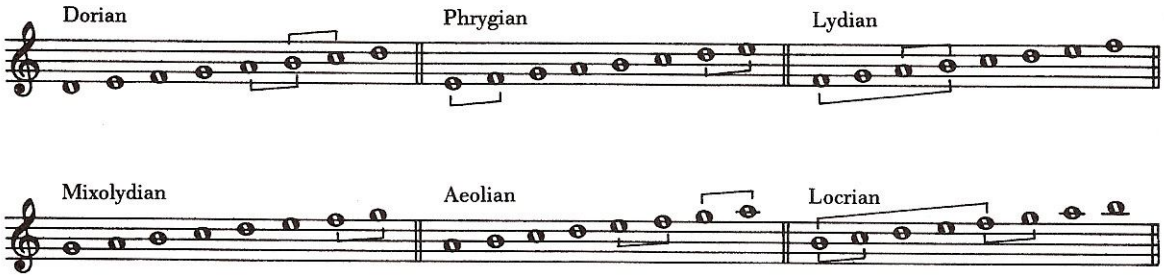
5 The Diatonic (Church) Modes

I. The *diatonic (church) modes (mode* is the same as *scale)* follow in the standard terminology in their untransposed (white note) forms. The Ionian mode is not shown, since it is the equivalent of the major scale. The distinguishing intervals of each mode are bracketed.



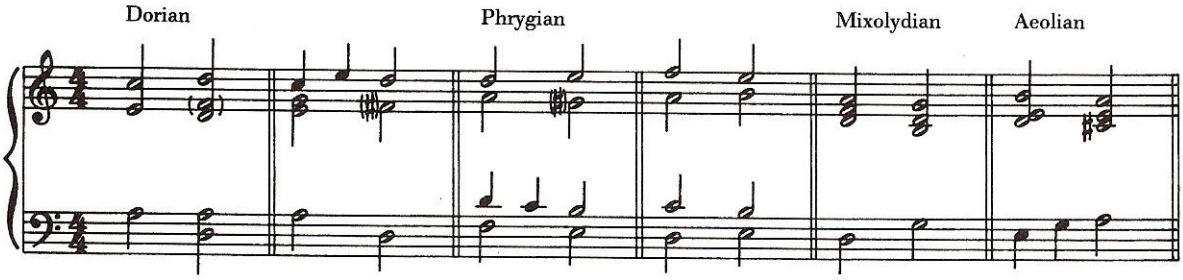
II. The modes are defined by tonic (final), scale-degree relationships, and certain typical melodic cadence formulas.

A. The Dorian, Phrygian, and Aeolian are often regarded as minor modes. Aeolian has the same structure of interval relationships as natural minor. Dorian is similar to natural minor with a raised sixth scale-degree. Phrygian is similar to natural minor with a lowered second scale-degree. The tonic triads of these modes are minor.

B. The Lydian and Mixolydian are often regarded as major modes. Lydian is similar to major with a raised fourth scale-degree. Mixolydian is similar to major with a lowered seventh scale-degree. The tonic triads of these modes are major.

C. The Locrian has a diminished tonic triad and is used less than the other modes.

D. Some typical cadence formulas follow:



III. Characteristic treatment.

A. Accidentals should be used sparingly so as not to obscure the sense of mode. The last chord of a piece in a minor mode is often major or omits the third of the tonic triad. The tonic must be clearly defined by means of repetition, return, and emphasis in line and cadences. The sense of modality is often brought out by emphasis on a strongly characteristic scale-degree.

B. It is possible to change modes over a single tonic or to transpose a mode to a new tonic for variety. Modes may be mixed freely within a given passage (the mixture of Dorian and Aeolian is typical). Two or more modes may be used simultaneously for an effect of polymodality. (See Part IV, Unit 9, for a discussion of polytonality.)

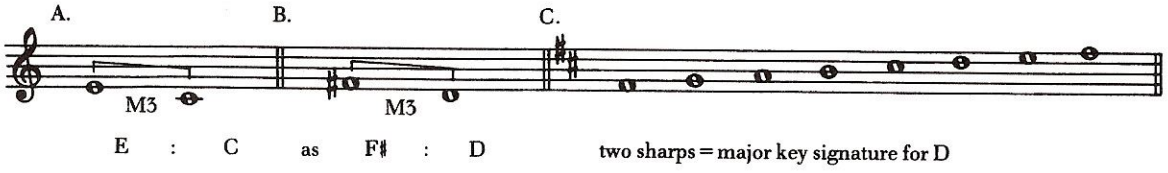
IV. Modes may be transposed to another tonic. One method for determining the key signature for a transposed mode follows.

A. Determine the relationship of the tonic of the untransposed mode to C.

B. Determine the note that has the same relationship to the tonic of the transposed mode.

C. Determine the major key signature for that note.

Example: Find the key signature of Phrygian mode with F♯ as the tonic.



V. *Scale and chord.* Modal music tends toward tertian harmony, often with root progressions that emphasize the characteristic modal degrees. Planing is typical. Pandiatonic techniques can be effective (see Unit 6). Quartal harmony can also be used in modal contexts (see Unit 8).

VI. Suggestions for class discussion.

A. Analyze the examples in Unit 31 of *Music for Analysis.* Students may bring additional examples from the literature into class.

B. Carefully analyze and compare all the modes in terms of interval relationships, both (1) between the tonic and other scale-degrees above it, and (2) between adjacent scale-degrees.

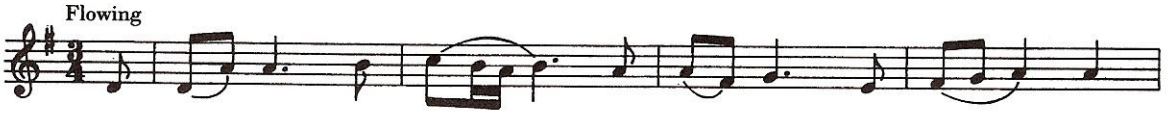
C. Practice transposing the modes onto various finals, both with and without key signatures (Dorian on G, Lydian on B♭, and so forth).

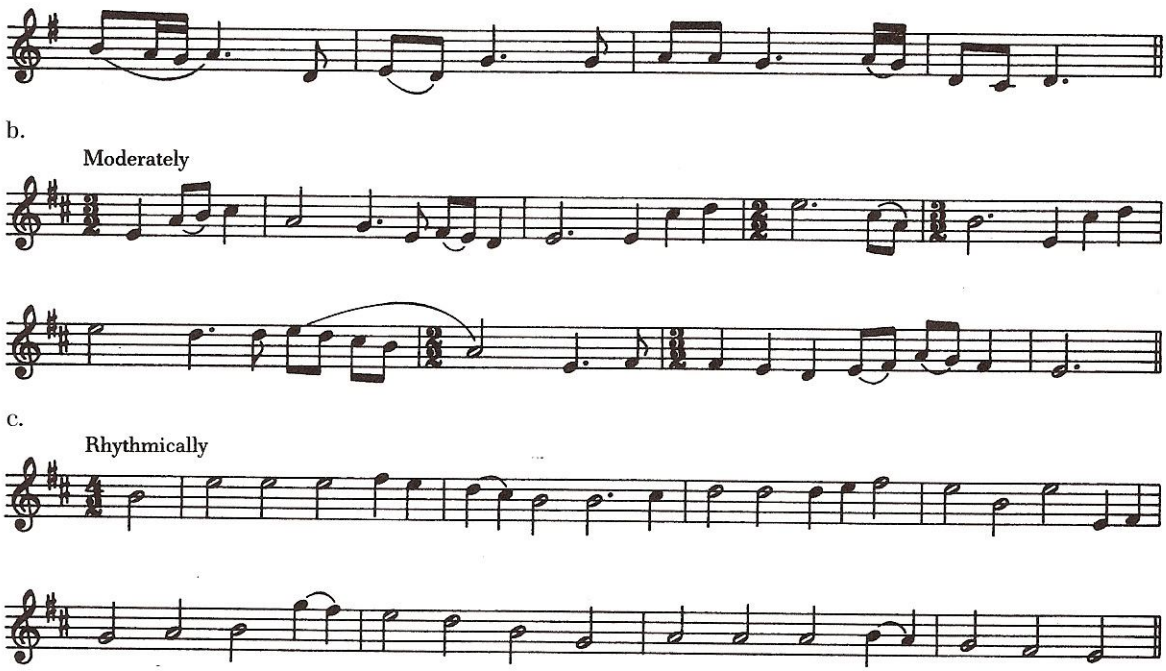
D. Suggested reading (see the Bibliography): Dallin, Hindemith, Persichetti, Ulehla.

Exercises

1. Construct three cadences in each mode using a variety of soprano lines, chord formulas, and textures.
2. Compose a brief piece for piano. Start in G Dorian, move to G Phrygian, and then move back to G Dorian.
3. Compose a brief piece for an instrumental combination available in class. Start in C Lydian, move to D Lydian, and then move back to C Lydian.
4. Write piano or instrumental accompaniments for the following Appalachian folk melodies. Keep the accompaniments basically simple, with a moderate to slow harmonic rhythm. Use the texture that seems to best complement the melody.

a.





b.

Moderately

c.

Rhythmically

5. Harmonize the following melodies, arranging them for combinations of instruments available in class. Employ the harmonic vocabulary and technique associated with modal music.

a.

Animé

b.

Bewegt

c.

Dolce

d.

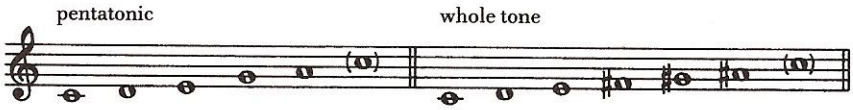
Frisch

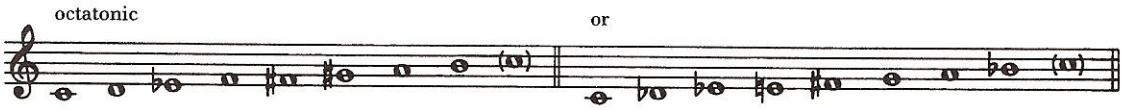
e.

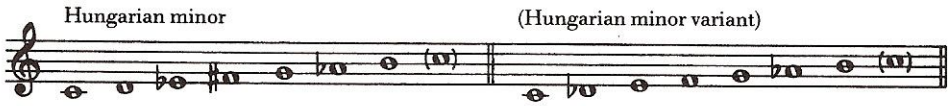
Leggiero

7 Exotic (Artificial, Synthetic) Scales

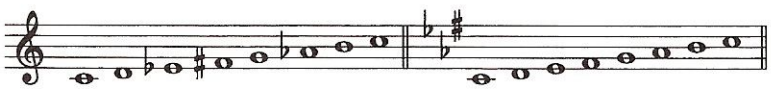
I. Scale forms other than traditional major, minor, and church modes are known as *exotic, artificial,* or *synthetic scales.* Some are derived from folk music, some come from cultures other than Western, and some are constructed by composers to yield special interval relationships. These scale forms may be built on any pitches. Among the most common scales in these categories are the following:



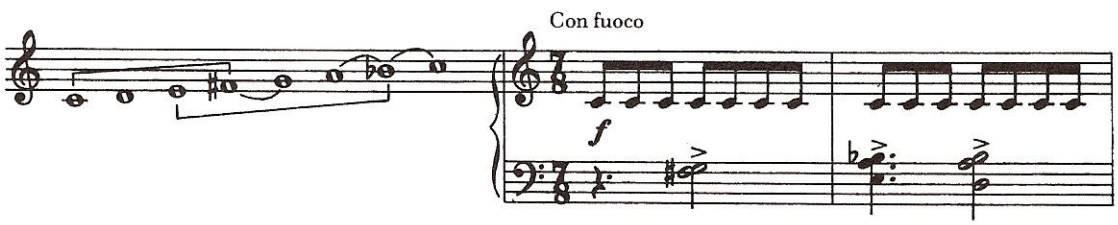


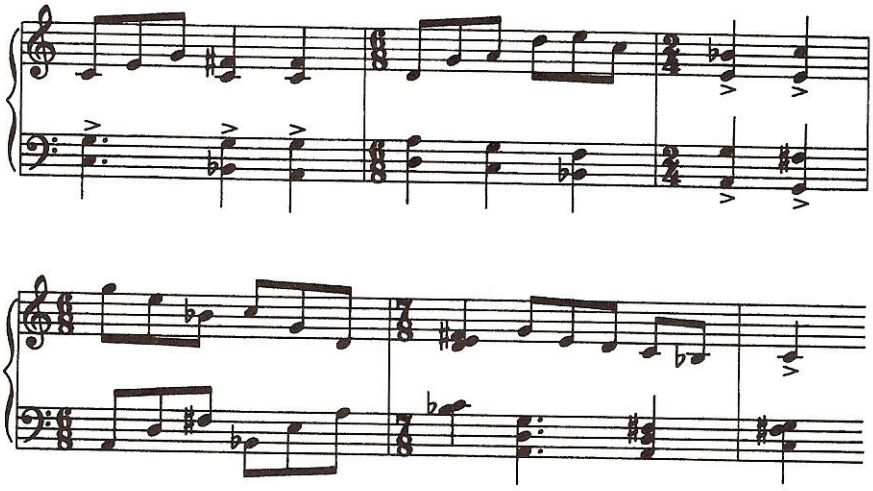


II. Any arrangement of two to twelve notes of the tempered scale may constitute a scale, although most exotic, artificial, and synthetic scales contain five to eight tones. Each scale tends to emphasize certain intervals and may completely lack other intervals. For example, the whole-tone scale, rich in M2, M3, and A4 (and their inversions), lacks m2, m3, and P4 (and their inversions). The pentatonic scale lacks m2 and A4. Interval content may affect the choice of transposition. All scales are abstractions; they are merely conventionally arranged collections of notes from which the composer may select in writing music. Composers occasionally employ nonconventional key signatures when exotic or artificial scales are consistently used.



A. In composing with these scales it is important to emphasize the characteristic intervals within each scale, as well as to emphasize clearly the tonic note by the usual means of reiteration, return, line emphasis, and appropriate cadence formulas.



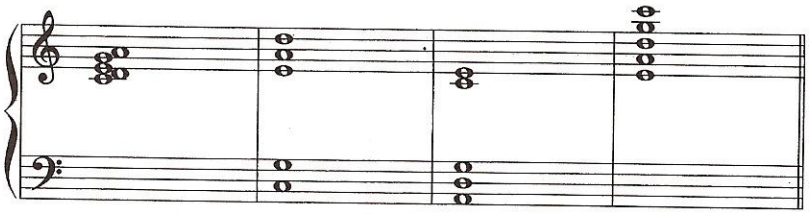


B. Scales often consist of two equivalent *tetrachords* (sets of four adjacent pitches), as in the major scale and the octatonic and Hungarian minor variant. As with the modes, it is possible to change scales over a single tonic or to transpose a scale to a new tonic for variety. Scales may be mixed freely within a given passage or used simultaneously. Frequently the tetrachords may be extracted and used independently.

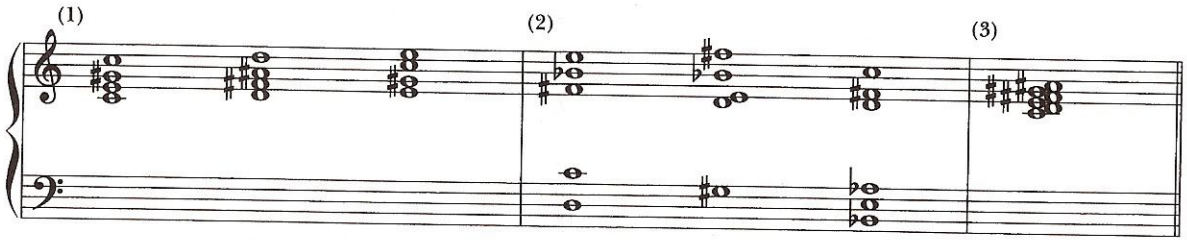
C. The transposition factor applies to composition with exotic scales. Refer to Part IV, Unit 1, for an explanation and examples.

III. *Scale and chord.* Exotic scales will frequently generate particular types of chord structures.

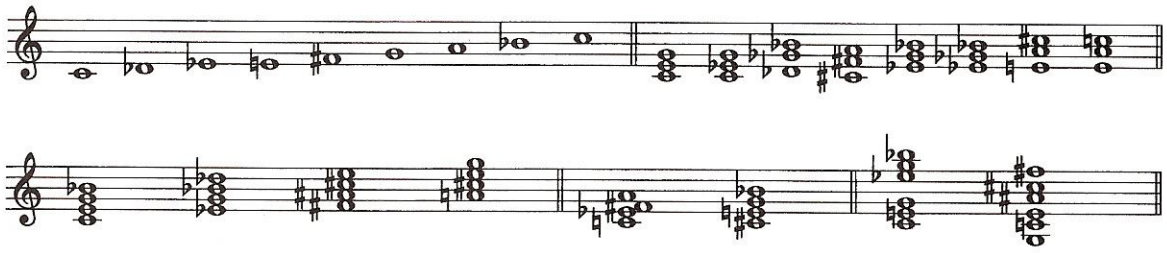
A. A pentatonic scale projected as a chord will result in either an additive chord or a quartal (or quintal) stack.



B. The whole-tone scale will generate (1) augmented triads, (2) altered dominants (whole-tone dominants), and (3) clusters.



C. The octatonic scale is rich in triads, dominant seventh chords, diminished seventh chords, and polychordal combinations (see Unit 9).



IV. Suggestions for class discussion.

A. Analyze the examples in Unit 33 of *Music for Analysis*. Students may bring additional examples from the literature into class.

B. Analyze the interval content of pentatonic, octatonic, and whole-tone scales. Which intervals are present? Which are missing? Which transpositions will introduce an entirely new set of notes? Which other transpositions will introduce certain notes in common with the original scale? How can these facts be used to create musical interest?

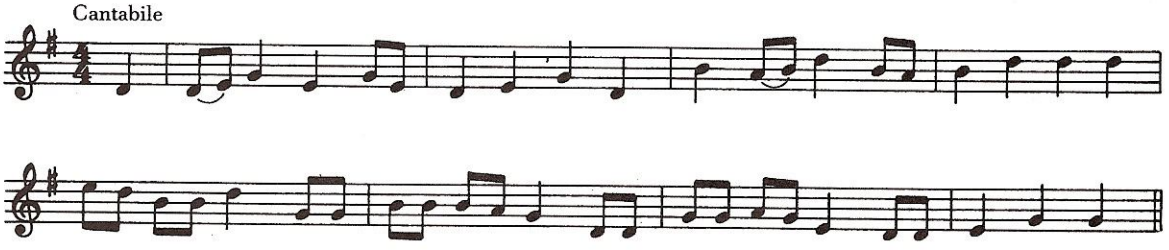
C. Suggested reading (see the Bibliography): Dallin, Hanson, Persichetti, Ulehla.

Exercises

1. Construct five artificial scales consisting of five to nine tones that emphasize certain intervals and avoid others.
2. Compose a brief work for instruments available in class based on one of the scales from Exercise 1.
3. Employing the scale demonstrated in II–A, write a brief work for piano.
4. Write accompaniments for the following pentatonic melodies. Experiment with different harmonic structures and different textures. Try using melodic or chordal ostinatos. Also consider harmonizing the melodies with tones restricted to the tones of the pentatonic scale. Analyze the resulting chord structures.

a.

b.



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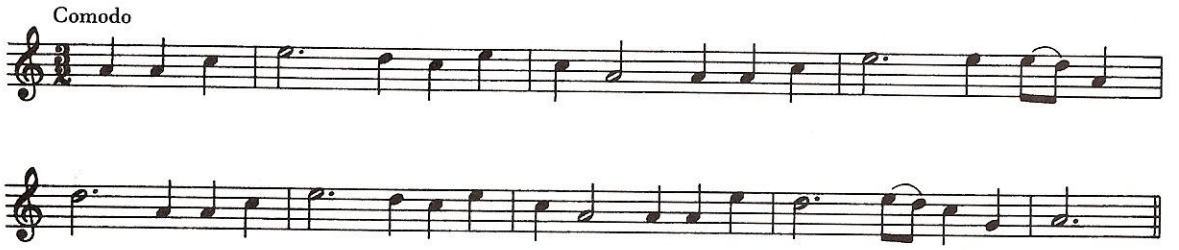
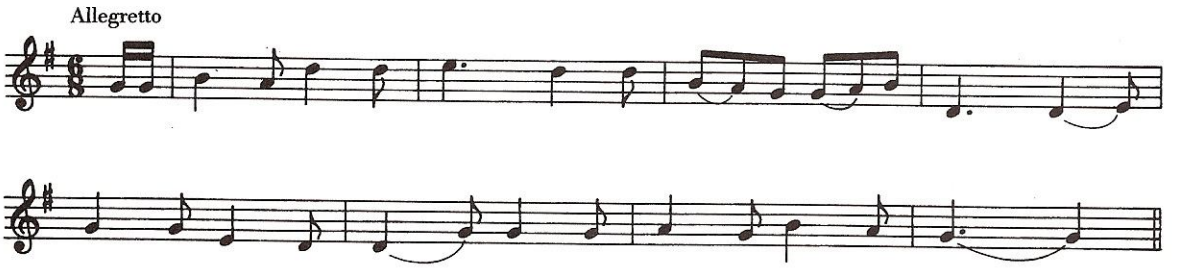
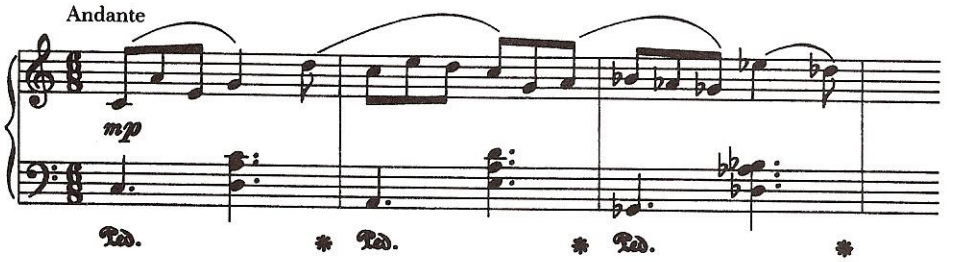


d.

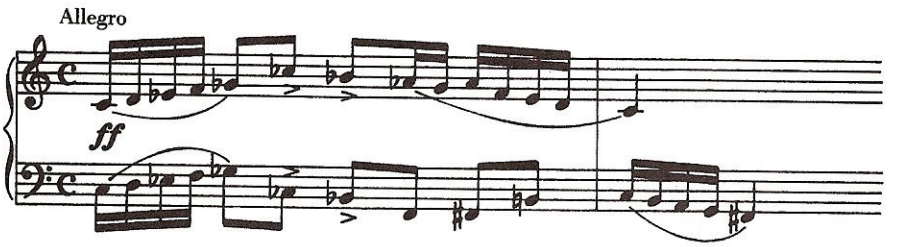


5. Determine the scale of the given material, then complete, adding six to eight measures:

a.



b.



c.