

EIGHT TO THE BAR*

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THE theory still survives that the syncopation peculiar to American jazz is a form of rhythmic expression that had its birth "on some Negro's dull tomtom in Africa." This lingering obsession is not unconnected with the feverish cult of the Negro that flourished in the 'twenties after the still earlier discovery of African sculpture. The idea, of course, is dated; it belongs to an era of art-galleries crammed with primitive carving, of Josephine Baker in Paris, the exploration of Harlem, *La Création du Monde* – a period of romantic anthropology long past.

The known facts instead point to a very wide distribution of the rhythmic impulses that animate jazz. One can hear the rumba-pattern in Bali, the Charleston in China. *Chicken Chowder*, *Stumbling*, *I Got Rhythm* – these milestones in American music – are part of the whole Eastern stock-in-trade, and have been so from time immemorial. The question of melodic style, where Negroid and Jewish-Arabian elements are so inextricably blended, belongs to the mysterious realm of scale and intonation. It is the rhythmic impulse that I am interested in here and in pointing out parallels to our own practices from the music of what may seem the most unlikely countries.

The point of departure for comparison is polyrhythm. Today we know that much of the syncopation in jazz lies in the conflict of two opposing rhythms, the result of scanning the bar two different ways. The fundamental beat of four is split into eighths, and may be subdivided thus:

$$\begin{array}{cccccccc} 1 & 2 & 3 & 1 & 2 & 3 & 1 & 2 \\ \hline 1 & & 2 & & 3 & & 4 & \end{array}$$

This formula was first exploited in the early 'twenties, although there had been occasional hints of it before. Today its appeal seems stronger than ever; we are constantly aware of it, in diminution or augmentation, as it scans frenzied drumming or leisurely melodic line. I use the word scan deliberately, since the subdivision is metrical rather than accentual. We need only instruments of contrasting timbre to establish

*This article is from a chapter on rhythm in Mr. McPhee's book on the music of Bali and Java which will appear next season.

the feeling of interplay; the mechanical but exhilarating polyrhythmic texture of the rumba may serve as illustration. This dual concept of the bar, with its opposition of two rhythmic impulses which (for want of a better term) may be described as positive and negative, is the basis for illustrations given below.

The division of eight beats into 3+3+2 is simple enough, but the principle expressed is both complex and of apparently inexhaustible vitality. It is at once natural and enigmatic; it is deceptive, full of surprise, creates a rhythmic tension which is of special appeal to people whose urge for musical expression is before all kinesthetic. It is the antithesis of chant and chorale, and we need not be surprised to read in a missionary report from some coral strand that "indeed the spirit of Satan is only too clear in their dance and music."

For a simple example of the use of this 3+3+2 formula I give a phrase from a song of the Swahilis of Africa (Decca record 20140 A). Here the melody is scanned by the drums in a purely mechanical way.



The result, however, is complex. There is an interplay of three separate rhythms. A "bar" of four is irregularly split into eighths; the melody, spanning four bars, divides the quarters into groups of 6+8+2 (or 6+10, which is an augmentation of 3+5). In this example the melody occupies the foreground.

For complexity of polyrhythmic interplay, I know of no better examples than those in the Dutch East Indies, where a unit of eight beats may be split up ten ways at once. In 1938 one could still hear the most primitive rhythms of signal gongs, or the hothouse art-music of gamelans in the Javanese courts. In Sumatra, Borneo and many lesser islands, ceremonial processions still marched to the rhythmic accompaniment of gongs, cymbals and drums. Such instrumental groups, the equivalent of our military bands, were known long ago. Gongs and drums figure in the battle scenes of the Angkor reliefs and Javanese temples, dating back some eight centuries. Passages in Javanese literature of that time are evocative. "Day breaks. King Erlangga sets forth; gongs rage and echo; the sound of drums mingles with the neighing of horses and flapping of banners."

In Bali a processional orchestra ordinarily included some twenty

players. Each man sounded a single note, striking gong, cymbal or drum. Each man beat out an independent rhythm; the rhythm interlocked and created an exhilarating pattern of sound whose tireless energy was ideal from the functional standpoint. To analyze the music is to discover the genesis of polyrhythm. Its rhythmic impulse will be seen to be identical with that of jazz.

The inevitable march-music to a Balinese procession in full swing is a short ostinato which measures off eight steps of a normal walking-pace. By ostinato I do not mean melody, but a many-voiced polyrhythmic unit. What we actually hear when a procession passes is this:



Here we have, in different strata, figuration (a), "theme" (b), time-beater (c), syncopated offbeat (d), and metric accents (e), over the walking-pace (f). If we remember, however, that each note represents an individual player, the pattern becomes even more involved. The "theme" (b) turns out to be two-voiced; each player measures off the eight march-steps in a different way, one seeming to negate the other. According to the time-beater (c) we have four stressed beats, but when we examine the rhythmic structure of the ensemble every beat will be found to have its accent. There are no weak beats.



Thus the first man at *b* strikes on the 1st, 4th and 6th steps of this 8-step unit, counting (though certainly not consciously) 1 2 3 1 2 1 2 3 in relation to the initial gong-stroke. The pattern of the second man is essentially the same (since a unit of 5 equals 2 plus 3), only it is displaced.

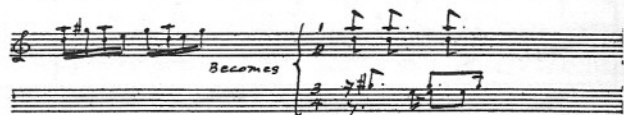
So we find different players thinking, as it were,

ONE	two	Three	FOUR	Five	SIX	Seven	eight
One	two	THREE	four	Five	Six	Seven	EIGHT
ONE	two	Three	four	FIVE	six	Seven	eight

and so on.

This is the very essence of polyrhythm. In the brief ostinato we see a basic rhythm, the march-step with its alternation of right-left, its relation to the heart-beat of contract-expand, eject-draw-in, given a secondary accentuation whose primary purpose is to negate the other, as though to conceal the weakness, deny the implications of exhaustion and death that lie in the second beat.

The true polyrhythmic nature of the four players' figuration, (a) – at first glance a mere arabesque – can now be seen.



A more complex stage is reached when a player no longer strikes a single note but may have two gongs under his control. Patterns are now created by irregular alternation of right and left hand; the bar is no longer merely scanned but is given a syncopated accentuation. In the figuration two men now take the place of four; the playing becomes more fluid; parts dovetail, and patterns may be developed over several bars.



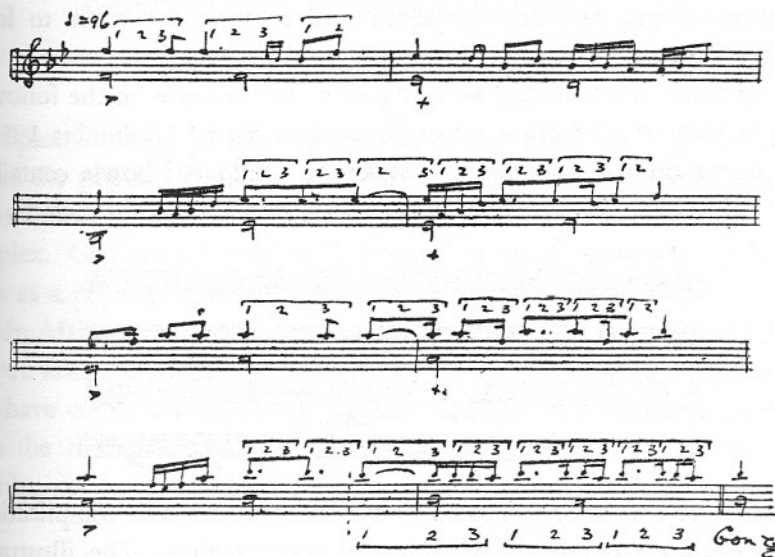
The formula for these patterns is familiar; we have heard them in tap-dancing, and more recently in the virtuoso drum-solos of a swing band. All are galvanized by a similar rhythmic impulse. All may never relax; once started, they must all travel their course, vertiginously or logically, until they resolve on some given point in the metric structure.

Metric structure is an important factor in controlling such cross-accentuation. As in America, the sixteen-bar unit prevails; longer pieces may be based on a unit of twenty-four or thirty-two. Different sized gongs measure the progress of the music, stressing every other bar, marking the quarters and halves of the phrase. These accents are purely quantita-

tive, simply measure the passing of time.* Crossrhythmic disturbance occurs chiefly in unaccented bars, and becomes most complex toward the end. In the following diagram each figure represents a bar of four notes; a dot above or below marks a high or low gong accent; a dash indicates syncopated figuration. Every bar thus has its own accent. Even syncopated passages can be described as quantitative, since they are regulated by the metric structure.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Melodic style is controlled the same way. A soloist may perform on a row of gongs an elaborate version of the "basic melody" played in unison by the others. His style sharply recalls the fluidity of a Negro blues singer against the equally percussive background of a jazz orchestra. In the same way he evades, plays around the beats. Toward the end tension increases, finds release only on the terminal note.



Here is style clearly created by the dual conception of the bar. Played without stress to give a clue, such a performance creates a feeling of relax-

* It is interesting to read in this connection Virgil Thomson's article *Swing Again* (MODERN MUSIC, March 1938), especially the following passage: . . . "there is only one other known form of meter besides the meter of beats. That is the meter of quantities. . . . Beat music is accentual music. Its rhythmic measure-unit is a succession of blows of varying force. Quantitative music has no accent. Its rhythmic measure-unit is the unit of length."

ation and casualness. In more tranquil sections (not shown here) there are embellishments which seem to point to imitation of the florid "Oriental" vocal style. But this instrumental melody, beaten out on gongs, is born of a different impulse. It is muscular, percussive, tense. The "floating" syncopations are in reality indications of an inner secondary rhythm that negates the fundamental beat. The relaxation is a deception.

The same deceptive quality underlies Balinese dancing. I am thinking of the *légong*, an art-dance performed by trained children of eight or nine. At times the tempo is extremely rapid, the rhythms complicated. But dancers and music are one. Nervous and alert, the children dart like humming-birds. In their stiff gilded costumes they are like intricate little statues suddenly come to life. They are supple and fluid, but if you look closely you will find the suppleness an illusion, like the sequence in a film, created by images that last the fraction of a second. One has only to have watched a dance-lesson to know that, like the musicians, the children are aware of every sixteenth-note. The syncopations in the melodic playing are controlled by the metric progress of the music. Even the still more complex drumming is in the last analysis quantitative. The drum-patterns control the movements of the dancers. The dance itself scans the music.

III

The passion for quantitative accent in Bali and Java seems to point to Chinese origin, but the complexities of rhythm owe much to India, although it is many centuries since there has been any direct contact. The same rhythmic principle may be recognized, for instance, in the following example, transcribed from a recent Hindustani record (Columbia 19589). It is played on the *jalatarang*, a series of graduated bowls containing water. The chief accents of the drum are indicated below the melodic line.



India, of course, is the land of metric subtleties and complications; rhythm is closely related to prosody and poetic meters. The illustration above, which remains in a simple beat of four (or eight if you like) was chosen for its almost identical style. But the 3 3 2 principle is only the

simplest (perhaps the source) of an endless variety of formulas. A metrical phrase or *tala* of seven beats may be counted 3 2' 2; one of thirty (!) 8 4 5 5 8. But it is the 3 3 2 unit that has held the widest appeal. It may be pointed out that since there are eight beats, there may be eight displacements of the pattern, beginning on any one of these eight beats.

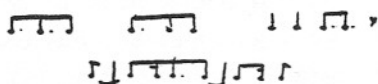


In the Eastern hemisphere these patterns extend from Africa to China. In Siam and China they are not so much in evidence, but they are there, nevertheless, as anyone will agree who has listened to the gongs and cymbals in Chinese theatre music.



Space does not permit the analysis of the guitar playing that accompanies the popular itinerant story-teller in China, such as may be heard in the Odeon record A 20455. The playing is rapid, the cross-accentuation complex. Given a different orchestration, it would be perfectly familiar to us as a piece of unusually hot jazz.

In Africa the 3 3 2 unit is a meter widely employed by the Arabs, and we find it constantly recurring in the music of various Negro groups that have come in contact with Islamic culture. In Latin America it supplies the rhythmic basis to music with "Negro influence" such as the rumba, conga, batacada, son.



These patterns can only be described as Negroid with reservations. They are a far cry from the wild tumultuous drumming of the primitive African groups that are to be heard, for example, in the Roosevelt or Boulton recordings. Transcriptions published by investigators like Hornbostel, Curtis-Burlin and Kirby demand an altogether different analysis. Rhythmic units of $3/2$, $6/8$ and $9/8$ are frequent. In the sometimes elaborate polyrhythm we get little feeling of interplay; the patterns tend to establish all the more firmly a single regular pulsation. Their energy is purely cumulative. The underlying rhythmic impulse, on the other hand, of the different examples given here is based on disturbance and restoration of balance. It may take place within the bar; it may find its solution only at the end of an extended phrase. Purely quantitative, this rhythm invests the music with a purely abstract excitement. Splitting the bar into fractions and giving each beat the same stress-value, it eliminates all possibility of the expressive or pathetic accent. Therein lies its strength and universal appeal.

The immediate object of this brief survey has been to point out one or two facts that are not yet fully realized. The rhythmic patterns we have been discussing are not unique to our jazz but have a wide distribution; in some countries they are the core of the music. By applying the magnifying glass to the march-music of Bali we can read a case-history of motor-impulse and musical expression. It cannot help but widen our conception of polyrhythm. The widespread appearance of a rhythmic impulse that animates so much of our own music definitely suggests at least its universality and antiquity.

III

I never could get the Balinese to listen thirty seconds to any record containing culture-music of the West. "What noise!" they would exclaim. "Like wailing! And where is the beat?" But they would listen to one jazz record after another. They found them grotesque but comparatively intelligible. They particularly liked Ethel Waters' *Shake That Thing* and *The Peanut Vendor*.