raga-system and repertory as a whole, and from it, it was possible to see that one of the basic musical criteria for differentiating ragas is the distribution and emphasis of decorated and undecorated notes within a raga. The scheme is derived from observation of practice, and particularly of *vina* technique.

Essentially it works as follows: taking C arbitrarily to represent the drone-tonic common to all ragas, the following notes may be prolonged unshaken: C, D, E, F, G, and A. Naturally, not all of these tones are prolongable in any one raga. All other tones exist in some functional relationship to one of these six, either as leading, neighboring, or passing tones; any tone other than one of these six will, when prolonged at all, be an ornament using one or two of the six as an auxiliary. The six stable tones harmonize with the drone-tonic, so that one can say that, in practice, the South Indians treat the octave, major sixth, fifth, fourth, major third, and both sizes of major second as consonances, and all other possible intervals to the drone, including various minor thirds and minor sixths, as dissonances.

There are, according to South Indian scale-theory, twelve available

⁹ Somanātha, *Rāgavibodha* (1609).

¹⁰ From *Nārada Śikṣā* (8th century), after N. S. Ramachandran, *The Ragas of Carnatic Music*, Madras, 1938.

tones in the octave. The six stable tones are, however, the only ones to which definite pitches in ratios to the drone-tonic ought legitimately to be assigned. The others have no fixed pitch in practice, since they never stand still long enough to be measured. Even the extent of their oscillations depends entirely on their functional relationship to the nearest stable tones. Thus a B $\flat$ between two A's will range quite low, an F $\sharp$ between two G's will range quite high, and so on.

If there was ever anything in Western liturgical music comparable to the ornamentation in detail, systematized or otherwise, of Indian music, only traces of it remain. It is possible that the liquescent neumes represent methods of performance comparable to some of the Indian ornaments. The two forms of the *plica* (otherwise *cephalicus* and *epiphonus*), commonly associated with liquid or nasal consonants, indicate a practice similar to the Indian practice of sometimes carrying vocal tone on a syllable-final liquid or nasal consonant rather than on the vowel. It is also possible that the *quilisma*, which always occurs in ascent, might have represented a shake ornament similar to the tremulous *appoggiatura* or trill-like shakes used by the South Indians on non-stable tones in ascent. But these are, at best, notated remnants; and passages dealing with them in the Christian theorists are by no means comparable either in quantity or in scope with the Indian theorists' discussions of *gamaka*.

The foregoing discussions of improvisation and ornamentation have introduced a term referring to a basic feature of Indian music — the drone-tonic.¹¹ All ragas have a common tonic, Sa, which is the only note common to all ragas. This common tonic is sounded on a drone instrument continuously throughout any musical performance. The particular absolute pitch chosen by any given artist may, of course, be different from that chosen by another artist — hence our concept of absolute pitch would be meaningless to an unsophisticated Indian musician — but every raga used in the course of one particular performance by one particular artist will have the same drone-tonic.

In the modern Greek chant a drone, called the *ison*, is used; and it has been suggested¹² that such a practice might actually have come down from the heyday of Byzantine chant, being what was referred to by the compilers of the early *Ordines Romani* in connection with the mysterious

¹¹ The term "drone-tonic" is used as equivalent for the expression *adhāra śruti*.

¹² By Otto Kinkeldey, in a talk given at the annual meeting of the American Musicological Society in December 1955.

term *paraphonista*. But until further evidence comes to light, we must assume that the *ison* came into the Greek practice more recently, probably from the Near East.

Indeed, the use of the fundamental drone-tonic in India itself is probably of comparatively recent origin; it may well have been introduced only through the various invasions of Mohammedan peoples. In the older treatises, from the 13th-century *Sangita Ratnakara* back to the much earlier *Natya Sastra*, the scale systems described lead one to the conclusion that the older music had movable modal tonics within an over-all system. Certain terms, which are no longer used,¹³ represented types of octave species within two (or possibly three) over-all systems.¹⁴

The drone-tonic might seem at first to be somewhat analogous to the finalis in a Gregorian scale-mode. But in fact the drone-tonic is much more prominent with respect to the other notes of any given raga than is any tone of a Gregorian piece, even the tenor of a psalm-tone. The drone-tonic is the one, and only, sound common to all ragas of the system. It permeates the whole atmosphere of a performance, with the twanging of the four-stringed *tambura*, the incessant reiteration of the tonic from the tuned drum, the frequent return to or sustaining of the tonic in the solo. The drone-tonic adds, as it were, an extra, quasi-harmonic dimension to Indian modality; all sounds are felt not only in intervallic relationship one to another but also, on another level, in direct intervallic relationship to the constant, over-riding drone-tonic.

Three terms that come from the older treatises and are still used correspond to the initial, pre-dominant, and final of the Gregorian theorists.¹⁵ But these terms are used quite unnecessarily in South Indian music, since their functions no longer exist in the sense in which the terms are still applied. In the older, pre-16th-century Indian treatises,¹⁶ ragas are listed with a great variety of combinations of initial, pre-dominant, and final. But in treatises from the middle of the 16th century on, these functions, while still listed, are almost universally assigned to the note Sa, the common drone-tonic.

From this we might well postulate that, in this respect, the older Indian modal system had more in common with the modal system of

¹³ *Jati, murcchana.*

¹⁴ The *gramas*.

¹⁵ The terms are, respectively: *graha, amsa, nyasa.*

¹⁶ E. g., the 13th-century *Sangita Ratnākara*, the best known, most quoted, and latest important "medieval" (i. e., pre-Mogul) treatise.

the later medieval theorists than does the present Indian modal system.

This brings us to a final, and still somewhat controversial question, the relative importance of scale versus formula in the determination of modal character.

Modern studies of both Gregorian and Byzantine repertory have come to attach more and more importance to melodic formulas and melody-types as determinants of modal character. And in the earlier medieval treatises formulas or melody-types characteristic of a given mode are sometimes referred to or cited. Particularly interesting in this respect is the treatise of Aurelian of Réomé, from the middle of the 9th century,¹⁷ in which an eight-mode scheme is mentioned for the first time in the medieval literature. The term "tonus" is defined, but no mention is made of anything like an octave-species. The fact that Aurelian uses the terms Protus, Deuterus, Tritus, and Tetrardus, and refers at some length to his acquaintance with the Byzantine enechemata, indicates that he got the eight-mode idea from Eastern church sources. But his passages dealing with each of the eight modes individually are not concerned with the ambitus, finalis, etc., of the later theorists, but rather with melody-types and formulas. His classification scheme is tripartite, and is very like that later used systematically by the compilers of tonaries. He suggests that the melodies be grouped according to "tonus" (which I take to be the imported notion), liturgical type (antiphon, respond, offertory, etc.), and what he calls "variety." The several "varieties" are enumerated for each liturgical category in each "tonus," and a specific piece or two is mentioned as an example in many cases. I take it that this third level of classification, being the one nearest the actual music, was the one most nearly representative of Aurelian's practical experience with the melodies.¹⁸

The later medieval treatises come to attach more and more importance to the working out of a system of scalar modes, with the eventual result that, as the monodic art itself declined and disappeared, the term "mode" or "tone" came simply to connote "octave-species," with emphasis only on ambitus and scale-structure.

But, whatever the relative importance of modal formulas versus modal scales, it seems clear that two quite different modes could not

¹⁷ Gerbert, *Scriptores*, Vol. I. The date has been deduced by Oliver Strunk and communicated to me by him.

¹⁸ Aurelian's "varieties" would seem to be equivalent to the "differences" of the tonaries.

share the same scale, that is, could not reduce to the same abstract sequence of half steps and whole steps.¹⁹ Nor is there any case of a Western or Byzantine mode regularly having used an augmented-second interval.²⁰

Indian music is, of course, quite different in these respects. Not only are there many ragas using theoretical augmented-second scales, but there are also many large groups of ragas each of which uses notes from one and the same scale. Here indeed is a major point of difference between the two notions, as we understand them today: one scale, one mode; but, one scale, many ragas. (This diversity of strongly individualized ragas using the same notes is, to be sure, made possible partly by that extra dimension of Indian music provided by the drone-tonic.)

Prior to 1900 there were two indigenously worked out scale systems in India. The older is that of the *Natya Sastra*, some time before 500 A. D.,²¹ in which the seven steps of the diapason are distributed in various ways within an octave according to the extremely ingenious system of the twenty-two *śrutis*. This system was supplanted in South India in the 16th and 17th centuries by three theorists who gradually evolved a new scale theory more in accordance with the musical facts of their own time and place.²²

There are, to be sure, some contradictory passages in these treatises, a fact that has led to some confusion for a few Western and Indian scholars who are anxious to be able to envisage a sweep of Hindu musical tradition extending unbroken and essentially unaltered for some two thousand years. But the contradictions in these treatises are usually between passages reverently quoted or paraphrased from older writings, out of respect for authority, and passages representing the authors' own ideas and investigations.

The new scale-system in the South appears to have taken its beginnings from a new method of fretting the *vina*. An instrument using twelve frets to the octave, frets fixed in place and not movable, is

¹⁹ The only possible exception might occur in connection with the problematic *Justus ut palma*.

²⁰ The so-called "quarter-tones" of Montpellier MS 159 do not come into question here.

²¹ This is the latest suggested date. Some scholars assign the treatise to much earlier periods.

²² Rāmamatya, *Svaramelakalānidhi*, 1550. Somanātha, *Rāgavibodha*, 1609. Venkatamakhi, *Caturdandi Prakāśika*, 1620.

described, for the first time, in the treatise from 1550. On the basis of the twelve tones produced by these frets, the so-called *melakarta* system was evolved, a system in which the tones are methodically permuted according to certain rules to give a symmetrical scheme of seventy-two "parent" scales.

In the three treatises through which the *melakarta* scheme was evolved, however, there is never any claim that such scales were more than a theoretical construction. In the last of the group, from 1620, in which the method for producing the seventy-two scales is suggested, the author points out that in his time only nineteen of these scales have any ragas connected with them, and several of those nineteen have only the one raga from which they might originally have been derived. In modern usage, I would estimate that about ninety percent of the music one hears is in ragas assigned to only seven of the seventy-two parent scales; and in even the most comprehensive lists of ragas, many of the theoretical "parent" scales are unrepresented by any so-called "derivative" ragas.

But the neatness of the scheme captured the imagination of musicians during subsequent centuries, with the result that today there is a strong tendency in some circles to force those ragas that still do not quite fit the scheme to conform. Notes foreign to the theoretical parent scale are sometimes frowned upon by scholastic purists, very much as the B-flats in the D and F ecclesiastical modes came to be frowned upon in theory. In other ragas, characteristic turns and twists are gradually being smoothed out into regular scalar configurations; here too I am inclined to see a parallel with the development of medieval chant theory, with its ever-increasing emphasis on scales.



Let us return to the question with which we began: "Is a raga anything like a Church mode?" The answer is, obviously, "Yes, and no." They are alike in that they are both based on melodic formulas, and both associated with scale systems. But the Western modes show virtually a one-to-one correspondence with the scales of the system, whereas in the South Indian system there are not only theoretical scales with no ragas in them but also theoretical scales with more than one raga. Furthermore, the extra, quasi-harmonic dimension resulting from the use of the drone-

tonic cannot have been a prominent feature of Christian chant, if indeed it ever existed there.²³

Finally, Church modes are associated with liturgical texts. Improvisation and ornamentation (apart from spontaneous composition) would seem to have been primarily tied down either to the adaptation of one melody to several different texts or to the elaboration of a whole melody for a different place in the liturgy. If slides, shakes, and mordents occurred profusely in medieval chant practice, the records tell us little enough about it; nor do they tell us about free improvisation as an artistic end in itself. In India, on the other hand, ornamentation in detail is functionally determined and obligatory; and the most essential feature of the musical art is free improvisation with the motifs and patterns of a raga, free from any textual bonds.

In short, for Christian church music the modal system is fundamentally an analytical scheme used for classification of melodies, whereas for Indian concert music the raga system is the practical foundation of self-renewing spontaneous creativity.

²³ Unless, as has been suggested, it was so fundamental and so taken for granted that it would never have occurred to any writer to mention it. This seems extremely improbable to me.