

RHYTHM

OUTLINE

Focus

- ▶ The exploration of phrasing in various speeds per pulse
- ▶ Ingesting rhythms by reciting / saying material to be played through the use of nonsense syllables / mnemonics
- ▶ Using “rhythm scales“ as a tool for understanding phrasing, polyrhythms, “odd rhythms“, metric modulation
- ▶ Gaining independence within your bones and the ability to feel deeply grounded in The Big Pulse while comfortably playing any rhythm
- ▶ Making rhythms more poetic / musical by getting inside the shape and nuance of the rhythm through reciting
- ▶ Extending the ability to memorize longer phrases
- ▶ Freedom from repetitive phrasing ruts through the combination and permutation of groupings and speeds
- ▶ Staying away from the pronounced *One* or downbeat of the bar to create long lines / phrases. This eliminates the feeling of bar lines, making the *One* more elusive and opens the rhythm to being one long syncopated phrase.

For

- ▶ For all musicians, composers and educators of all styles of music

Elements

- ▶ Nonsense syllables
- ▶ Rhythm scales
- ▶ Techniques for grounding The Big Pulse while reciting the rhythm scales through the use of a physical time reference / body movement such as keeping tal, conducting, stepping or dancing

Additional Tools

- ▶ Silence
- ▶ Permutation / Combination
- ▶ Metronome

Application

- ▶ For interpretation and a deeper understanding of charts and scores which are written in western notation
- ▶ Interpretation and a deeper grasp of music that is being taught orally and needs to be memorized
- ▶ Soloing
- ▶ Improvising
- ▶ Composition

Singing music (rhythms and melodies) will deepen your feel for rhythms and increase your ability to hear music. By feel I mean the actual state of being very comfortable and relaxed with the rhythm you are dealing with (either singing or playing). Learning to sing the melody of any piece of music you are to play has been recommended many times by many people and is always good advice. Learning to sing rhythms is equally important.

Dividing and subdividing space and time and singing these subdivisions, with mnemonics or nonsense syllables, can be a very valuable form of practice and is one of the most proven ways for gaining a deep internalization of music (rhythm / melody). It will also increase your ability to memorize rhythms, patterns, parts, etc.. Practicing this way can be beneficial regardless of what style of music you are playing. It is equally helpful in situations involving strictly written music or totally improvised forms, and all areas in between.

While reciting the rhythms it is very important to keep some form of "physical time reference" to show the large skeletal frame or shape of the space / time we are dividing. Some examples of "physical time reference" are conducting, keeping tal (the Indian system for maintaining a particular time cycle and showing the stressed and unstressed beats of the cycle by clapping or waving the hands on each beat) and stepping.

By stepping I simply mean a repetitive right foot / left foot body metronomic movement that will clearly mark the pulse in the space we are working with. Even if you are familiar or comfortable with conducting or keeping tal, I feel that the idea of moving your hands and feet while saying (reciting) the rhythms is worth checking out as it gets the whole body moving, feeling and marking time while reciting.

The brilliantly innovative percussionist and composer John Bergamo has constructed a "rhythm scale" which is an ideal tool to use for reciting the subdivisions of a large pulse. These divisions may also be considered speeds per pulse / beat.

Subdivisions 1 to 8 per pulse
(Main pulse or down beat) =Ta

1. Ta
2. Ta Ke
3. Ta Ke Te
4. Ta Ke Te Ne
5. Ta Ke Te Ne Ge
6. Ta Ke Te Ne Ge Ne
7. Ta Ke Te Ne Ge Ne Te
8. Ta Ke Te Ne Ge Ne Te Ne

1.Ta = one syllable
2.Ta Ke = two syllables
3.Ta Ke Te = three syllables
etc.

When first working with this material I would suggest using a metronome.

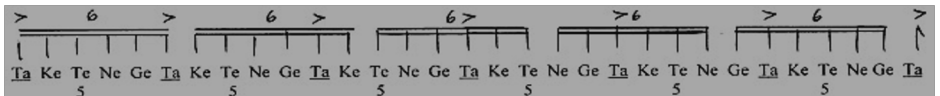
The Rhythm Scale and all examples and exercises included use the speeds of one to eight but of course any pulse can be subdivided from one to infinity.

- ▶ Set the metronome to a slow, comfortable tempo around 50 B.P.M.
- ▶ Start "stepping", alternating right foot to left foot (RLRL...etc.), giving one step to each beat of the metronome.
- ▶ Each step and beat from the metronome should be considered to be the main pulse.
- ▶ Together with "stepping" (RLRL...) begin reciting the divisions from 1 to 8 then 8 to 1 and then "out of order" (i.e. speed 2 to 7 to 3 to 8 to 5 ...etc.) while keeping the alternative footing solid with the beat of the metronome.
- ▶ You may want to add your hands clapping double time to the pulse of your feet. This will help to make the pulse, or downbeat of the metronome and feet, feel stronger. This will also show you how these speeds lay over two beats, which will help in understanding such polyrhythms as 7:2, 5:2, 3:2 etc.
- ▶ Next, try reciting five (Ta Ke Te Ne Ge) and three (Ta Ke Te) in the speed of 4 and 8.



Reciting odd number combinations of phrases (such as 3 and 5) in even speeds (such as 4 and 8), while moving, can be helpful in breaking the common habit of always starting phrases on the down beat. Reciting these phrases will also help you to think of longer spaces before resolving a phrase which makes playing "over the bar line" more comfortable. Of course these ideas we have just worked with in the speed of 8 can be used in other speeds as well.

- ▶ Keep the metronome at 50-55 and continue stepping the same way as before, alternating steps with each beat from the metronome
- ▶ Recite in the speed of six (Ta Ke Te Ne Ge Ne) for each beat of the metronome with "TA" falling together with the downbeat. Always go for clear articulation with the reciting.
- ▶ Now, recite phrases of five (Ta Ke Te Ne Ge) while staying in the speed of six. In Western notation this would look like:



(Main pulse or down beat) =Ta

1. Ta=
2. Ta Ke=
3. Ta Ke Te=
4. Ta Ke Te Ne=
5. Ta Ke Te Ne Ge=
6. Ta Ke Te Ne Ge Ne=
7. Ta Ke Te Ne Ge Ne Te=
8. Ta Ke Te Ne Ge Ne Te Ne=

SHORTHAND

1. T
2. Tk
3. Tkt
4. Tktn
5. Tktng
6. Tktngn
7. Tktngnt
8. Tktngntn

Shorthand examples of patterns in the speed of 4

3355 = Tkt,Tkt,Tktng,Tktng

77774 =Tktngnt,Tktngnt,Tktngnt,Tktngnt,Tktn

583 = Tktng,Tktngntn,Tkt

Exercises in the speed of 3

Two 4/4 measures of 8th note triplets (24 units / notes)

- 55554 or “shorthand” $4 \times 5 + 4$
- 7773 or $3 \times 7 + 3$
- 7755
- 46464
- 4848
- 5748
- 625362
- 535353
- 5775
- 7575
- 5757
- 3366222
- 444363
- 462246

Four 4/4 measures of 8th note triplets (48 units / notes)

- $6 \times 7 + 33$
- $4 \times 64 + 8$
- $4 \times 83 + 4$
- $5 \times 36 + 3$

Exercises in the speed of 4

One 4/4 measure of 16th notes (16 units)

- 5533
- 7333
- 664
- 754
- 4453
- 8332
- 385
- 3553
- 3355
- 583
- 42244
- 45322
- 5542
- 5335

Two measures of 16th notes (32 units)

- 77774
- 4x5+4x3
- 755555
- 86864
- 853358

Four measures 16th notes (64 units)

- 6x46+4
- 88+4x75

The focus of the following form exercises is the ability to shift accurately and comfortably while shifting between various speeds per pulse. This means changing speeds directly on the one of the change with no hesitation while keeping the physical time reference of RLRL stepping solid and comfortable. All notes of the subdivisions should receive full even value with no rubato.

Speeds of 3/4/6/8 in an eight bar form. 3/6 = the speeds of 3 and 6.
4/8 = the speeds of 4 and 8. The numbers below the speeds are the groupings.

Be sure to keep the physical time reference. Keeping the tal (Indian time reference) is very helpful for keeping your place within the form.

The eight bar form is:
One time the speed of 3 plus two times the speed of 8 plus two times the speed of 6 plus one time the speed of 4 plus the brackets ().

Eight Bar Form

$\begin{array}{r} 3/6 \\ \hline 7773 \\ 4/8 \\ \hline 5533 \end{array}$	$\begin{array}{l} 1 \times 3 \\ 2 \times 8 \\ 2 \times 6 \\ 1 \times 4 \\ 1 \times (3+6) \end{array}$	$\begin{array}{r} 3/6 \\ \hline 625362 \\ 4/8 \\ \hline 3553 \end{array}$	
$\begin{array}{r} 3/6 \\ \hline 4848 \\ 4/8 \\ \hline 8332 \end{array}$	$\begin{array}{l} 3 \\ (246) \\ 3 \\ (462) \\ 3 \\ (552) \\ 3 \\ (2622) \end{array}$	$\begin{array}{l} 6 \\ (7755) \\ 6 \\ (5577) \\ 6 \\ (888) \\ 6 \\ (272733) \end{array}$	$\begin{array}{r} 3/6 \\ \hline 46464 \\ 4/8 \\ \hline 385 \end{array}$
$\begin{array}{r} 3/6 \\ \hline 5748 \\ 4/8 \\ \hline 3355 \end{array}$		$\begin{array}{r} 3/6 \\ \hline 5775 \\ 4/8 \\ \hline 583 \end{array}$	

$\begin{array}{r} 3/6 \\ \hline 8448 \\ 4/8 \\ \hline 583 \end{array}$	$\begin{array}{l} 1 \times 3 \\ 2 \times 8 \\ 2 \times 6 \\ 1 \times 4 \\ 1 \times (3+6) \end{array}$	$\begin{array}{r} 3/6 \\ \hline 3777 \\ 4/8 \\ \hline 2338 \end{array}$
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$\begin{array}{r} 3/6 \\ \hline 263526 \\ 4/8 \\ \hline 853 \end{array}$	$\begin{array}{l} 3 \\ (462) \\ 3 \\ (273) \\ 3 \\ (222222) \end{array}$	$\begin{array}{l} 6 \\ (46464) \\ 6 \\ (7755) \\ 6 \\ (54555) \end{array}$	$\begin{array}{r} 3/6 \\ \hline 7575 \\ 4/8 \\ \hline 3337 \end{array}$
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$\begin{array}{r} 3/6 \\ \hline 55554 \\ 4/8 \\ \hline 7333 \end{array}$	$\begin{array}{l} 3 \\ (444) \end{array}$	$\begin{array}{l} 6 \\ (35655) \end{array}$	$\begin{array}{r} 3/6 \\ \hline 535353 \\ 4/8 \\ \hline 358 \end{array}$
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<u>3/6</u>		<u>3/6</u>
73734	1 x 3	83832
	2 x 8	
4/8	2 x 6	4/8
<u>82222</u>	1 x 4	<u>556</u>
	1x (3+6)	
	3	
<u>3/6</u>	(2622)	6
	(272733)	<u>3/6</u>
82527	3	52278
	6	
4/8	(462)	4/8
	(5577)	
<u>3733</u>	3	<u>475</u>
	6	
	(222222) (54555)	

Many more exercises can be created from this material by exchanging the speed groupings of different exercises or by changing the order of the numbers within the groups.

Once the exercises become accurate and comfortable, try substituting the subdivision units / beats with unsounded beats. Of course it is important that you still feel the groupings and hear the syllables within your being, but instead of playing every note, replace some units / beats with silence.

Here we are working with an eight bar form but of course any size form can be used.

POLYRHYTHM

A polyrhythm may be defined as different rhythms or meters / time signatures played simultaneously.

Developing the ability to execute speeds per pulse accurately is essential in the understanding and performance of polyrhythms.

Here is an easy way to understand polyrhythms based on speeds per pulse. Polyrhythms are written as one number over or against another number as in 4 over 3, 3 over 2, 5 over 3, etc. Three simple steps can decipher any polyrhythm:

- 1) Establish the value of the bottom number.
- 2) Subdivide the bottom number using the top number to establish the speed of the subdivision.
- 3) Group the units of the subdivision using the bottom number.

Examples of polyrhythms

2 over 3

- 1) The bottom number is 3. This example has 3 quarter notes.
- 2) The speed is 2 (two 8th notes).
- 3) Accent the first note of every group of three 8th notes.



3 over 2

- 1) The bottom number is 2.
- 2) The speed is 3 with 8th note triplets.
- 3) Accent the first note of every group of 2 8th notes.



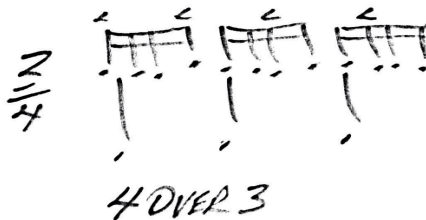
3 over 4

- 1) The bottom is 4.
- 2) The speed is 3.
- 3) Accent the first note of every group of 4 notes.



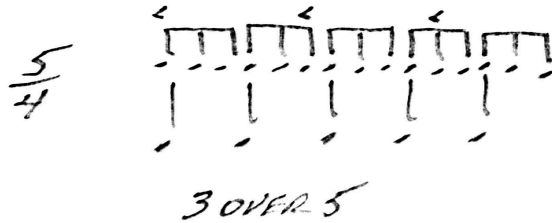
4 over 3

- 1) The bottom number is 3.
- 2) The speed is 4, which would be four 16th notes per quarter note.
- 3) Accent the first note of every group of three 16th notes.



3 over 5

- 1) The bottom is 5.
- 2) The speed is 3.
- 3) Accent the first note of every group of 5 notes.



4 over 5

- 1) The bottom is 5.
- 2) The speed is 4.
- 3) Accent the first note of every group of 5 notes.



NUTBUSTER by Mark Nauseef

Nutbuster utilizes concepts such as sub-division, cycles, reduction and phrasing / grouping in various “speeds per pulse”. The purpose of this article is to look at ways of using these concepts with a limited amount of melodic material which is made into modules of different sizes that can be stretched, squashed, sped up and slowed down while keeping a constant pulse.

These concepts can be heard at the highest levels of execution in Indian classical music (Hindustani and Carnatic) where these ideas are used to build long and complex structures filled with mathematical calculations and illusion. The simple examples of these concepts used in Nutbuster were “borrowed” from Indian classical music, with the greatest respect.

Melodically, this piece is based on a group of six notes (C,D, Eb, F#, G, Ab). As the piece only uses those notes, and groups them into recurring modules, parts of Nutbuster have been written as a formula / equation.

Writing with formulas containing modules can be useful when composing pieces that include permutation or repeating of the same material. Not only does it reduce the number of pages needed to produce the chart / score, but also becomes a good exercise for the player, as the most effective way in playing the piece is through memorization.

As the piece is under three minutes in duration, there is no time for the long development that happens in Indian music. The use of these Indian rhythmic mechanisms in Nutbuster is basic but gives an idea of how such concepts can be used in putting pieces together.

The “Info for Intro” and the “Info for B section” should be memorized.

The Elements

- ▶ *Cycles* – The intro, sections A, B, C and the ostinato are all in fifteen beat / pulse cycles. The D section is also in a fifteen beat / pulse cycle but “felt” and played in half time.

Points of interest concerning cycles

Section A - By keeping track of the 15/4 pulse through some means of physical time reference, such as keeping tal, a conducting pattern, stepping, etc., it is possible to perceive the same phrase in various ways as the reduction of the material places the “one” of the phrase in a different relationship to the pulse, each time the phrase repeats.

Sections B and C - Each equation is repeated three times in order to fill the space of the fifteen pulse / beat cycle(s) (one cycle for Section B and two cycles for letter C).

By keeping a two beat physical time pattern such as stepping RLRL...etc., keeping tal or a backbeat, it is possible to feel the same phrase in different parts of the beat / pulse with a completely different feeling as it crosses over the “two” rhythm or backbeat.

- ▶ *Reduction* – In section A (bars 1 - 11), a reduction is caused by eliminating phrases each time that the material returns to the low D to repeat the phrase played in bars 1 - 4. So, in bars 5 - 8, the material from bars 1 - 4 is repeated but drops or eliminates the last quintuplet. In the next two bars more material is eliminated, reducing the melodic line and leaving only the first bar of the A section (bar 11). Of course it is also possible to go the other way and build a composition through gradual expansion.
- ▶ *Subdivision and Speeds Per Pulse* – Sections B and C are built on the concepts of subdivision and speeds per pulse. Subdivision is shown by the numbers used in the equations in both of these sections.

The speed or rate per pulse in section B is four beats / units per pulse. The sixteenth notes which make up the cycle of fifteen large pulses are subdivided into groups of 5/16, 4/16, 7/16, 8/16, 3/16 (this includes sounded (played) and unsounded (rests) notes or beats).

There is also subdivision in section C. The subdivisions used in section C are played at the speed per pulse of three or triplet time.

It is very important that the player feels comfortable phrasing in groups of seven, five and eight beats while playing in the speed of three (triplets).

This is the essence. To phrase with any group possible, while feeling a “speed per pulse”.

In this simple example in section C, these small phrases have a different feeling and sound as they move across the pulse. This concept can get very serious and there is no better example than Indian classical music (Hindustani and Carnatic). Through permutation and combination of small phrases being played in various speeds per

pulse, there are enormous possibilities for building compositions.

As little as one five-note phrase when played in various speeds per pulse can be a wealth of information.

Also “borrowed” from Indian music, is the *tihai*.

A tihai is a rhythmic cadence containing a phrase which is repeated three times so that it finishes / resolves on the downbeat or “one” of the next material. There are exceptions to this in Indian music, where the resolution is not on the “one”, but the use of the tihai in Nutbuster, resolves directly on the “one”.

This simple form of tihai takes place during the last three bars of section A. (bars 12, 13, 14 of section A). It is also used as a signal from the soloist, to move to Section B. This happens on the ninth beat of the fifteen beat cycle (at bar three of the ostinato).

Although this is a simple example of a tihai, it is possible to see how the phrase that is repeated three times is perfectly

symmetrical in the way it works across the pulse.

As mentioned before, keeping a “physical time reference” of “downbeat” while reciting or playing, will allow the player to feel the sensation of independence as the phrase which is repeated three times switches between a downbeat and upbeat feeling.

Summary

- ▶ Rhythmic modules (with or without specific pitches)
- ▶ Cycles
- ▶ Subdivision
- ▶ Speeds per pulse
- ▶ Permutation / Combination
- ▶ Reduction / Expansion

You can hear a good version of "Nutbuster" on "The Old Country" with Howard Levy, Miroslav Tadic and Mark Nauseef on MA Records.

Nutbuster

Mark Nauseef

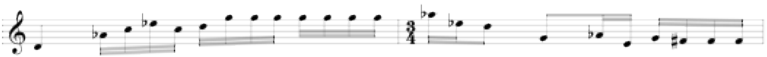
Info for Intro: 

$$\text{Intro: } 2x (2x \textcircled{8} + 3x \textcircled{5} + [3]^*) + (2x \textcircled{8} + 3x \textcircled{5} + [6]) + 3x \textcircled{5}$$

* a number in square brackets denotes a rest

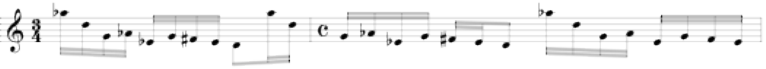
Info for "B" section: 



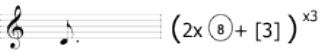
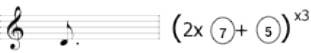
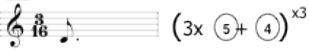





tihai:



B

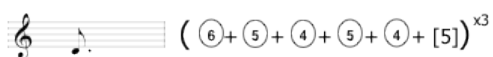
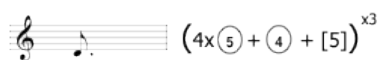
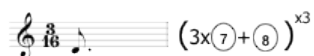


ostinato for solos:



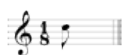
to signal the end of solo
play the tihai here

C in speed of 3



D (coda)

half time



PREPARATION FOR PRACTICE AND / OR PERFORMANCE

- ▶ Focused concentration
- ▶ Relaxed breathing
- ▶ Relaxed posture. Making sure there are no obstacles to the flow of energy such as having the shoulders raised unnecessarily, a bent neck or any other forms of body tension.

Music practice as a form of meditation is not a new idea and much has been written about cultures relating to music in this way, such as India with its raga / meditation connection. Any musician, regardless of degree of ability or experience, can use music practice as meditation.

The key is concentration. Focused concentration with complete attention to the situation whether it is with composed (notated, graphic, verbal, etc.) or completely free improvised music. This is not meditation in the sense of a transcendent state of “no mind” but a meditation of completely absorbed concentration.

This intense but relaxed concentration should have the music you are practicing as the single object of the awareness. As well as increasing your ability on your instrument through the benefits of focused / concentrated practice, you are also designing a sanctuary within yourself where you can go which is away from or outside your normal state of active mind. Over time the periods of concentration should become longer and deeper and easier to access.

Of course, access to a state of deep, concentrated awareness is also very valuable in live performance situations as well as practice not only to reap the riches deep within the sound but also to cut off / exclude the many other distractions which go along with live performance. These distractions could include certain acoustics, sound systems, lights, air (or lack of), audience (or lack of), etc. It does not matter if it's in your practice studio or in concert, the key is to develop a way of easy access into this sharp, clear, relaxed, awake, peaceful and concentrated state of mind. Here are a few ideas that may help:

- ▶ Relaxed posture. Making sure there are no obstacles affecting the flow of energy such as having the shoulders raised unnecessarily, a bent neck or any other forms of body tension.
- ▶ Start practice before you actually begin to play by being clear and focused on what you are about to do. Know exactly what material you are about to work on. Of course the exception to this would be free / spontaneous improvising, although any form of improvising also requires an alert state of mind.
- ▶ Prepare the area where you are to practice or perform so that you are comfortably situated for clear and focused work.
- ▶ Take a moment before beginning to play to do some relaxed breathing and release any tension in the body and also release the mind from any thoughts not pertaining to the work you are about to do.
- ▶ Once you are prepared and are comfortable to begin practice, the use of LSD is recommended. LSD meaning LONG-SLOW-DISTANCE.

Practice LSD (LONG-SLOW-DISTANCE) by establishing the amount of time you want to play a particular idea and go the full distance of time without changing the material. Make the period of time long enough so that the brain-muscle connection can be well trained and the idea / material can be burned into your being. When learning new material, start at a slow tempo so the material can be well understood through clear execution.

- ▶ Have respect for your instrument as it is not just a pile of wood, metal, strings, skin, etc., but is a vehicle that can bring you to an exceptional state of awareness and peace.
- ▶ It's yoga with music as the object / point of awareness.
- ▶ By making music practice not just something that you do to improve your ability with your instrument, but a destination, a focused, relaxed and concentrated state of awareness inside the music. This cultivation of attention makes music a place to create within as well as the product of creation itself.