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The basic pulse underlying measured music and thus the unit by which musical time is reckoned; the beat, though not always sounded, is always perceived as underpinning the temporal progress of the music, and it is only the presence of the beat that allows rhythm to be established. This article describes the ways in which the beat is expressed in jazz, and the relationship between the underlying pulse and the rhythms played by jazz musicians.

#### 1. Meter.

Meter is the grouping of beats in a regularly recurring pattern (the bar or measure) defined by accentuation (see §4 below). At a higher level than the beat and in more complex ways, meter (whether explicitly marked or only sensed) provides the temporal framework of the music within which rhythm is established and perceived. Meter is expressed in terms of the number of beats of a certain value that occur in the bar. In notated music it is indicated by a pair of numerals, one placed above the other, known as the time signature: the upper numeral indicates the number of beats in the bar, the lower the value accorded to each beat. Thus the time signature shown in ex.1 indicates that there are four beats to the bar and that each beat has the value of a quarter-note (so-called common time).

Ex.1 4 1 1 1 1

Ex.1

Because much jazz is never notated (and even notated pieces are not generally available) meter in jazz must usually be inferred by the listener and is consequently open to differences of interpretation. A fast piece, or one in which accents fall equally on every second beat might be interpreted by one listener as being in 2/4 and by another as being in 4/4; the typical boogie-woogie rhythm, described in jazz parlance as "eight to the bar," might be heard in 4/4 or 8/8.

In spite of such analytical difficulties (which often have more to do with the notation than the perception of the music) useful generalizations may be made about meter in jazz. Until the mid-1950s nearly all jazz was in duple meter (i.e., having two or four beats to the bar). Exceptionally, triple meter was a staple of the string and jug bands which lie behind much early jazz, going back at least to *Missouri Waltz* by Dan and Harvey's Jazz Band (1918, Col. 738) and including most notably such material as *Jug Band Waltz/Mississippi Waltz* by the Memphis Jug Band (1928, Vic. 38537). It may perhaps be considered surprising that waltzes by

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urban jazz bands of the vintage era should invariably be rhythmically stiff and that hot waltzes emerged only later and to some rather exaggerated promotion by the jazz press. This reflects the needs of the actual dancers: evidently rural dancers wanted their waltzes hot and swinging, but during this early period urban dancers, even African-Americans it seems, relished the contrast between a lively two- or four-beat number and a staid waltz. There have also been numerous waltzes in the repertory of New Orleans bands, but these were not recorded before the New Orleans jazz revival of the 1940s.

Isolated examples of triple meter occur in the swing era – among these, Fats Waller's *The Jitterbug Waltz* (1942, Bb 11518) became a jazz standard – but only with the introduction of the "bop waltz" (early examples of which are Thelonious Monk's *Carolina Moon* (1952, BN 1603) and Sonny Rollins's composition *Valse hot* on the album *Sonny Rollins Plus 4* (1956, Prst. 7038)), did triple meter become well established in jazz. Two weeks after Rollins recorded *Valse hot* (in 3/4), Kenny Dorham recorded on the album *Kenny Dorham and the Jazz Prophets* (1956, ABC-Para. 122) his own composition *Tahitian Suite*, of which the opening theme and improvisation, and the closing statement of the theme, are in 6/8. Other notable examples include a rhapsodic rendition by Bill Evans (ii) of his composition *Waltz for Debby* (on his album *New Jazz Conceptions*, 1956, Riv. 223), *Some day my prince will come*, on Evans's *Portrait in Jazz* (1959, Riv. 1162), and *Bluesette* (1961), on Toots Thielemans's eponymous album of 1961–2 (ABC-Para 482).

Irregular meters made their appearance in the late 1950s and enjoyed a brief vogue; they were almost always found in composed pieces, the themes at least of which are notated. Examples included Paul Desmond's *Take Five* (on Dave Brubeck's album *Time Out*, 1959, Col. CL1397), which is in 5/4, and Brubeck's *Blue Rondo a la Turk* (on the same album), which is alternately in 7/8 and 9/8; most of Don Ellis's compositions, among them 33 222 1 222 and *New Nine* (on the album *Live at Monterey*, 1966, PJ 20112) and the pieces on the album *The Don Ellis Orchestra in 32/3Time* (1966, PJ 20123); and the track *Ubava Zabava* on Chris Barber's album *Get Rolling!* (1969–71, Pol. 2683001), which has a succession of changing meters. At much the same time free jazz emerged, in which there is sometimes neither an underlying beat nor a discernible meter. Yet throughout this period and later (most notably in fusion styles) jazz continued to be dominated by pieces having four (less often two) beats to the bar. From the late 1980s there has been a considerable and widespread revival of interest in exploring irregular meters, and in many instances the results have been much less self-consciously clever and much more satisfying than before. Notable practitioners are Dave Holland, Steve Coleman, and, in a Latin-jazz context, David Sanchez, who excels at improvising on sambas in such odd meters as 7/8.

## 2. Tempo.

"Tempo" (the word derives from the Italian for "time") is generally used to mean the speed at which a performance proceeds: "up tempo" (sometimes "up") means, simply, "fast." In jazz parlance "tempo" and "beat" are sometimes used synonymously: a drummer or a bass player may be praised for the ability to maintain a steady tempo or a steady beat, when what is meant is that he plays the beat at a steady and unchanging speed. The player who has "a good beat" (or "good time") not only plays with rhythmic exactness but also imbues the rhythm with an indefinable energy and spirit, which makes the difference between a pedestrian and an exciting performance.

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Steadiness of tempo is highly valued in jazz and is expected in all styles except free jazz, which in some (not all) instances proceeds at a free and varying tempo (as does, for example, Albert Ayler's *Holy Spirit*, on his album *Ghosts*, 1964, Debut 144, and Cecil Taylor's *Steps*, on his album *Unit Structures*, 1966, BN 84237). It is therefore not surprising that there are no terms in jazz parlance for the local easing and quickening of tempo familiar in Western classical music. "Rubato," the stretching or broadening of tempo, occurs often in performances by Art Tatum (as in the first and last choruses of *Time on my Hands*, 1949, Cap. 15712). It may also occur in the opening chorus of a Ballad, which is usually played at a slow tempo; examples may be heard on Miles Davis's *Stella by Starlight* and *My Funny Valentine*, on the album *My Funny Valentine* (1964, Col. CS9106). "Accelerando" (acceleration of tempo) and "rallentando" (slowing down of tempo) are comparatively rare in jazz, but both occur in Charles Mingus's music; notable examples of accelerando may be heard in his suite *The Black Saint and the Sinner Lady*, on the album of the same title (1963, Imp. 35). Another unusual instance of accelerando and rallentando as an intergral element of a jazz performance may be heard on the title track of Bennie Green's album *Walking Down* (1956, Prst. 7049)

The failure to adhere strictly to the beat and to play in a steady tempo is usually accidental, but a player will sometimes manipulate the beat for special effect; the degree to which he alters the rhythm will be infinitesimal and the irregularity may be momentary or prolonged (in the latter case the tempo of the entire ensemble may eventually be affected). To "lay back" or play "behind the beat" is deliberately to place notes slightly after the beat in a relaxed or hesitating manner; to "drag" may also mean to delay the beat intentionally, but it is often used of an incompetent musician who cannot maintain a steady tempo. Conversely to play "ahead of the beat" is to place notes slightly before the beat, and to play "on top of the beat" is to place them slightly early or too precisely in time. Both terms may imply that the performer is anxious or not entirely in control of the music, but "on top of the beat" often carries more positive connotations: Art Blakey and Charles Mingus, for example, are both admired for their aggressive, driving style, which involves playing on top of the beat without rushing the tempo (*seealso* Boot and Kick ).

# 3. The subdivision of the beat.

In the hierarchy of musical time, meter is a grouping of beats, each of which may in turn be subdivided into smaller values. Since the beat is normally thought of as a quarter-note, the subdivisions are usually referred to as eighth-notes, though the value accorded to the temporal unit and therefore to its subdivisions is a matter of individual interpretation in all jazz preserved only in recorded form. The way in which musicians articulate the beat and its subdivisions creates the rhythmic nuances that give jazz its character. In most ragtime, Latin jazz, and jazz-rock pieces, and in fusions of jazz with soul music, funk, and folk music the beat is subdivided into two equal parts, usually played strictly. But in much early jazz, music of the swing era, bop, and modal jazz the beat is divided unequally in a lilting fashion that implies three, rather than two subunits, though the subdivision is executed with such flexibility and variety as to give only an impression (and not an exact statement) of these values. The way in which the beat is subdivided in swing rhythms is exceedingly complex and may change constantly (for an attempt at a scientific measurement of such subtleties in the music of Charlie Parker *see* Transcription, §2); since they defy precise notation, swing eighth-notes are variously represented as shown in ex.2. (*Seealso* Notation, §5, (iv).)

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Ex.2

## 4. Accentuation.

The bar, the beat, and the subdivisions of the beat may be treated very regularly or with great rhythmic subtlety. Each element of the bar carries a different weight in relation to the others, these relative weights being determined not only by duration and stress but also by other factors such as the progress of the melodic line, changes of harmony, the instrumentation, etc. Much of the rhythmic interest of jazz lies in the manipulation or contradiction of the regular accentual pattern established by meter – the deliberate displacement of the expected accents, the slight precipitation or delay of articulations, the temporary cessation of a regularly marked beat, etc.

#### (i) Strong and weak beats.

The grouping of beats into the metrical unit of the bar creates relatively stronger and weaker positions, which are reinforced by other elements of the music. In music that progresses regularly in 4/4 time, for example, the first beat of the bar is the strongest, the third is the next strongest, and the second and fourth less strong still; subdivisions of any of the beats are weaker than the main beats.

Several terms are used to describe the beats of the bar in terms of their metrical functions (ex.3). The "downbeat" is the first and strongest beat of the bar; it is followed by a succession of "afterbeats," that is, in 4/4 (or 12/8) the second, third, and fourth beats, all of which are weaker than the first (though not all of equal weight). Another term for any beat other than the first is "offbeat," but while "afterbeat" is essentially a neutral term, "offbeat" is often used in contexts where expected accentuation is overturned, especially where the downbeat is replaced by a rest or is tied over from the preceding bar; an offbeat rhythm is one in which beats that are metrically in weaker positions are emphasized and those in metrically stronger positions are understressed.

An "upbeat" is the impulse that immediately precedes a downbeat: in 4/4 (or 12/8) time the upbeat, metrically speaking, is the fourth beat of the bar, but the sensation of preparation for the following downbeat may be created by the last eighth-note, or even the last 16th-note, of the bar. Impulses that produce such an effect may occur at more than one level in a given rhythmic scheme: in ex.4 the metrical upbeat occurs at *b* but at a local level the 16th-note at *c* is also an upbeat and the 16th-note at *a* may be regarded as a lesser upbeat since it prepares for *b*, which at this level is a relatively important beat of the bar.

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Ex.3

While all these terms are current in general musical theory "backbeat" is more specific to jazz and other forms of popular music. Backbeats are the beats occupying the weakest metrical positions in the bar – in a 4/4 or 12/8 bar the second and fourth beats (see ex.3). In jazz characterized as having a "heavy backbeat" these metrical impulses are consistently stressed, generally by strokes on the snare drum, or comping by the rhythm section, or both. An extended passage in which the backbeat is emphasized occurs in the tenth, 11th, 14th, and 15th (last) 12-bar blues choruses of Jack Teagarden's *Pitchin' a Bit Short* (1944, Com. 1521), where the drummer George Wettling plays rim shots on the second and fourth beats of every bar throughout.

## (ii) Regular articulations.

In most styles of jazz the beat is expressed explicitly. In spite of the familiar notion of the drummer who "has a good beat," it is usually not the drums but the Bass instrument (most often the double bass, but in some contexts the tuba or electric bass guitar) that carries the responsibility for marking the beat. In music of the swing era the bass instrument is joined by the entire rhythm section (the bass drum and cymbal from the drum set, the piano, and the guitar) in striking every beat, but in other styles the members of the rhythm section have considerably more rhythmic freedom than the bass player.

The way in which the bass player marks the beat varies in different styles of jazz. In the marches and rags on which early jazz drew, accents were placed on the first and third beats of the 4/4 bar, creating what is known as "two-beat" accentuation. As jazz became established as an independent form the two-beat

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Ex.4

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pattern gradually gave way to a "four-beat" one, in which all four beats of the bar were firmly marked. (*Seealso* Jazz, §II, 5.) A common form of bass line in many styles of jazz is the Walking bass, so called because the double bass player marks every beat, at the same time creating a coherent line moving mostly by step.

Although he may not be responsible for maintaining the beat, the drummer often plays patterns that reinforce it. Ex.5 shows a few simple, stereotypical rhythms that a drummer might play on certain components of the drum set to mark the beat explicitly in different styles of jazz. In ex.5*b* the ride cymbal plays various combinations of the basic pattern of swing eighth-notes; in ex.5*c* the snare drum plays on the backbeats, against a steady stream of eighth-notes on the ride cymbal, and bass drum articulations of the first and third beats with varied patterns on other beats and upbeats.



Ex.5

Many styles of jazz use such rhythmic formulas, often repeated steadily in the rhythm section of the band beneath more varied lines in the melody instruments. Some formulas are related to dances (*see*, for example, Charleston, Samba, and Shuffle); others derive from ethnic music, as is the case with the characteristic patterns of eighth-notes superimposed on 4/4 meter in Bossa nova and Latin jazz; and others are peculiar to a single piece or section of a piece (*see* Ostinato and Riff).

There are several performance conventions in which the explicit statement of the beat is suspended for a time, though they depend for their effect on the persistence of the beat by implication in the listener's mind. In a passage in double-time the prevailing note value is halved (in 4/4, for example, the basic quarter-note gives way to the eighth-note) so that an apparent doubling of the speed occurs, though the

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beat and harmonic rhythm do not change (ex.6). All members of an ensemble may go into double-time together (as in the first section of the theme of Mingus's *Fables of Faubus*, on the album *Mingus Ah Um*, 1959, Col. CL1370), or the soloist may improvise in double-time while the rest of the ensemble continues in the original note values (as in Charlie Parker's break on his *Night in Tunisia*, 1946, Dial 1002). A reversal of this process, in effect "half-time," occurs in the second blues chorus of Armstrong's *Gully Low Blues* (1927, OK 8474). Stop-time is a device designed to highlight the playing of a soloist: typically the entire ensemble (or the rhythm section alone) plays, in rhythmic unison, a one- or two-bar formula consisting of sharp accents, interspersed with rests during which the soloist takes over. A similar interruption, though over a shorter period, occurs during a Break, in which the accompaniment ceases entirely for one or two bars while the soloist improvises. In both stop-time passages and breaks the underlying beat and harmony, though temporarily suspended in the accompaniment, are adhered to by the soloist in his improvisations.

Ex.6

#### (iii) Irregular articulations.

The character and vitality of jazz derive to a considerable extent from the irregularity of its rhythms. While rhythmic tension can be created by the setting up of conflicting patterns (such as those discussed in §(ii) above) between the explicitly stated beat and the lines played against it, greater subtlety results from rhythmic articulations that shift and change in their relation to the beat.

Syncopation, which is fundamental to jazz rhythm and ubiquitous in both arranged and improvised pieces, involves the shifting of articulations from stronger beats to weaker ones or to metrical positions that do not fall on any of the main beats of the bar; the strong beats are silent, either because a rest occurs in those positions or because the articulation of a preceding weak beat is tied over (ex.7). Syncopation depends for its effect on a persisting sensation of the beat against which the articulated notes set up strong rhythmic contradictions; unless the beat is preserved in another voice in the ensemble or is swiftly reasserted, the listener loses his consciousness of the metrical framework, or even of the beat itself, and the syncopated pattern ceases to be perceived as such. Examples of syncopation are most obvious in (but by no means restricted to) performances in which a steady pattern of accents placed on the beat (for example, the two-beat formula of a ragtime bass line or an unchanging jazz-rock drum ostinato) provides an accompaniment against which syncopated lines are created. Some fundamental rhythmic devices in jazz are based on syncopated patterns (see the discussion of backbeats and dance rhythms in §(ii) above; *seealso* Bomb).

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 (a) From the stop-time section of Spain, on C. Corea: Lightas a Feather (1973, Pol. 5525); transcr. B. Kernfeld



(b) From Birdland, on Weather Report: Heavy Weather (1976, Col. PC34418); transcr. B. Kernfeld



Ex.7 Syncopated rhythms

In the process known as "turning the rhythm (or beat or time) around" the meter is accidentally or deliberately redefined over a long period by the displacement of accents or the disturbance of phrase structures. The repositioning of strong and weak beats in the metrical unit of the bar, by means of dynamic accent, harmonic change, and the shaping of melodic lines, is at first perceived in conflict with the established meter, but gradually the ear is persuaded that the new positions are regular and a shift in the meter is thus achieved. Exciting, even disorienting, effects can be created if different members of the ensemble pursue their own independent definitions of the meter. A famous example is provided by Charlie Parker's quintet of 1947–8, whose playing was described by Miles Davis (one of the members) in an interview with Nat Hentoff ("Miles Davis: Last Trump," *Esquire*, li/3 (1959), 88). Parker was capable of improvising lines of extraordinary rhythmic complexity: always knowing exactly where he was in relation to the underlying beat, he could begin playing at bar 11 of a 12–bar blues as if he were playing the first bar of the progression, or he could accent the second and fourth beats of the bar as if they were the first and third; the other players, particularly those in the rhythm section, had to maintain the original metrical structure with great tenacity to prevent Parker from turning the rhythm around.

Few players have Parker's phenomenal ability to manipulate meter intentionally in this manner. Other examples of distinguished players' turning the rhythm around are due to error in performance (as on Joe Albany's recording of *Body and Soul*, on his album *The Right Combination*, 1957, Riv. 270, in which he drops half a bar during a double-time section) or to faulty editing of a recording (as on Charles Mingus's *Hora decubitus*, from the album *Mingus*, *Mingus*, *Mingus*, *Mingus*, *Mingus*, *Mingus*, *1963*, Imp. 54), where six beats are missing from the first 12-bar blues chorus of the tenor saxophone solo). (B. Kernfeld: *What to Listen for in Jazz* (New Haven, CT, and London, 1995), 5)

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