Modality

and other short articles for EPMOW
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by P Tagg

antiphony

From Greek *antifonía* [Žntifvnía] (= 'opposing sound'), antiphony is an umbrella term denoting performance techniques in which one line of music is alternated with another contrasting or complementary musical line of roughly equal importance. Although no absolute duration limit can be given, each antiphonal statement between different musicians, singers, instruments or recorded tracks is usually perceived as lasting at least the length of a musical phrase. For alternation of individual *notes* between different voices, instruments, etc., see HOCKET (p.4).

Most responsorial techniques, for example African-American call and response, the *sawal-jawab* (= 'question and answer') of Indian raga music, and the chanted dialogue between precentor and congregation in many forms of Christian liturgy, are also antiphonal. Antiphony that is not necessarily responsorial occurs when one part of a vocal or instrumental ensemble exchanges alternate phrases or sections of music with another, for example: (i) the brass section playing one passage and the whole big band answering with another; (ii) the jazz drummer or bass player performing two- or four-bar breaks and the rest of the band answering with passages of similar length, usually just before the final chorus; (iii) two sides of the choir or congregation singing alternate lines or verses from psalms or hymns. Stereo antiphony occurs either when the same sound is panned left (or right) for one phrase or passage and right (or left) for the subsequent one, or when two different sounds are assigned alternate phrases or passages at opposite panning positions.

changes

Short for 'chord changes', the word is used in three ways: [1] as a term used mainly by jazz musicians in the English-speaking world to denote any harmonic progression; [2] to denote any such chord progression forming the basis for improvisation; [3] any progression of at least three chords, often more, recurring consecutively several times during performance of the same number (see TURNAROUND in Tagg's *Harmony Handout*). Colloquial examples of usage: (i) 'the *La bamba* changes go one, four, five'; (ii) 'which changes do you use in the middle eight of *Round About Midnight*?'; (iii) 'I was trying to work out the changes on that recording'.

drone

Fr. *bourdon*; Ger. *Bordun*; It. *bordone*

[1] continuously sounding single note(s), usually accompanying a melodic line often performed in a higher register (continual drone); [2] as [1] except that note(s) of identical pitch are repeated at short intervals (rhythmic drone). Drones act as tonal reference point and background for the changing pitch of other strands in the music. They are a common feature in many forms of popular music throughout the world and may be vocal or instrumental.

Vocal drones can be found in, for example, the antiphonal rhythms of traditional hymn singing from Tahiti (*himene*) as well as in backing vocal passages from some types of gospel singing in the USA (e.g. Swan Silvertones, 1952: 1'15"-2'00"). Instrumental drones can be produced by the same player on the same (set of) instrument(s) that perform the melody, or by a separate (set of) instrument(s): bagpipes, hurdy-gurdy, launeddas (Sardinia) and Jew's harp belong to the former category; didgeridoo (Australia), komuz (Kirghizstan) and tanpura (India) to the latter. Some string instruments, such as the vina (South India) and other members of the lute family, are provided with one or more drone strings that can be plucked at appropriate junctures for purposes of tonal reference and rhythmic impetus. Rhythmic drone effects are also produced by fiddlers who make frequent, often percussive, use of open strings (e.g. Robertson 1922; Ståbi et al. 1965), and by guitarists plucking the low strings, often when adjusted to open-chord tuning (e.g. Hooker 1995; Cooder 1974). Drone effects of a more continuous rhythmic character are often heard in the open-fifth guitar or banjo arpeggiations of artists steeped in European and North American folk traditions (e.g. Folk och Rackare 1976; Steeleye Span 1971; Watson 1971).

The connotative charge of drones varies according to cultural perspective and media context. In the heyday of Central European art music drones were often used to evoke pastoral or bucolic settings (e.g. Händel 1741; Beethoven 1808; Alfvén 1904). More recently drones have become increasingly common and can be heard in, for example, folk rock, ambient and 'Celtic mood' music (bygone rural days, broad stretches of time and space, etc.), as well as in such styles as house, techno and other types of 'modern dance music'. In the latter case, the drone's connotations, if any, have yet to be clearly established. However, the connotations of one latter-day drone are quite obvious: the 'doomsday mega-drone' underscoring ongoing threat scenarios in such popular TV productions as *V* (alien reptiles occupy Earth) or *Twin Peaks* (evil omnipresent in a small town). It seems that the drone has deeper connotations on the Indian subcontinent. For example, Coomaraswamy (1995: 77-80) describes the tanpura, the droned string instrument of much raga music which is heard before, during and after the melody, as 'the timeless and whole which was in the beginning, is now and ever shall be.' The account continues:

> 'The melody itself, on the other hand, is the shifting character of Nature which comes from the Source and returns to It'… 'Harmony is an impossibility for us, for by changing the solid ground on which Nature's processes rely we would be creating another melody, another universe and destroying the peace on which Nature rests'.

hocket

From French *hoquet* and Latin *hoquetus* (meaning 'hiccup'), hocket is a musical performance technique in which individual notes or chords within musical phrases, not the complete phrases (see ANTIPHONY, p.2) are alternated between different voices, instruments or recorded tracks.

Although 'hocket' is traditionally used to describe the technique in late medieval French motets (see 'In seculum'), hockets are far from uncommon in modern popular music. A well-known example is the woman shifting to and fro between voice and one-note pan pipe in the introduction to Herbie Hancock's 1974 version of 'Watermelon Man'. Indeed, hockets are a prominent feature of several African music cultures, not only among the Ba-Benzélé featured on the Hancock recording, but also among the Mbuti, the Basarwa (Khoisan) and Gogo (Tanzania) (Nketia, 1974: 167).

In a more general sense, fast alternation of one or two notes between voices, instruments and timbres not only contributes massively to the dynamic of timbral and rhythmic distinctness that is intrinsic to the polyphonic and polyrhythmic structuration of much music in Subsaharan Africa (Nketia, 1974; Chernoff, 1979): it also gives evidence of 'social partiality for rapid and colourful antiphonal interchange' (Sanders, 1980). Such partiality may also help explain the predilection for hocketing found in funk music where the technique is intentionally employed for purposes of zestful accentuation and interjection. Typical examples of funk hocketing are the quick, agogic interplay between high and low slap bass notes, or the fast interchange between extremely short vocal utterances, stabs from the horn section and interpunctuations from the rest of the band (e.g. James Brown, Larry Graham). These affective qualities of hocketing were certainly recognised by medieval European clerics who characterised it as *lascivius* (= fun) *propter sui mobiltatem et velocitatem*. In 1325, Pope John XXII issued a bull banning its use in church (Sanders, 1980).

Another type of hocketing has been developed in response to restrictions of instrument technology. For example the Andean practice of sharing the tonal vocabulary of a piece between two or more pan pipes (*zampoñas*) and their players demands skillful hocketing to produce runs of notes that are in no way intended to sound like hiccups (see Morricone, 1989). Advanced hocketing is also practised in Balinese gamelan music where very short portions of melody are allocated to many different players to produce highly complex sound patterns.

modality

From Latin's *modus* (= measure, manner, mode), modality is a term mainly used to denote certain types of tonal vocabulary which diverge from that predominant within Central European art music (c. 1730-1910) and tonally related forms of popular music (e.g. popular hymns, marches, waltzes, polkas, evergreens).

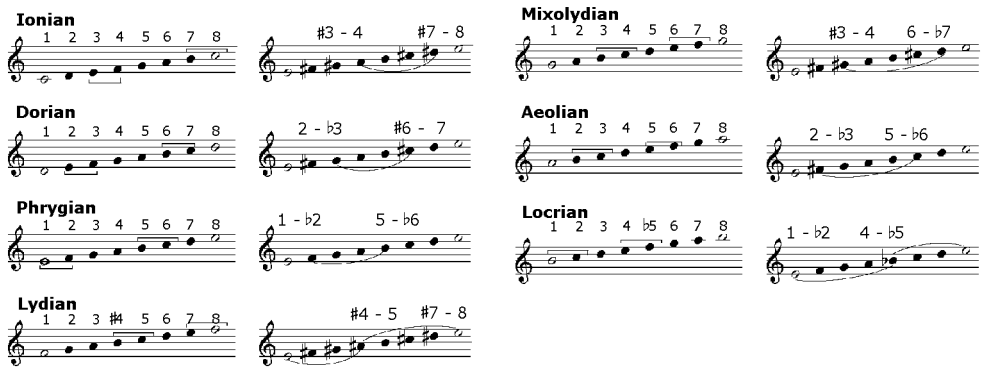
1. General

Current usage of 'mode' and 'modality' derives from two main sources: (i) attempts by medieval European theorists to systematise the tonal vocabulary of liturgical music according to Ancient Greek and Arab concepts — the 'church modes'; (ii) ethnomusicological classification of tonal vocabulary used in folk and non-European musics.

Modes are not melody types, like the Indian *raga or* Arab *maqam* which contain not only modal templates but also basic formulae for the improvised performance of melodic contour, mood and direction. Nor are modes mere scales: they are reductions of particular tonal practices to single occurrences of recurrent pitch used within those pratices. Such sets of single occurrences are usually presented in scalar form spanning one octave (ex. 1 and 2).

2. Church modes

Ex. 1 'Church' modes



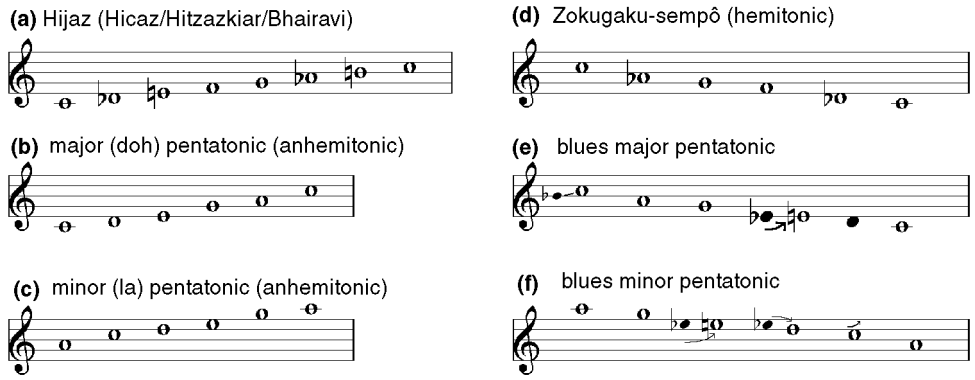
Church modes presuppose: (i) the diatonic division of the octave into seven constituent pitches, five separated by a whole tone, two by a semitone; (ii) a tonal centre or 'tonic', which may sometimes be identified as a (real or potential) drone or as the final, or most frequently recurring, melodic note. The seven heptatonic church modes appear in example 1. The left column shows each mode, its tonic as n°s 1 and 8, using only the white notes of a keyboard instrument. The right column shows each mode transposed to E, this highlighting each mode's configuration of intervals. Three interrelated factors determine each mode's unique sonic character: (i) the position of the two semitone steps (bracketed in the left column, shown as numbers in the right); (ii) the one tritone interval (marked with a slur in the right column); (iii) the relation of these two phenomena to the tonic. Thus, only the ionian mode has its tritone between perfect fourth and major seventh (4–♯7), only the dorian between minor third and major sixth (♭3–♯6), only the phrygian between minor second and perfect fifth (♭2–5) etc. More general distinctions are often drawn (i) between major and minor modes, i.e. those containing

a major or minor third in their tonic triad and (ii) between those including major and minor sevenths.

3. Non-diatonic modes

Many popular tonal practices cannot be categorised according to the diatonic framework of heptatonic church modes. For example, *pentatonic modes* are widespread throughout the world, the most common types being *anhemitonic* (without semitones) and qualifiable as either major — 'doh-pentatonic' (example 2b) — or minor — 'la-pentatonic' (ex. 2c). Popular melody from such widely flung areas as Eastern Asia, the Andes, Subsaharan Africa and the Celtic fringe of Europe makes extensive use of such anhemitonic pentatonicism, the latter two exerting particularly strong influence on the development of popular music in North America. Other globally circulated non-diatonic modes include: [i] the hexatonic whole-tone scale, used copiously by Hollywood as a mystery cue and by jazz musicians as improvisation material to fit chords containing an augmented fifth; [ii] variants of the *Hijaz* (or *Hejjaz*) mode (a.k.a. *Hicaz*, *Bhairavi*), widespread throughout the Balkans, Greece, Turkey, Southern Spain, the entire Arab world and parts of the Indian subcontinent.

Ex. 2 Some common non-diatonic modes



Many non-diatonic modes enjoy considerable popularity on a less global scale, e.g. the hemitonic Japanese penta-scale *zokugaku-sempô*, based on common koto tuning patterns (descends 8 ♭6 5 4 ♭2 1). Other well-known, non-diatonic modes, such as the heptatonic 'Gypsy' mode (ascends 1 2 ♭3 ♯4 5 ♭6 ♯7) and the related 'harmonic minor' (1 2 ♭3 4 5 ♭6 ♯7), recur frequently in popular melody from the Balkans, while much popular melody (e.g. Javanese, Arabic) uses modes incompatible with the Western division of the octave into twelve equal semitones.

4. Modal harmony[1]

*H*armonic practices derived from use of church modes are as important as melodic vocabulary in determining modal character. For example, the melodies of both *Da-Doo-Ron-Ron* (Crystals 1963) and *Sweet Home Alabama* (Lynyrd Skynyrd 1974) are basically major tritonic (♯3 2 1) and thereby potentially ionian, mixolydian or major pentatonic. However, harmonisation of the Crystals song is unequivocally ionian (I–IV–V–I), that of Lynyrd Skynyrd mixolydian (I– ♭VII–IV), this discrepancy contributing as much as timbre,

1. For greater detail, see *Tagg's Harmony Handout*.

rhythm or sound treatment to radical differences in character between the two recordings.

5. Perceived characteristics of modality

Mode nomenclature often reflects hegemonic identification of tonal vocabulary in ethnic terms, e.g. the 'Gypsy' mode and the church modes named after areas of Greece, perceived as marginal from the power centre of ancient Athens. Similarly, from a contemporary Northern European or North American viewpoint, the phrygian mode is often thought to sound Spanish, while other modes, already mentioned, are heard as Arab, Balkan, Japanese etc. US film music frequently uses such hegemonic perception of modality to transmit cultural stereotypes of place.

Different modes are also perceived as connoting different moods. ('Mood' and 'mode' are etymologically related.) Such connotations are culturally specific, the equation of minor modes with 'sad' and major with 'happy' being largely valid within the Central European tonal system of art music and related styles but inapplicable to the music of most other cultures. Similarly, rock and pop music using aeolian harmony in a certain way has a tenedency to be associated with alienation and the ominous while mixolydian rock and pop veers more towards a mood of wide open spaces. Within African American music, descending minor pentatonic modes with 'blue' fifths are more likely to connect with blues, old times and oppression while melismatic major pentatonic melodies link with the positive ecstasy of gospel music.

During the hegemony of Central European major-minor tonality, music from the continent's 'fringe areas' (Spain, Russia, Scandinavia, the Balkans and British Isles) was often characterised by the musicological establishment as 'modal', because, although much music produced in those areas conformed to the central (ionian) norms of tonality, some — usually older forms of rural popular music — did not: it conformed to modes abandoned and regarded as archaic by the European bourgeoisie during the ascendancy of that class. Some of these modes, notably those containing a flat seventh (dorian, mixolydian, aeolian) and the two anhemitonic pentatonic modes are regarded (rightly or wrongly) as typical of rural music from the British Isles. These modes blended with compatible tonal systems of West African origin to contribute to the establishment of North American popular styles challenging the global hegemony of Central European major-minor tonality to the extent that the latter is now more likely than the former to own connotations of 'the old order'.

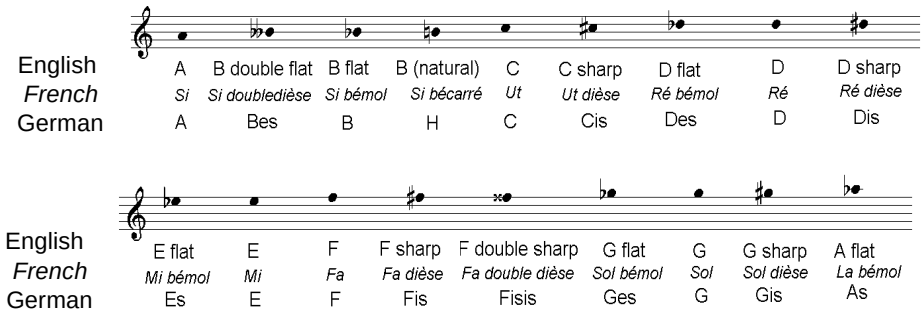
note

[1] any single, discrete sound of finite duration within a musical continuum; [2] such a sound with easily discernible fundamental pitch; [3] the duration, relative to the music's underlying pulse, of any such sound, pitched or unpitched.

[1] Although 'note' originally referred to the scribal marking of these minimal elements of musical articulation, the word has come to denote a discrete sonic event on its own, without any reference to musical notation. This terminological practice is illustrated concisely by the notes of MIDI sequencing which are defined by such factors as [i] the point at which a given sound will start; [ii] the type of sound (timbre, volume, attack, envelope, decay) that will occur at that point; [iii] (if pitched) the frequency at which the sound will be articulated; [iv] the point at which the sound will stop. According to this general meaning of the term, a note may be long, short, high, low, pitched, unpitched, loud, soft, sharp, rounded, etc. However, although a note may theoretically have any duration, it is virtually impossible to perceive as such if it sounds for less than 0.1 or for more than 12 seconds. Hence certain types of ornamentation which from a technical viewpoint involve more than one note are perceived as single notes of a particular type (e.g. drum rolls, tremolandi, fast trills), while extremely long notes are heard as pedals or drones.

[2] 'Note' is often used in a strictly tonal sense to refer to the specific pitch of a single sound event. A pitched note name refers to either: [i] an absolute pitch in any octave ('a', 'f sharp', etc.), or [ii] to the particular occurrence of such a sound (e.g. 'high c', 'a low b flat', 'c^0', 'd^3'), or [iii] to one pitch in relation to another (e.g. 'a fifth below', 'flat seventh', 'leading note', 'mi-do-so-la'). Pitched notes are named in either absolute terms (*a b c d e f g* etc.) or in relative terms (for example, *doh re mi fa so la ti* or *sa ri ga ma pa dha ni*). In all instances note names are identical from one octave to another. Absolute note names are based on standard concert pitch (*a* at 440 Hz) while relative note names presuppose the fixation of *doh, la* or *sa* to any one pitch for the duration of a musical continuum, the other names denoting intervallic relationship to that *doh* or *la*. Three main conventions for naming notes of absolute pitch are in everyday use in popular music throughout the world and are displayed in Table 1: (i) the English-language system; (ii) the Latin convention (exemplified by French names) used in Russia and Poland as well as throughout the Latin world; (iii) the German convention used in Scandinavia and in German-speaking areas.

Table 1 Pitched note names



3. As evidenced by German and North American nomenclature, 'note' is often used when referring solely to the duration of a minimal musical sound event, for example *ganze Note* = 'whole note', *Viertel(note)* = 'quarter note' (see Table 2).

Table 2 Note length names

Note	English (UK)	English (US)	German	French	Italian
	breve	double whole note	Brevis	carrée	breve
	semibreve	wholenote	Ganze (Note)	ronde	semibreve
	minim	half note	Halbe	blanche	minima or bianca
	dotted crotchet	dotted quarter note	punktiert Viertel	noire pointée	nera con punto
	crotchet	quarter note	Viertel	noire	nera or semiminima
	quaver	eighth note	Achtel	croche	croma
	semiquaver	sixteenth note	Sechzehntel	double-croche	semicroma
	demisemiquaver	thirty-second note	Zweiund dreissigstel	triple-croche	biscroma
	hemidemi-semi-quaver	sixty-fourth note	Vierundsechsigstel	quadruple-croche	semibiscroma

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