

THE METRIC SYSTEM...FOR SONGWRITERS

Part II: White Space...the Final Frontier

By Bill Pere

In the last article, we discussed the importance of aligning the syllable, rhetorical and musical accents in a song. The final consideration is one which has a profound effect on a lyric but is frequently not given attention as a discrete factor when writing a song, because it's 'invisible' -- white space, i.e., the 'empty' space between syllables of a word, or between one word and the next. Why is this important? To answer this, think again of the major difference between poetry and song lyrics. In reading poetry aloud, when the reader pauses for a breath or for a comma, or stops for any reason, time is on 'hold' until the reading resumes. In a song, however, every pause in a lyric, and in fact every tiny space between one syllable and the next must contend with the fact that underneath the words, the musical pulse continues to cause time to march forward. Even if the music pauses, the listener's mental metronome continues to tick, expecting the music or words to come back in at a particular pulse in time. Thus, as far as a song is concerned, there is no such thing as dead space.

Now let's look at how this affects lyrics. Suppose you have paid careful attention to the metrical structure of your lyric, and you've got everything absolutely perfect. All the accents line up, the syllable counts all match, and you're ecstatic. Given that degree of crafting, you would think it impossible for that lyric to still sound 'off' or unnatural. Not so. Let's go back to our well-worn umbrella example:

SIT- ting ON a ROT- ten STUMP
um- BREL-las FALL and MAKE a THUMP

Saying this rhythmically but naturally gives us the musical alignment we arrived at earlier, i.e.,

4 + 1 + 2 + 3 + 4

SIT- ting ON a ROT- ten STUMP
um-BREL-las FALL and MAKE a THUMP

But, suppose you as a lyricist gave these fine lines to a composer, and the composer decided to use a melody which subdivides each musical beat into three instead of two. The result:

4 + a 1 + a 2 + a 3 + a 4 + a

SIT- ting ON a ROT- ten STUMP
um- BREL- las FALL and MAKE a THUMP

Since each of the three subdivisions are of equal duration, and given that each of the '+' subdivisions (the "and's") are rests, what happens here is that the space between the syllables starting on the main beats (the numbers) and the next syllable, is twice as much as the space between those starting on the third subdivision (the 'a') and the next syllable. This is a typical 'swing' rhythm, and the perception is that the time given to each syllable alternates in a 2 to 1 ratio i.e., the syllable "sit" has twice as much 'room' to be said as "-ting". In natural speech, the word 'sitting' is never pronounced this way. The two syllables receive equal time. The word "rotten"

never receives twice as much time on the first syllable as the last. In the phrase 'rotten apple', all four syllables get equal time, with no open space (rests) between any of them. In the spoken phrase 'rotten kid' (or rotten stump), there could be a pause (white space) between -ten and the next syllable, or a pause after 'kid', depending on the context of the sentence, but never between 'rot' and '-ten.' That is totally unnatural for that word. Thus, to force words which usually take equally spaced syllables to 'space out' into wide and narrow spaced configurations will inevitably make them sound wrong.

Of course there are thousands of songs that use 'swing' time and other types of tuple meter (subdivisions into three) which sound perfectly normal, and in fact, would sound strange if fit to duple meter (subdivided into twos). To clearly understand what's at work, consider two words:

'tintinabulation', and 'tatterdemalion' .

When divided into syllables, both have six (tin-tin-a-bu-LA-tion; tat-ter-de-MA-li-on). However, when spoken naturally, "tintinabulation" takes much longer to say than "tatterdemalion". Try the sentence "The ship shone like a tatterdemalion under the tintinabulation of the stars". (This is not meant to be a good example of lyric writing, because in fact it's metrically lopsided).

In addition to the time difference in saying the two six-syllable words, it also worth noting that you are forced by the natural flow of the language to insert a rest between "ship" and "shone". This is true of most combinations of adjacent syllables, each of which is a primary accented syllable, (e.g., RED RUBber Ball; SONG SUNG BLUE; BIG GIRLS DON'T CRY; TWO STORy House; WARM SUMMer evening.; TRAIN BOUND for nowhere...) This points out a key difference between the analysis of foot and meter in poetry (called scansion) as opposed to song lyrics. In poetry, "ship shone" would be considered a foot (accent pattern) of LOUD-LOUD, which is called a spondee. It does not address the white space between the two words, as one must do in words set to music. In a lyric sitting on top of a moving musical pulse, "ship shone" is LOUD-rest-LOUD (an amphimacher), and thus takes up three equal musical pulses. (Those three pulses could be part of a duple or tuple meter, depending on what the rest of the words are, as long as they are spaced evenly). If written on a lead sheet, they would likely be written as two eighth notes, but the articulation (the degree of separation between successive musical notes) would be more like a sixteenth note, a sixteenth rest, and another sixteenth note (or eighth note, depending on what follows the word "shone").

Analyzing lyrical white space is analogous to musical articulation, where notes may be written without any clearly defined space between them (legato), but may be played stacatto (separated), leaving gaps between them. Those gaps have definite values which cannot be ignored, and in fact, today's computerized sequencers and music notation software will pick up very tiny gaps between notes and show them as musical rests (This is not desirable for creating printed music and is suppressed in that case, but it can be useful in analyzing lyrical articulation).

With current music technology, it is easy to analyze what's happening in a spoken or sung phrase. By speaking words into a sampler or computer and then viewing the sound wave, one can identify each syllable and find its exact relationship in time to the other syllables, since time and length are directly proportional. The reason for the time difference in saying the two six-syllable words is a result of the fact that "tintinabulation" is naturally in a tuple meter (the syllables alternate lengths in a ratio of two to one), whereas "tatterdemalion" is naturally spoken with the syllables of equal length and spacing. Try saying "tintinabulation" with all the syllables of equal length. Even if you put the primary accent correctly on the fifth syllable, the word sounds robotic. Alternatively, if you try to 'swing' the word "tatterdemalion", giving the syllables alternating lengths of 2 to 1, it becomes impossible to make it sound right. (Note that it would be possible to

use "tatterdemalion" in a tuple meter provided that the six syllables come on six consecutive pulses, i.e., 1-and-uh 2-and-uh. As long as the SPACING is equal, the word sounds right. You just can't make it 'swing'.)

It is important to note that white space is different than rhythmical triplets, where three notes are executed in the space of two. Triplets are three EVENLY-SPACED notes, thus, a triplet cannot accommodate a phrase which requires unequal spacing to sound right. A triplet may be used to accommodate an extra syllable or a particular accent pattern. The same may be pointed out when dividing four beats into even eighth note groupings of 3-3-2. This can accommodate ACCENT PATTERNS (feet) which have three pulses, but it does not address the difference between words requiring even vs. uneven open space between the syllables.

Our two six-syllable words above are obviously not the only two words with these characteristics. Every multisyllabic word or group of monosyllabic words has a natural rhythmic spacing which corresponds to either an even or uneven spacing. Thus, the final aspect of songwriting metrics is to be sure that the spacing of the syllables does not cause a naturally occurring even cadence to be sung over a swing rhythm, and vice-versa, for even if all accents are perfectly aligned, incorrect white space will make it sound wrong.

There is one qualification to this concept that needs to be highlighted. With very long note values or in slow tempos, or with very quick note values, or fast tempos, the awkwardness of a 3-on-2 or 2-on-3 tends to be much less pronounced (no pun intended), and may be acceptable to the ear. It is in the tempo ranges which are nearest to speaking speeds that the difference is most noticeable.

Why does this effect occur at all? When we speak, there are always accented syllables separated by a number of unaccented syllables. If a poem or lyric has an absolutely regular meter all the way through, this problem wouldn't occur, but it is rare to have an effective lyric or poem which has absolutely regular meter. The first two lines from the song "Chimney Smoke", recorded by Harry Belafonte, show a perfectly regular meter:

(REST) there's a HOUSE on a HILL by an OLD will-ow TREE
with a FI- re place BURN-ing for MY love and ME (rest rest)

Again, it is important to note that the meter in a lyric must account for open spaces, thus the accent pattern is LOUD-soft-soft (dactyl), as opposed to the soft-soft-LOUD pattern (anapest) it would be if it were being analyzed as poetry. To say that in another way: grammatically, the phrasing is soft-soft-LOUD, but musically/rhythmically, it is LOUD-soft-soft.

These lines have nine groups of LOUD-soft-soft pulses making them very regular, and when spoken naturally, all the syllables are of equal length and spacing. Thus, if this lyric were given to a composer, 3/4 time might be the first thing to present itself for an easy fit. (NOTE: in 3/4 time, each of the 3 beats is subdivided into two, thus it is a duple meter, 'even' feel. If 3 beats are subdivided into 3, then the resulting tuple meter is 9/8, which is often called 3/4 with a 'swing'. See the table of musical meters at the end of this chapter)

In the more complex and irregular lyrics of today's popular songs, the grouping of loud and soft accent patterns i.e., the feet, are not always the same from line to line, or even within a line. This is certainly the case in spoken language as well. Thus, in normal speaking, accented syllables can turn up with any number of unaccented syllables between them. In conversing, we perform some amazing unconscious acrobatics. If you have ever played "kick the can", consider what

happens as you walk toward the can and prepare to kick it. You find yourself unconsciously adjusting the length of your steps so that the 'kick' falls at the right part of your stride. The 'kick' is like an accented syllable, and the steps leading up to it are unaccented syllables. We continually, but unconsciously, adjust the spacing between syllables to make the accents fall at the right points in our speaking rhythm. In "tatterdemalion", the primary accent is on the fourth syllable with a secondary accent on the first, while in "tintinabulation", the primary accent is on the fifth syllable with a secondary accent on the third. This is the major factor contributing to the big difference in the way these words flow.

A final example to consider:

Jack in the Box Pizza and Beer
 Jack in the Box Beer and Pizza

Both phrases have exactly the same syllables and words, the only difference being the order, which in turn means a different arrangement of accents. I stopped 10 people at random in a busy hallway and asked them to read the phrases. What commonly emerged was:

LOUD-soft-soft-Loud LOUD-soft soft-LOUD
 LOUD-soft-soft-Loud LOUD-soft LOUD-soft

The simple reversal of the two last syllable stresses causes a significant difference in the way we have to adjust our speaking stride to hit the accents. (The word "box" is a secondary accent, in that it is louder than "in the", but softer than "Jack". Secondary accents are important because they can, in many cases, work properly on either an accented or unaccented musical beat and give a vocalist more freedom of enunciation. In writing the accent pattern, a secondary accent can be written as either "Loud" or "sOFT", depending on how it is interacting with the musical accent).

If fitting the above phrases to music, we would end up with something like:

LOUD-soft-soft Loud-(rest-rest) LOUD-soft-soft LOUD-(rest-rest)
 JACK in the Box PIZ- za and BEER

LOUD-soft-soft-Soft (REST-rest)- LOUD-soft-LOUD-soft (rest-rest-rest-rest)
 JACK in the Box BEER and PIZ- za

In either case, the words "in the" are always spoken faster than "BOX BEER" or "BOX PIZ-", because, recalling from above, adjacent accented syllables need a pause between them, while unaccented syllables do not. The first is clearly grouped in threes, the second in twos, and it seems that the first phrasing is more natural than the second phrasing. This is partly due to the fact that the third syllable, "the" can never have an accent. When grouped in threes, the third syllable is normally unaccented, and the whole phrase is a symmetric grouping of dactyls (LOUD-soft-soft). But in the sequences of two, the fact that the third syllable cannot take an accent and the reversed accents in the second half makes the whole phrase asymmetrical and less flowing.

Most phrases, can be forced to fit, but like forcing a rhyme, the result is not very effective. The natural cadence of most phrases in language is a mixture of twos and threes, and is totally without symmetry or pattern. Thus, another task of the lyric crafter is to find words which not

only say something clearly and colorfully and have properly aligned syllable, rhetorical, and musical accents, but which also have the right white space to flow with a natural feel.

This consideration has particular importance for collaborators and vocalists. A lyricist who plans to give a lyric to a composer to have it set to music must be very cognizant (either consciously or intuitively) of the white space. If a lyric contained words or phrases within a line that required different spacings to sound natural, the composer would have an extremely difficult, if not impossible time trying to construct a melody which is striking, instead of striking out. Such a melody would have to be very syncopated and choppy, and although collaborators with the skill of Burt Bachrach and Hal David can make such things work, it is not an easy task for most. A composer and lyricist who can analyze these kinds of problems and discuss them with a common conceptual framework can make their collaboration efforts be much more harmonious.

I have worked with many vocalists who do studio demos for new writers who are not yet masters of their craft. The result is a difficulty with phrasing which comes from unnatural white space. The vocalists realize there is a problem, but are often unable to pinpoint why a phrase just doesn't sound right. Highly skilled vocalists can often compensate by using a very rubato style (loose timing i.e., 'adjusting the stride'), but not all songs lend themselves to this, and not all vocalists are good rubato singers. This problem is common among songwriters who sing their own material and thus make intuitive phrasing corrections, and then try to give the song to a better vocalist for a demo. The vocalist, reading the sheet music and not having the same intimacy with the lyric as the writer, runs into white space problems and can't quite figure out what's wrong.

The final point to be made about this entire discussion of metrics is that the concepts presented herein are tools primarily for the analysis and correction of problems, not for the initial fleshing out of a song idea. If you feel your intuition leading you, follow it, and only when you have a final draft or have received some feedback indicating a problem should you look with the extremely analytical techniques presented here. By keeping the concepts of accent alignment and white space in your awareness as you craft a song, you'll find that your intuitive side and analytical side begin to work together simultaneously, giving you better end products with less grunt work. If you find a specific problem that needs specific analysis and correction, then let the toolkit come to the forefront of your awareness and try a purely analytical approach. Just as it is possible to overproduce a song, it is possible to overanalyze a song. As with most things, finding the right balance for yourself is the key to maximizing your efforts. If you find that you have absolutely no facility or desire to analyze syllables and accents and spaces, then by at least being aware of its importance, you can seek out a colleague or collaborator who can do it for you.

TABLE OF COMMON RHYTHMIC METERS:

- 4/4 -- (ONE-and TWO-and THREE-and FOUR-and) Four counts per measure, each subdivided into two (duple meter) i.e, quarter notes divide into eighth notes, and eighth notes divide into sixteenths, etc. Triplets put three evenly spaced notes in the space of two. This meter cannot swing.
- 3/4 -- (ONE-and TWO-and THREE-and) Three beats per measure, each subdivided into two. All spacing is even, with no swing.
- 6/8 -- (ONE-two-three FOUR-five-six) Six counts per measure, making two groups

of three. This is really equivalent to 2/4 time where each beat is subdivided into three. Because it is usually used at slower tempos, beats two and five are either not rests, or if they are, the 'swing' effect is not perceived because of the slow tempo.

12/8 --(ONE-and-uh TWO-and-uh THREE-and-uh FOUR-and-uh) Twelve pulses per measure, usually counted as four groups of three. This is the result if 6/8 time (above) is speeded up to a fast tempo, or if 4/4 time subdivides every quarter note into three instead of two (i.e., a triplet on every beat). This is typical 'swing' rhythm, when the second pulse of each group of three is a rest, creating a spacing effect of 2 to 1.

9/8 -- (ONE-and-uh Two-and-uh Three-and-uh) Nine pulses per measure, usually counted as three groups of three. This is typically used for a swing effect in what would otherwise be 3/4 time. Note that beats two and three are usually secondary accents, softer than the downbeat.

There are of course many other unusual timings such as 5/4, 7/4, etc., but these are infrequently used in pop music (You can hear 5/4, 7/4 and 11/4 in the rock opera "Jesus Christ, Superstar") It is important to note that in most cases, these kinds of rhythms are alternating groups of the simpler rhythms given above, e.g., 5/4 is usually 6/8 plus 2/4; 7/4 may 4/4 plus 3/4; etc.

It is also important to note that on sheet music, the rhythms which use subdivisions of three are often written using subdivisions of two, with dotted notes. This, however produces a three to one ratio instead of the desired two to one. It is assumed that a performance instruction saying to 'swing' will be correctly interpreted by the performer, who must then mentally convert the 3-to-1 ratios to 2-to-1. If you see this, realize that the piece is really in 12/8 if the music says 4/4 or 9/8 if the music says 3/4. And if you are writing sheet music or having it written for you, or if you converse with collaborators, you do yourself and your music a great service if you say 6/8, 9/8, or 12/8 when you mean it, not 2/4, 3/4 or 4/4 with 'swing'.

TABLE OF COMMON LANGUAGE ACCENT PATTERNS (feet)

Note: Since we are dealing with Lyrics as opposed to poetry, these must be considered in relation to musical patterns. Thus, accent patterns which begin with a LOUD syllable must also begin on the first pulse of any beat, or fall on a syncopation. A foot which begins with a Soft syllable cannot begin on a syncopation and must begin on something other than the first subdivision of a beat, creating an anacrusis, which leads up to the accent (i.e., 'kicking the can', as described above). Also important to note is that the table given here covers all the feet typically found in poetry or spoken language. However, when considering feet as being aligned with musical accents, accounting for rests and white space, a lyrical phrase may not exhibit the same pattern as that same phrase with no music involved. This shown in the first example below, "a big balloon", which when spoken, requires a pause between "big" and

"bal-". In poetic meter, that pause has no significance, but in lyrical meter, that pause takes up a musical pulse a forces the phrase to swing. Finally, note that only in patters where two LOUD syllables are separated from each other by at least one Soft syllable (or rest) can there be a swing. Consecutive primary accents cannot swing. (Swing implies a spacing ratio of 2 to 1.)

TYPE	PATTERN	EXAMPLES	SPACING AND TIMING
	(S=soft, L=loud)		
IAMBUS	SL	a big balloon	(swing) 12/8
		ability to sing	(no swing) 4/4
TROCHEE	LS	tintinabulation	(swing) 12/8
		once upon a mattress	(no swing) 4/8
ANAPEST	SSL	in the still of the night	(no swing) 6/8
		there's a light in her smile	(no swing) 6/8
DACTYL	LSS	shimmering city of hope and a	(no swing) any tuple
		climb to the top of a mountain and	(no swing) any tuple
AMPHIBRACH	SLS	horrendous arrangement	(no swing) any tuple
		together forever	(no swing) any tuple
AMPHIMACHER	LSL	Back to back (rest) side to side	(swing) 12/8
		Send a bright star to me	(no swing) 6/8
BACCHIUS	SLL	a big jerk with brown eyes	(no swing) 4/4
		the big car of bright chrome	(no swing) 4/4
ANTIBACCIUS	LLS	Come throw a big ball to	(no swing) 6/8 or 3/4
		Dark night with weird sounds that	(no swing) 6/8 or 3/4
CHORIAMBUS	LSSL	Flowers will bloom year upon year	(no swing) any tuple
		(pause required between bloom/year)	
PAEON	LSSS	Vegetable (VE-ge-ta-ble)	(no swing) 4/4
SPONDEE	LL	Hot Fun; loud noise	(no swing) any duple
PYRRHIC	SS	of a; to the; and a;	

(Pyrrhic is not applicable to lyrics, as there must always be a musical accent somewhere in a foot)

We have just gone through a long and sometimes technical discussion of the intricacies of fitting words to music, but as with all guidelines, techniques and tools, it becomes important to have a proper perspective on when they are essential and when they are optional. Remember that this

discussion centers primarily on popular song forms wherein the writer's intent is to convey an idea, emotion or message through the lyrics. In those cases, all metrical considerations are essential. Ballads and show tunes fall largely into this area, because the lyrics are often narrative or conversational. To see the contrast between when these guidelines are and are not applied, think of some common song genres where the primary purpose is to allow a group of untrained singers to sing along, e.g., Church Hymns, or Christmas Carols (which are really Church Hymns). The most important element in Church Hymns is to have an exact syllable count so that the melody is precisely the same from verse to verse, making it easy for an untrained choir and congregation to sing. Look at the lines in the second verse of "Joy to the World" (the Christmas carol, not the Three Dog Night song): Joy to the World, the Savior reigns Let men their songs employ While fields and floods, rocks, hills, and plains Repeat the sounding joy...

Here, the required white space between two consecutive accented syllables "rocks" and "hills" is absent, smashing those words together to produce "rock hills". If "rocks" were one eighth-note sooner, there would be exactly even white space between "floods", "rocks", and "hills", which matches the normal speaking rhythm, but then the corresponding line in the first verse, which is correct as it stands (Let every heart prepare him room), would be out of sync. (Typically with church hymns, the first verse is written first, and then the subsequent verses are forced to match it.) The syllable counts of that line in each of the verses match exactly, making for easy singing, which is why it has received more 'airplay' and 'live performance' than anything any of us have ever written, but wouldn't it be nicer to sing if it didn't have "rock hills" in it? In "The First Noel", we encounter the opposite problem, i.e., too much white space:

The First Noel, the angels did say
Was to certain poor shepherds in fields as they lay;
In fields where they lay keeping their sheep
On a cold winter's night that was so deep...

I'm sure you picked the third line as the offender. The natural spoken pause would fall between "lay" and "keeping", but the music forces an inordinate amount of white space between "they" and "lay". Despite this and the several very wrenched accents in the fourth verse of this carol (in HIS pre-SENCE), it is still a widely sung song, but I highly doubt that a song written like that today could become a standard of the genre. Having written a great deal of church music myself, I find that the constraints imposed by trying to get all the metrics correct and still have interesting, meaningful lyrics and melodies is an extremely difficult task, but is incredibly satisfying if achieved.

In the genre of children's music, all the points of the previous discussion apply as well. Some of the primary goals of children's songs are to entertain, to develop basic music skills, and/or to educate children about something through the lyric content. Children may not yet be consciously sensitive to misplaced accents or white space, and thus are a very forgiving audience. However, they are still being sent subtle messages about what makes up a song, and should the day come that they may want to write their own, they'll think it's okay to bend words into unnatural forms.

No matter what your ultimate goal is for a song, and no matter what the style, there's no reason not to strive for making it the best it can be. So if as a songwriter you're still green and it gives you the blues and makes you see red and yell "Oh!", attention to white space and metrics will help you write songs that can put you in the black.

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