

## CHAPTER ONE

### §1. INTRODUCTION

**I**NSPIRATION to the study of Greek music comes to most of those who have felt it from wonder at the musical legislation of Plato and Aristotle, from references to music in the Greek poets, from a realisation of the way in which music permeated Greek life from the Homeric period onward. The student soon finds, however, that his researches lead him into dusty places. The modes, the ἁρμονίαι that seemed so powerful for good or evil to the philosophers, must be sought among the controversies of professors, in dry manuals, out of date perhaps centuries before they were written, or in actual melodies that may in some cases be no more than the hack-work of their own late day. By delving in such places we can learn something. We can learn about the forms and structure of scales, as they are presented in Greek theory. But a scale is a mere list of notes. If we are to begin to have a conception of the kind of music written in it, we must know something of the relationships of the notes that it contains, the hierarchy of their importance. For the democracy of atonality seems to be a discovery of the modern world. The smallest set of notes that the savage sings tends to group itself round a tonal centre. More highly developed music has more complicated relationships; and in some musical cultures these have been worked out in considerable detail. It is the aim of this essay to set out what can be discovered about this aspect of the Greek modes, about the internal relationships of their notes.

It is not a simple task. Probably only actual melodies in adequate numbers, in complete preservation, and of unequivocal interpretation could give us the information we are seeking. Such a collection is not available; and the common measure of agreement between modern authorities upon this matter of modes is not great. It cannot be settled with

finality in the present state of the evidence; but it may be useful to re-examine that evidence as a whole and see what conclusions, if any, can be based upon it. First, the few remarks of ancient writers that seem to have a direct bearing on the subject are examined. Then such of the evidence as bears upon particular modes is collected. Thirdly, the more general question of mode and key is discussed for the purpose of discovering to what extent mode may have been submerged by key in the course of development of Greek music.

The task is not made easier by the subtle nature of mode. Mode is essentially a question of the internal relationships of notes within a scale, especially of the predominance of one of them over the others as a tonic, its predominance being established in any or all of a number of ways: e.g. frequent recurrence, its appearance in a prominent position as the first note or the last, the delaying of its expected occurrence by some kind of embellishment. The modern major scale is an instance of a mode. But there is little occasion to use the term, unless variety of mode is present: and in the classical music of modern times the only alternative to the major mode is the minor, the distinctness of whose character from that of the major has been much impaired by the development of harmony, since the use of minor chords in the developed major key blurs the aesthetic distinction between them. Harmony is indeed a factor antagonistic to mode, and mode an obstacle to the progress of harmony. But harmony played a small part, if any, in Greek music; and our evidence shows fairly conclusively that variety of mode was present there during the classical period, and was present centuries later, when the bulk of our extant fragments was composed and when Ptolemy wrote his *Harmonics*. But it would be a mistake to suppose that mode meant precisely the same thing at all epochs.

There is one word in Greek that is particularly associated with modal variety; it is ἦθος, which is best translated “character” (or transliterated “ethos”). It occurs alike in

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Plato and in Ptolemy; but it can hardly have had exactly the same significance for all who used it. This ascription of inherent character to modes is not confined to Greece; but it is conspicuous there because of the fame of certain writers and the moral interpretation they put upon modal character. It would be out of place here to discuss the reasons that led them to this doctrine. It is more relevant to express some scepticism whether musical elements can in themselves possess such clearly marked characters at all. Many other factors enter in. Mode may be defined as the epitome of stylised song, of song stylised in a particular district or people or occupation; and it draws its character partly from associations contracted in its native home, reinforced perhaps by the sanctions of mythology. This is true of the Chinese *tyao*, the Indian *rāg*, and the Arabian *maqam*; and probably of the Greek ἀρμονία. The colour of each mode, each type of song, is precisely felt; and there is great reluctance to combine them by modulation. But, as the commerce of music breaks down this reluctance, the associations gradually fall away; and, though there may still be modal variety of a sort (scales differing in the internal relationships of their notes), the characters of modes must now depend principally upon purely musical differences: they will be less trenchant, and the affinities of mode and subject-matter will be less clearly marked. Again, even within the strictly musical sphere the structure of scales becomes more clearly defined, both in practice and in theory, and, in consequence, systematised.

With these preliminary remarks we can embark upon our task.

## §2. THE DIRECT EVIDENCE OF ANCIENT THEORY

Modern musical theory gives to every note of the scale a designation (tonic, mediant, sub-dominant, etc.) which indicates its place in the scheme of relations that underlies our harmonic system. The Greek theorists used a nomenclature

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which goes back ultimately to the position of strings on the lyre<sup>1</sup>. In itself it implies nothing about the functions of the notes; nor is there any term in Greek theory that corresponds to e.g. the modern “tonic” or suggests a hierarchy of importance among the notes of the scale. Nor do the Greeks anywhere treat the question specifically. It is perhaps permissible to conclude from this that modality in their music was a vague and elusive element, which they were unable to reduce to system; and indeed mode is an elusive thing.

All that we find is a number of passages dealing with the note Mese, which may or may not have a bearing on this question. They may be considered in two groups.

(a) Aristotle (*Met.* 4, 1018 b 29) remarks that Paraneite is prior to Nete in point of order (κατὰ τάξιν), Mese being the ἀρχή or starting-point. Clearly he is contemplating the arrangement of notes in the scale rather than their functions; but he regards Mese as the natural standard of reference. We now pass to Aristotelian Problems xix, 33, a text upon which far-reaching conclusions have been based. Why, it is asked, is a descending scale more harmonious (εὐαρμωστότερον) than an ascending one? As so often, more than one answer is suggested. “Is it that in this order we begin with the beginning (ἀρχή)—since Mese, the leader (ἡγεμών), is the highest note of the tetrachord—but in the reverse order with the end (τελευτή)? Or that low notes after high ones are nobler and more euphonious?” The second explanation appeals to a supposed aesthetic fact; the first takes a specific example of downward movement and interprets it in terms of the theoretical structure of the scale. For in Problem 47 we find the same use of ἀρχή and τελευτή for the notes that bound the tetrachord. Clearly then τελευτή here means the end or lowest note of the tetrachord Meson, not necessarily of a complete melody; and this passage by itself provides no evidence that melodies ended on Hypate or began on Mese or that either note had any particular modal function. The most

<sup>1</sup> See Diagram on p. 85.

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that we can say is that, unless such a melodic sequence had in fact been common, it would probably not have been used as an instance; and that, if there are other grounds for believing that in some types of music there were cadences upon Hypate, then it is very likely that the writer was thinking of such cadences.<sup>1</sup>

(b) The passages just considered deal primarily with the order of notes in the scale. In the Problem, however, Mese is called “leader”; and the expression occurs also in Plutarch.<sup>2</sup> It suggests predominance of some kind, and leads us to a number of passages which clearly contemplate not the order, but the functions of notes. Cleonides (202, 3 Jan) says: ἀπὸ δὲ τῆς μέσης καὶ τῶν λοιπῶν φθόγγων αἱ δυνάμεις γνωρίζονται, τὸ γὰρ πῶς ἔχειν ἕκαστον αὐτῶν πρὸς τὴν μέσην φανερώς γίνεται: that is, the other notes have a functional relationship to Mese. But this tells us nothing directly about musical practice. Aristotelian Problems xix, 20 and 36 are more important. Both ask in effect the same question. Why is it that when Mese is out of tune the whole melody is disorganised and all the other strings sound out of tune, whereas when one of them is out of tune itself alone is affected? Their answers are different. That of 36 recalls Cleonides: the other notes are

<sup>1</sup> Cf. Monro, *The Modes of Ancient Greek Music*, pp. 45 ff. This passage is often quoted as evidence that Greek melody had a general tendency to fall. In itself it will not bear such an interpretation. Primitive melody has, it is true, such a tendency; and in considering the origins of scales we can postulate it (cf. p. 26). But the Greek music in which we are interested is not primitive; and the evidence for its having this character is precarious. The vocal notation with its downward alphabetic series and certain passages where scales are read downwards are not conclusive proof of a melodic tendency. We read scales upwards: is this evidence of a preference for ascending movement? A sounder basis for this view is perhaps the doctrine of the genera, if we are to explain the lower varieties by the attraction of the lowest note of the tetrachord. But, unfortunately, both the origin and employment of the enharmonic and chromatic genera are by no means clear.

<sup>2</sup> *De musica*, § 112 (Weil et Reinach). Ruelle emended the text of the Problem by inserting καὶ before ἐξυτάτη, thus turning ἡγεμών into a predicate and so relating it to the tetrachord Meson; we could then compare the usage of Ptolemy, e.g. 54, 6: ὁ ἡγούμενος τοῦ τετραχόρδου (φθόγγος), of Nete Synemmenon. But Plutarch uses ἡγεμών as a simple synonym for Mese, without reference to the tetrachord. Forster (*The Works of Aristotle*, Vol. vii, Oxford translation) is thus right to retain the MSS. reading. That ἡγεμών in Plutarch is a noun, in the Problem a feminine adjective, presents no difficulty.

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tuned in a certain relationship to Mese, and the loss of it means the loss of the “harmonising” element of the scale (τὸ αἴτιον τοῦ ἡρμόσθαι). That Mese was the string to which the others were tuned is implied by Dio Chrysostom.<sup>1</sup> The answer of 20 is the only passage with a clear reference to actual melody. The cause of the phenomenon is, it is said, that all good melodies (χρηστὰ μέλη, ἀγαθοὶ ποιηταὶ) constantly recur to this note as they do to no other, and its recurrence acts as a link (σύνδεσμος) binding the notes of the melody together.

This apparently simple statement has given rise to much controversy. It has been both affirmed and denied that we have here an attempt to describe the function of a tonic. Among those who affirm it there has not, unfortunately, been agreement what note is meant by Mese. Is it the central note of the Greater Perfect System, Mese “by function” (κατὰ δύναμιν), or the fourth note from the bottom of any species of the octave, Mese “by position”, according to Ptolemy’s *ὀνομασία κατὰ θέσιν*?<sup>2</sup> The latter interpretation at least provides modal variety; and some of the fragments seem to support it. But, if we make this the basis of a scheme of tonics, we are in difficulties with the F mode (not to mention yet the non-diatonic genera). Yet this passage does not justify us in picking and choosing, in taking Mese κατὰ θέσιν as tonic in some octaves but not in all. But, in fact, although it is not inherently impossible that this nomenclature

<sup>1</sup> Or. 68, 7 (Dindorf II, 234): χρή δὲ ὡς περ ἐν λύραι τὸν μέσον φθόγγον καταστήσαντες ἔπειτα πρὸς τοῦτον ἀρμόζονται τοὺς ἄλλους· εἰ δὲ μή, οὐδεμίαν οὐδέποτε ἁρμονίαν ἀποδείξουσιν· οὕτως... It should be observed that even those passages which speak of Mese as a kind of *Stimmton* hardly have a bearing on the query of the Problem, unless it retained some kind of modal predominance in the actual melody. To-day instruments are tuned to an A, but that note need have no modal predominance.

<sup>2</sup> *V. infra*, p. 64. This was the early view of Westphal, in which he was followed by Gevaert in his *Histoire*. The latter sings a palinode in *Les Problèmes musicaux d’Aristote* (pp. 194–200). But Stumpf (*Die pseudo-Arist. Probl. über Musik*) prefers his earlier view. C. Sachs seems to adopt it in his discussion of the Seikilos-Skolion (*Musik des Altertums*, p. 63). Mountford (*New Chapters in Greek Literature*, Second Series, p. 167) holds that “the fragments seem to indicate that in all the diatonic modes, and in the Mixolydian chromatic, the fourth note ascending was the tonal centre”, but makes no dogmatic statement. Cf. p. 70, n. 1.

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is earlier than Ptolemy, it seems that the Problems never envisage any musical unit larger than the central octave of the Greater Perfect System or use any other nomenclature than the dynamic. Further, the explanation of Problem 36 (together with the passages of Dio and Cleonides, which are clearly related to it) must refer to *Mese κατὰ δύναμιν*, and it would be rather surprising if Problem 20 did not also.

But, granted the writer is referring to this *Mese*, is it certain that he is attempting to describe it as a kind of tonic? Gevaert put forward a different interpretation, which has been developed by Emmanuel.<sup>1</sup> *Mese κατὰ δύναμιν* is indeed a note of frequent occurrence in extant pieces. But frequent occurrence is not an infallible indication of the tonic, which may not in fact be heard till the very end of a melody. Gevaert finds the reason for the stated phenomenon in the fact that *Mese* alone forms part of the usual range of all the modal scales and thus acts as a link or bond between them. Emmanuel refines the conception: “la mèse, en effet, n’est pas seulement l’ombilic du système général par la place centrale qu’elle y occupe. Elle est un centre d’émission sonore, une sorte de foyer d’où émane comme un rayonnement, en permanence”. To which it may be replied that frequency of repetition is certainly *one* of the many ways in which a tonic may be established, and one which it would be easy to notice; that, while Gevaert’s explanation is no explanation at all of the frequent use of *Mese within a single mode*, Emmanuel’s ingenious concept is difficult in itself and hard to reconcile with his own theory of the modes, which embraces tonics and finals and, in effect, dominants and mediants, to which, naturally, *Mese* is differently related in the different octaves. This peculiar property of *Mese* complicates matters still further. Was it then so clearly marked as to draw an attention to itself which was never paid to the tonics and finals?

<sup>1</sup> Gevaert, *l.c.*; Emmanuel, article on Greek music in Lavignac’s *Encyclopédie de la musique*, vol. i, p. 452.

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It seems then that the Problem states that Mese (κατὰ δύναιμι) is, not simply (as in Problem 36 and in Dio) the *Stimmton*, but also—what is quite another matter—the tonic (or something like a tonic) of all good melodies. What are we to make of this? There would appear to be only three interpretations possible.

(i) We can accept the statement at its face value and hold that this was the only kind of tonic the Greek musical art ever knew. This was the view of Monro, for whom the difference between “modes” was merely one of pitch. It is however open to fatal objections, notably that it cannot adequately account for the differences of character (ἦθος) so commonly ascribed to them. Macran’s theory that each octave-species has Mese (κατὰ δύναιμι) as tonic and takes its character from Mese’s position in it, high or low, is hard to disprove, but has little to support it except this one passage of the Problems. The fragments give no countenance to it.<sup>1</sup>

(ii) The Dorian octave is the kernel of the Greater Perfect System. Mese, the central note of the latter, is the highest note of one of the standard tetrachords of the former and was almost certainly the tonic of Dorian melodies. This octave was predominant in theory; and, though we cannot assert that the Dorian mode was equally predominant in practice, it had very great prestige. Thus, it is possible that here the writer is confining either his vision or his praise to the Dorian. The former hypothesis is perhaps not very likely in view of the general terms of the text. But may it not be that, when it is implied that a melody which did not employ Mese in this way could not be a good one, we have before us the work of a disciple, less broad-minded than his master, who had read the praise unreservedly given by Aristotle (for educational purposes) to the Dorian alone and had elevated it into a

<sup>1</sup> Monro, *op. cit.* Macran, *The Harmonics of Aristoxenus*, Oxford, 1902. For criticisms of Monro see the review by H. Stuart Jones in *ClRev.* 1894, and J. F. Mountford’s article in *JHS.* XL (1920), pp. 18–20.



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general principle of tonality?<sup>1</sup> There is still a third possibility.

(iii) We may accept it as true, but true only for a limited period, that which saw the systematisation of Greek musical theory by Aristoxenus. When we come to examine the bearing of that system upon our enquiry, we shall see what reason there may be to infer from it a standardisation of tonality in practical music. First, however, we must abstract from it one portion and consider the seven species of the octave (εἴδη τοῦ διὰ πασῶν).<sup>2</sup> For upon them the most popular theories of the Greek modes have been built.

<sup>1</sup> *Pol.* viii, 1340 b 4, 1342 a, b. However much of genuine Aristotle there may be in the Problems, they contain demonstrable modifications of his views. In particular, Butcher points out (*Aristotle's Theory of Poetry*, p. 133, n. 1) that Problems xix, 27 and 29 state the doctrine of *Pol.* viii, 1340 a 28 in an exaggerated form.

<sup>2</sup> See Diagram on p. 85.

## CHAPTER TWO

### §1. THE EVIDENCE OF THE SPECIES OF THE OCTAVE

THE modes are indeed often simply equated with the species. It is attractive. We find them enumerated by Aristoxenian writers in association with the modal names, Dorian, Phrygian, Mixolydian, and the rest. Even the term ἄρμονία was sometimes applied to them.<sup>1</sup> They can be compared with the modal system of the Roman church, where similar variety of character is ascribed to similar scales. It may well be near the truth. Yet it is rash to accept a simple identification of them with the ἄρμονία in practical use in, for instance, the fifth century. The species are known to us only as part of the systems of Aristoxenus and Ptolemy. There is evidence for earlier forms, and it seems probable that the species are systematised surrogates of less uniform scales and display a greater symmetry than did their forerunners. It is rasher still to found upon this symmetry a theory of tonics such as those we find in the works of Westphal and even later writers. It is rashest of all to base such a theory upon the species of the fourth and fifth, into which Aristoxenus may have analysed those of the octave. It has often been put forward that the fundamental differences between the Dorian, Phrygian, and Lydian modalities are connected with the three different positions the semitone can occupy in a tetrachord.<sup>2</sup> This may be true. But, if we are to believe it, it must be on the evidence, not of Greek theory, but of the fragments and of analogy. We shall see later what light the former have to

<sup>1</sup> This is a legitimate inference from Aristoxenus, *Harmonics*, p. 36, 30 (Meibom), where Westphal's emendation is to be accepted. Compare also Aristides Quintilianus 11, 6 ff. (Jahn) and my comments on p. 56.

<sup>2</sup> E.g. by Riemann, *Handbuch der Musikgeschichte*<sup>3</sup>, 1, p. 171, who has been followed by subsequent German writers (see below, pp. 16–21). Compare also Laloy, *Aristoxène de Tarente*, p. 90. Note that, the octave having been analysed into a fourth and a fifth, the essence of the fifth has still to be determined. Is it to be analysed into another and similar tetrachord plus a disjunctive tone (Riemann), or completed with a mediant so as to produce a major or minor triad (Emmanuel)?