

tion of the semitone in the hexachord. Whenever a melody went beyond the range of one hexachord, the singer moved to another by changing syllables on a note common to both, a process known as *mutation*. One would like to believe that Guido is still enjoying the fantastic success of his essentially simple teaching device.

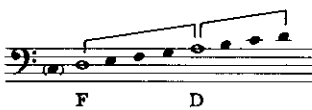





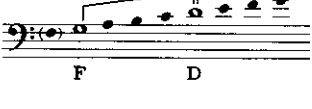

THE CHURCH MODES

Although Guido d'Arezzo's hexachords were first used for singing plainchant melodies, they do not reflect the scalar patterns, or modes, in which these melodies were written. However, the gamut of the solmization system contains all the tonal material of the church modes. One of the ways in which monophonic music achieves variety and subtlety is through the use of more modes than the two—major and minor—that sufficed for the music of the Classic and Romantic periods. Although many modes were to be found in Oriental music, Gregorian Chant used no more than the eight modes shown in Table 4. These modes and their various designations require some explanation.

All the chants in a given mode normally end on the same note, the *final* of the mode (marked F in Table 4). On the basis of their finals on **d**, **e**, **f**, and **g**, then, the modes are grouped in four pairs. Medieval theorists called these pairs *maneriae* (sing. *maneria*) and identified them by the Greek ordinal numbers, *protus*, *deuterus*, *tritus*, and *tetrardus*. Hence, modern writers sometimes use the phrase "protus tonality," for example, to indicate modes ending on **d**. The numbering of the modes is always the same and provides the most convenient means of identification. In the *Liber Usualis* and other modern chantbooks, the mode number normally appears under the name of an individual chant. Each pair of modes contains an authentic and a plagal form, distinguished by the range of the melody either above or around the final. Thus, Modes 1, 3, 5, and 7 are authentic, while the even-numbered modes are all plagal. Finally, the modes were given Greek names. The authentic modes are Dorian, Phrygian, Lydian, and Mixolydian; and the plagal form of each maneria is identified by the prefix *hypo-*, meaning "under" or "sub-". These somewhat confusing designations will become clearer, it is hoped, in the ensuing discussion of modal structure and its application to plainchant melodies.

Each mode consists of a pentachord joined conjunctly with a tetrachord. In Mode 1, for example, the five consecutive notes from **d** to **a** form a pentachord, the last note of which is also the first of the four notes from **a** to **d'** that form the conjunct tetrachord. In the authentic modes, the tetrachord is above the pentachord, whereas it is below the pentachord in the plagal modes. Here, then, the common note that joins the tetrachord and pentachord is the final of the mode, which is always

Table 4: *The Eight Church Modes*

Protus	1. AUTHENTIC—DORIAN	
	2. PLAGAL—HYPODORIAN	
Deuterus	3. AUTHENTIC—PHRYGIAN	
	4. PLAGAL—HYPOPHRYGIAN	
Tritus	5. AUTHENTIC—LYDIAN	
	6. PLAGAL—HYPOLYDIAN	
Tetrardus	7. AUTHENTIC—MIXOLYDIAN	
	8. PLAGAL—HYPOMIXOLYDIAN	

the lowest note of the pentachord. The distinction between authentic and plagal forms ending on the same final might seem to be unnecessary until we realize that the modes were not regarded as being repeatable from octave to octave like modern scales. Instead, the octave of each mode represented the normal range for a melody in that mode. The authentic and plagal modes, therefore, provide a means of distinguishing melodies according to the position of their final in relation to their total range. This purely melodic distinction has no validity for harmonic music, but we could apply it, if we wished, to many familiar, and much later, melodies. The tune of *America*, for example, is clearly authentic, using only the semitone below the final. A well-known plagal melody is *O Come, All Ye Faithful* (*Adeste, fideles*—LU, p. 1870), which ranges from *c* to *c'*, with a final on *f*. The difference between Modes 1 and 8 should now be clear. Although they have the same normal range from *d* to *d'*, the first mode ends on *d* and the eighth, on *g*. Moreover, the two modes have different pentachords and tetrachords within the same octave, so that the relationships of whole and half tones to the finals are also different.

Not all melodies, of course, have a range of exactly one octave. Many of the chants, especially the older ones, move within the limits of a fifth or sixth. Later melodies frequently have a range of an octave plus a third or a fourth. Even in melodies of restricted range, the note below the final is commonly used in all the authentic modes except Mode 5. For listeners accustomed to the leading tone in melodies associated with tonal harmony, it is curious to discover that plainchant composers evidently disliked the semitone below the final. In contrast to the usage in authentic modes, plagal melodies frequently extend one note above their basic octave. Both of these common additions to the modal ranges are indicated in parentheses in Table 4. Further extensions of the range can usually be explained as combinations of authentic and plagal forms, known to medieval theorists as "mixed" modes.

In their pure form, the modes were written without accidentals, a practice that now makes it convenient to find them on the white keys of the piano. One accidental, *B^b*, was permitted, however, and it appears more frequently than the theoretical forms of the modes might suggest. It is used in Mode 1, for example, in melodic figures such as *d-a-b^b-a*; and it is particularly common in Mode 5. Where it is used throughout a melody, as in *Alma Redemptoris Mater* (Fostering Mother of the Redeemer), the result is indistinguishable from our modern major scale (AMM, No. 1).

Although the notes *d*, *e*, *f*, and *g* are the normal finals for the eight church modes, some chants end on the notes *a*, *b*, or *c'*. Medieval theorists called these latter notes cofinals (*confinalis* or *affinalis*). Chants ending on one of these cofinals are normally regarded as being transposed up a fourth or fifth. The reasons for such transpositions will

become evident when we consider the historical development of the medieval modal system.

One important aspect of the church modes remains to be discussed: the presence in each of a *dominant* tone identified by the letter D in Table 4. These tones are variously called tenors, *tubae*, or reciting tones; but the designation of *dominants* seems to be most commonly accepted. The choice is perhaps unfortunate, for it suggests a relationship to the dominant of tonal harmony; but there seems to be little point in trying to reform the terminology here. We shall not be led too far astray, if we remember that the dominants of the modes had a purely melodic function. They are, in fact, the reciting tones, or tenors, of the formulas used for singing psalms. These formulas, known as psalm tones, will be discussed in detail when we consider the various types of liturgical recitative. Now we need only note that there is a psalm tone to correspond with each mode, and the tenor of the psalm tone is the dominant of the mode. Originally, the dominants of the authentic modes were all a fifth above the final, and those of the plagal modes, a third above. During the tenth and eleventh centuries, however, the dominants of Modes 3, 4, and 8 shifted up a step to their present positions. Possibly this resulted from the newly standardized notation and solmization systems with their alternation between **B^b** and **Bⁿ**. In any case, the dominants of Modes 3 and 8 moved up from **b** to **c'**; and, influenced perhaps by its authentic partner, the dominant of Mode 4 became **a** instead of **g**. Although the dominants originated in the psalm-tone formulas, they evidently influenced the composition of many free melodies, which often stress the dominant more than the final.

Having described the various characteristics of the church modes, we may now attempt a definition: *modes* are octave species characterized by different arrangements of whole and half steps around dominant and final notes. To identify the mode of a written melody, the final, dominant, and range are the important determining factors, in that order. The Offertory *Deus, Deus meus* for the second Sunday after Easter (Example III-3) illustrates very well the relative importance of these factors. The total range of this chant is only a sixth, from **c** to **a**, but its final on **d** establishes it as being either Mode 1 or 2. Quite obviously, it is the stress on **f**, the dominant, that determines its classification as Mode 2.

For the listener, the distribution of intervals around the final provides the most obvious means of identification. The position of the semitones and the size of the third—major or minor—above the final make the mode of a particular chant easily recognizable. To illustrate again from Example III-3, whole steps both above and below the final and a minor third above are found only in the modes of the protus tonality. Once more it is the emphasis on the dominant that decides in favor of Mode 2. The student is advised to study the modal characteristics of a number of different chants in the *Liber Usualis* and to practice identifying by ear as

many recorded chants as possible. In this way, he will become increasingly aware of both the individual characteristics of each mode and the great variety of modal structure in the total plainchant repertory.

Example III-3: *Offertory Deus, Deus meus* (LU, pp. 818-19)

Offert.
2.

D E-us, * Dé- us mé- us, ad te de lú-
ce ví- gi- lo : et in nómine tú- o
le- vá- bo má- nus mé- as, alle-
lú- ia.

O God, thou art my God; early will I seek thee. I will lift up my hands in thy name.—Psalm 62 (63):1 and 4 (parts).

THE MODAL SYSTEM: HISTORICAL DEVELOPMENT

The modal system, of course, did not spring full-blown from the head of any one man. Instead, it evolved over several centuries before reaching the complete state that we have just described. The course of its development is complex and somewhat problematical, and we need not consider it in detail here. A few remarks, however, should clarify the historical relationships between the repertory of plainchants and its modal system.

Perhaps the most important point to remember is that the modal system did not begin to take shape until the tenth century, at which time, of course, a large part of the plainchant repertory was already in existence. The same period saw the development of an exact pitch notation and the establishment of available tonal material in the gamut of the Guidonian system. These nearly simultaneous developments presented a number of problems. Musicians had not only to classify a large number of chants according to mode but also to write those chants correctly within the limits of the Guidonian scale. That some melodies resisted their efforts is less surprising than that the majority seem to have fitted into the new theoretical system with little difficulty.

Even before the formulation of the modal system, classification of

some chants had occurred in chantbooks known as *tonaries*. In these collections, the Office antiphons—chants performed in conjunction with psalms—were grouped according to the psalm tones with which they would be used (see Chapter IV). Although the psalm tones as we know them were standardized at about the same time as the church modes, the earlier tonaries represent a first step toward modal definition by final and reciting tones. Another, and very important, means of classifying antiphons, however, was by their opening melodic formulas. That they, as well as other types of chants, can be arranged in melodically related groups or families suggests the chief reason for the ease with which so much of the plainchant repertory fitted into the later modal system. The different chants of a particular family prove to be in the same mode, but the real basis of their relationship is their common use of certain melodic formulas. The chants of some antiphon groups have only the opening phrase in common. In other groups, especially in other types of chants, the melodies are made up of several stock figures. The process of creating new melodies from combinations of preexisting melodic formulas is called *centonization*.

The modern emphasis on originality in the creative arts makes the idea of centonization seem strange indeed. Yet it is the normal procedure in much Oriental music. For the Oriental musician, modes are not so much octave species or scales as collections of melodic formulas. The originality of the composer or improvising performer consists in his choice and arrangement of these formulas, the way he links them together, extends and elaborates them, and perhaps includes a small amount of free material. Centonization is not to be confused with mere adaptation, in which a complete melody, with whatever modifications are necessary, is fitted to new words. This process too is common throughout the Middle Ages, not only in plainchant but in many other types of music as well. Centonization, obviously, represents a considerably higher stage of artistic endeavor. The composer must assemble, and the listener recognize, traditional melodic formulas in new and individual contexts.

The formation of the modal system, then, was in part an effort to extract the fundamental series of modes from the existing plainchant repertory. At the same time, however, tenth-century theorists tried to relate their modes to the complex Greek system as transmitted by Boethius and later Latin writers. This accounts for the Greek names of the eight modes, although nothing else about them is Greek; and through a misunderstanding of Greek theory—by no means the last—even the names were misapplied. (In the Greek modal system, Dorian begins on **E**, Phrygian on **D**, Lydian on **C**, and Mixolydian on **B**.) Despite their failure to reconstruct the Greek modal system, medieval theorists nevertheless evolved a new system that was to have far-