POLYRHYTHMS

Part 3

Diving head first into complex Polyrhythms.
Norman Weinberg avoids the bellyflops.

DURING THE PREVIOUS two installments of this column, we've covered the performance of polyrhythms in the flavors of 3 against 2, 4 against 3, and 5 against 3. This month, we'll apply similar techniques to dive into some of the more complex polyrhythms. But first, let's take a look at a type of polyrhythm where a number of notes are superimposed on top of two other notes – in other words, anything against two.

Whenever an even number of notes is performed against two notes (like 4:2, 8:2, or 10:2) the larger number is broken down into two equal parts. For example, the polyrhythm of ten against two will break down into two groups of five notes each.

Take a look at **Figure 1** to see how a few of these polyrhythms might appear. In the first four measures, the faster notes are designed to take place in the span of a complete measure. These rhythms are going to be set against half notes in the bass drum (this is where the "against two" part comes in). Even though the figures were written to fill up a complete bar, there is no reason why the quicker note values can't be set against two quarter notes, or even two eighth notes (as in the last measure of the figure). In each case, the format is the same. Half of the faster values are laid on top of the first note, the other half is laid on top of the second note. Simple enough.

But something different occurs when the quicker rhythm is an odd number instead of an even number. Take the polyrhythm of three against two as an example. The number "three" can't be divided into two equal parts using whole numbers, so it has to be broken up by using fractional numbers. Here comes the tricky part, so stay with me. Since rhythm is nothing more than marking off sections of time, it's just as easy to mark off one and one-half sections as it is to mark off one or two sections.

So far, so good. As you look at the first measure of **Figure 2**, notice that the first two triplet notes will be played before the second half note of the bass drum. I guess that you could say that the "larger half" of the rhythm lays on top of the first note and the "smaller half" lays on top of the second note. Does this seem a little weird or what? Well, keep in mind that the "smaller half" doesn't actually get played on top of the second note. Instead, it lays somewhere inside the second note's value. The trick is to realize that equally dividing an odd number grouping will result in more strokes occurring within the first division. In fact, the second half of the rhythm will start exactly between the "larger half" and the "smaller half."

To get a firmer grasp of what I'm talking about, imagine the face of a clock. Now, let's say that someone asks you to mark off each consecutive minute by hitting a drum. It would then be an easy matter to play a stroke whenever the second hand passed across the 12 o'clock position. Next, you're asked to mark off every consecutive minute and a half (performing a three against two rhythm). No problem. You start when the second hand reaches the number 12 by striking the drum. Then you wait for the second hand to pass through the 12 and strike the drum for the second time when it reaches the six o'clock position. To mark off the next 90-second section, you would wait for the second hand to pass through the 12 o'clock position and then strike the drum at the beginning of the fourth minute (this starts the whole process over again).

If this still seems a little foggy, take a look at **Diagram 1**. The numbers above the clocks indicate the beats. The first set of diagonal bars below the clocks show the length of each minute, while the lowest set of bars delineate each 90-second grouping. The point I'm trying to make is that the second hand is going to pass through the 12 o'clock position twice for the first two strokes, but only once more during the second division. (Author's note: If you think this is a ►

difficult concept to grasp, try explaining it to someone else! Then again, maybe that's why you haven't read an article on this topic before.)

As you look at the other measures in Figure 2, you'll see that each of them has more strokes before the second division than after. Again, just like in Figure 1, these rhythms can be set against two quarters, two eighths, or even two sixteenths (the last would require either a slow tempo or great chops!).

We all know that playing polyrhythms

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increases the amount of tension present in the music. Polyrhythms can be a good choice when you're trying to come up with a truly kinetic groove, or a fill that creates such a whirlpool of energy that it simply must resolve. But, in today's contemporary sound, polyrhythms such as 3:2, or even 4:3 are becoming so common that they're starting to lose their uniqueness. To create some real turmoil, something drastic is called for.

So, what would you be interested in playing? How about nine in the time of four? If you've been following this series, you know how to go about solving the puzzle. First, find the common denominator. Nine times four results in thirty-six. Second, find some kind of measure that can be divided into thirty-six equal parts. How about playing sixteenth notes in a meter of 9/4? Another possible solution would be playing sixteenth triplets in a meter of 6/4. Let's use this last option (there is a method to my madness).

Figure 3 shows how this particular polyrhythm would be constructed. In the first bar, you can see that the entire measure is divided into thirty-six equal portions. In the second measure, the notes with the x-style noteheads indicate the notes that need to be struck in order to divide the bar into nine parts (every fourth note). The third measure has diamond-shaped noteheads showing how to divide the bar into four parts (every ninth division). When you put the two rhythms on top of each other, you'll end up with something like the fourth measure of the figure.

But wait, let's get real for a second. How many times a night are you asked to play a tune that's in 6/4 time? And even if your song list does contain a few little ditties in this meter, do they go slowly enough for you to comfortably subdivide each count into six parts so that you can accurately split the bar into nine equal divisions? Probably not. Is there an easier way? Yep! Can this polyrhythm be related to a bar of common time? You bet! Is life at the drumset always this complicated? Not if you know a few tricks.

Tricks of the Trade

What about building this rhythm on top of quarter note triplets? If you've been a regular reader of the *Reading Rhythms* column in this magazine, you'll remember that quarter note triplets are used to divide a half note into three equal parts. For those of you haven't been keeping up, **Figure 4** demonstrates how quarter note triplets are performed by playing every second eighth note triplet. Once the value of the half is divided into three parts and the sound of this rhythm is in your head, it's easy to divide each of

Diagram 1.

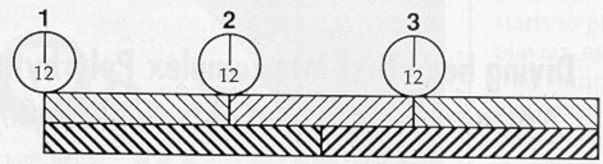


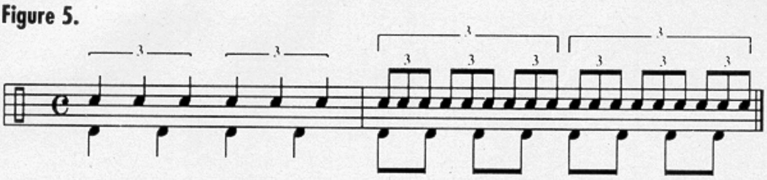
Figure 1.

Figure 2.

Figure 3.

Figure 4.

Figure 5.



All figures in this column were produced using Finale, courtesy of Coda Software.

these larger divisions into three smaller divisions.

Take a look at **Figure 5**. When performing the second measure, you're actually playing a rhythmic idea called "nested triplets." Nested triplets occur whenever you take a triplet rhythm, and play triplets within each of those tripleted note's values (it's a little like wheels within wheels). You can easily perform nine notes within a given time span by playing nested triplets based on different values. Playing triplets on top of quarter triplets will result in nine notes for each "normal" half note. Playing triplets on top of eighth triplets will give you nine notes in the space of a "normal" quarter.

But wait, there's more to this concept than meets the eye! If you can play triplets inside of triplets, why not nest a group of four, five, or even seven notes inside of triplets? Well, you can! In fact, you can even bypass the triplet idea completely and nest any value inside of any other value.

Playing five notes within a half-note triplet will result in a polyrhythm of 15:4. Playing four notes inside of a five note quintuplet figure will give you twenty divisions. How about laying septuplets (seven note figures) on top of triplets? The end result would be twenty-one notes!

Get the idea? It's not always necessary to subdivide down to thirty or more divisions to play some hip polyrhythms. This idea of nesting rhythms should keep you busy for a while. Next month, we'll explore something called "metric modulations." In the meantime, think about how many other polyrhythms can be created by nesting one rhythm inside of another. ®

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