The Art of Teaching and the Umbrellas of Time

By Jerry Leake

This two-part article provides general background on how I teach college-level students and how teaching led me to conceive of musical time in a visual graphic using "umbrellas."

PART I: THE ART OF TEACHING

Through teaching, I discover more about my own music. The college classroom is an open workshop where every participant has unique perspectives on what I introduce from week to week. Some students are percussion majors while others are non-drummers who take introductory classes on world percussion. The point is, everyone learns differently: reading notation (classical music) or a reliance on ear training (Suzuki method), perhaps from oral/aural language-based traditions (Africa/India), even kinesthetic approaches that combine ideas and action (author's "Harmonic Time" method).

I use all four methods to tap into the many learning channels, to provide different ways to describe the same material. I ask my students, "How many different ways can you get to the other side of a sequoia [giant tree]?" The obvious replies are "Go left" and "Circle right." Others add "Climb over it" and "Dig under it." A raised hand leads to a fifth approach: "You can go through it."

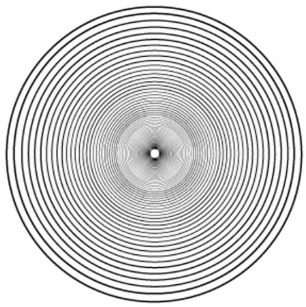
The metaphor leads to a key phrase: "The deeper the roots, the taller the tree." This brings music closer to nature, closer to the value of nurturing one single idea. Our goal as resourceful artists is to grow one idea into a tree of possibilities, with many branches and stability that cannot be shaken. Each idea is a seed that you plant in your garden of ideas. Through care, love, and devotion you tend to that idea/seed. You grow that seed, not into a blossoming flower or small bush, but into a sequoia of unshakeable possibilities. In your lifetime you will grow a forest of sequoias.

METAPHOR AND VISUALS

Metaphor and visuals are the fifth approach for tapping into the learning channels. Visual aids provide a unique doorway into a complex topic that a student may not understand. It might just be the lightbulb that connects random dots. For example: I (like others) use waves to describe the continuous flow of African bell patterns from point A to point Z.

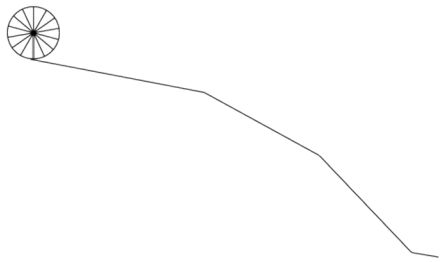


Whereas large circles containing increasingly smaller circles best describe the accelerating progression of North Indian classical music.



I compare the numerous parts of an African Ewe drum ensemble to a "solar system of planets" rotating around the sun (bell). Each planet/part adheres to the gravity of the sun while possessing its own unique gravity and perspective. I describe a spice rack of concepts that the improviser tastefully adds to the musical "stew." Or a toolbox of polished and organized tools to construct music in the moment. Or oceans that describe the need to "dive deep" and uncover the pearls (and clams) of taking chances. Clock metaphors describe large and small independent "gears" working together in different speeds and rotations: short cycles between two small gears, and larger cycles as multiple gears align.

On the board I draw the shapes of the *yatis* from S. Indian rhythm: "mridangam yati" (smaller groups of "cells" growing larger, then smaller; shaped like the drum), the "damaru yati" (larger, smaller, larger cells; an inverted shape of the drum). I refer to the progression of Time's Arrow (wave image), Time's Cycle (circle image), and the combination of Arrow and Cycle to explain how North Indian classical music develops from slow to fast. Shown below is a wheel to represent an Indian cycle. It has 16 spokes/beats set to the top of a hill (arrow). It rolls downward and forward, speeding up as it gathers energy. The golden spoke of beat 1 ("sam") moves so fast it is difficult to see and hear.



In my World Percussion class, I introduce South Indian patterns in 5, adapted to playing the tar frame drum using a lap-style technique. I begin discussing the "Umbrellas of Time" to explain my approach developed over twenty years of teaching and "self-archeology."

PART II: THE UMBRELLAS OF TIME

We now focus on a phrase in 5 from S. Indian music using the syllables "ta di ki na tom." There are several other ways the phrase can be rendered: ta di gi na tom / ta di ki ta tom / ta ka ta ki ta. Our series is subdivided into 2+3 by accenting the syllables "ta" and "ki" — TA di KI na tom. We will also use "Harmonic Time" stepping, clapping/sticking, and vocalizing to internalize musical time, groove, and mathematics in the entire body. This allows us to not just hear how parts combine but feel them on a deep and profound level. We need to get out of our head (intellect) and more into our body (groove) to feel complex, seemingly daunting patterns. The umbrella components shown below will help you step inside.

Stepping Sequence in 5

We first establish a side-to-side stepping movement to keep the "beat." Begin with the feet together. Beat "1" is marked by the right foot stepping to the side (not forward). The left foot steps inward for beat "2," left foot out for beat "3," right foot in for beat "4," and right foot

out for beat "5" (Example 1). Each beat is built using a sixteenth-note pulse, as indicated by the hash marks between beats. You can conceive this as a bar of 5/4 for a total of 20 pulse units (5 beats x 4 sixteenth notes = 20). This "1-bar cycle" will continue for three more cycles/bars until the right foot steps back out again at beat "1" (discussed later).

The syllables *ta di ki na tom* are positioned under each beat, establishing our "1-speed" (1 syllable per beat, "quarter note").

Solkattu Syllables

Example 2 represents the vocal layer for speaking the syllables *ta di ki na tom* in the same sixteenth-note pulse. As you can see, there are four sets of "syllable arcs" that will be spliced into our 5-beat stepping sequence. For now, become comfortable with the syllables and 2+3 accents: TA di KI na tom.

Combining Layers: 4 over 5 (4:5)

Example 3 combines the two layers of stepping and vocalizing to establish our 4 over 5 structure.

- Vocalizing 4 sets of 5 syllables = 20 pulse units
- Stepping 5 beats of 4 sixteenth notes = 20 pulse units

Notice in Example 3 that the beginning syllable (ta) of each "arc" shifts positions, moving forward in time by one sixteenth note. The phrase starts on beat 1, with the second arc beginning on the "e" of beat two, moving to the "and" of beat 3, and ending with the "ah" of beat four. In essence this is an expanded treatment of sixteenth-note theory: "1 e and ah."

Big Cycle

Example 4 takes our combined cycle from above and adds three more for a total of four cycles, forming a "Big Cycle." As we saw in Example 1, because we are essentially stepping in "4" (R L L R), we need an additional step to establish five beats. This means that each "small cycle/bar" will anchor to all four stepping positions, as shown in Example 4. Simply maintain your unified stepping sequence while speaking the syllables. You will see and feel the changing beat positions return to the right foot out for beat "1." At a medium tempo, a "Big Cycle" will take about 20 seconds to complete. You should feel a strong sense of "leaving home" (rhythm insecurity) before "approaching home" again as your right foot anchors to the Big Cycle downbeat. Success will result in a profound feeling of satisfaction.

In Example 4, A1 marks the first cycle "anchor point," A2 the second anchor, A3 the third, and A4 the fourth. Repeat the Big Cycle to absorb all tension and resolution points.

Adding Time Umbrellas

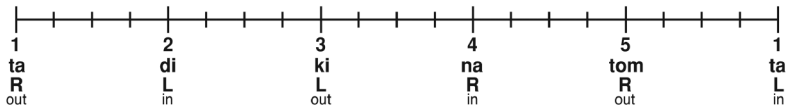
Example 5 reveals two sets of overlaying "Time Umbrellas." The small umbrellas mark the four anchor points of our internal single cycles (A1–A4). The all-encompassing large umbrella marks the Big Cycle (right foot out). As you render the exercise, your internal awareness will identify anchor umbrellas as significant events to be utilized in the context of actual music making. For example, each of the four smaller cycles can be marked as crash cymbal hits. The Big Cycle resolution, 20 seconds after starting, can be marked with a drum fill leading into the downbeat. With greater arranging possibilities, imagine a large gong marking the Big Cycle.

The total number of pulse units to the Big Cycle is: 5 steps/beats (1 small cycle) x 4 cycles (1 big cycle) x 4 (sixteenth notes) = 80 total pulse units.

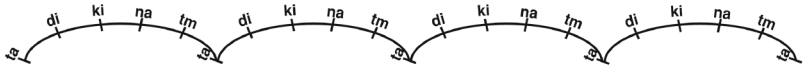
Internal Cross-Rhythms

It is possible to introduce other unique umbrellas inside the Big Cycle phrase. To that end we will explore a "3 cross-rhythm" (using a clap or stick) to create a completely different awareness. This is shown Example 6 with dashed lines. In Western notation the small dashed umbrella functions like a dotted eighth note. When a recurring dotted eighth note is played to a recurring quarter note, you have a

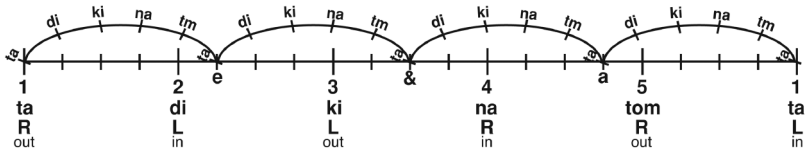
Example 1



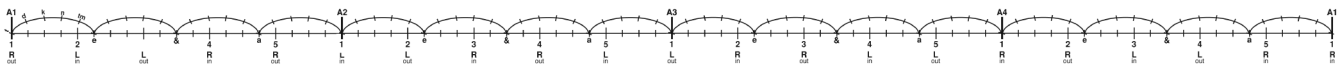
Example 2



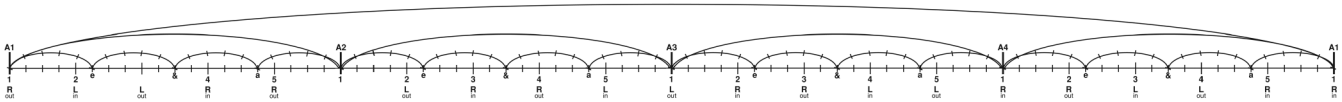
Example 3



Example 4



Example 5



3 over 4 polymeter (3:4). This is revealed in the first three beats of the phrase in Example 6. The larger dashed umbrella marks where the 4:3 comes together (every three steps/beats). The gears to this new "clock" are complex, as our previous Big Cycle has now tripled in size. Any time you play a three cross-rhythm to a binary pulse you need three sets of the phrase for all elements to land on "1." This "Grand Cycle" is so large that it exceeds our graphic, as seen by the unresolved dashed umbrellas at the end of the first "Big Cycle."

- 1 Big Cycle = 20 beats/steps = 80 pulse units
- 1 Grand Cycle = 60 beats/steps = 240 pulse units

3:4:5

What is fascinating about Example 6 is not only the immense size of the umbrella, but the fact that it establishes complex polymetric gears of 3 over 4 over 5 (or vice versa, depending on one's point of view). Let's check the facts:

- The stick/clap renders a "3" cross-rhythm (dotted eighth)
- The step/beat is in a continuous "4" pulse (sixteenth notes)
- The voice speaks "5" syllables: ta di ki na tom

In a medium tempo (as shown in the video) it takes approximately 60 seconds to complete the Grand Cycle with all three gears working together. You will feel a great deal of "leaving home" while wondering when (or "if") you will ever return to your origin. Deep cyclic awareness requires patience and "surrender" of all tension and anxiety. This will allow the gears to work on their own. Avoid getting in the way and second-guessing where you are in the beat, cycle, big cycle, and grand cycle.

CONCLUSION

Just as being a good improviser requires being a good analyzer of harmony and melody, a skilled and diverse drummer/percussionist must have a variety of perspectives on how to organize and conceive of musical time. Nowadays, working knowledge of world rhythm systems (and repertoire) from India and Africa are essential tools of the trade. As a teacher, I use visuals and metaphors to help me convey the meaning of complex ideas, and "Harmonic Time" bridges the gap between theory (ideas) and practice (action).

Tap to play Video



The discovery of new ways to tap into the learning channels has greatly expanded the horizons of my own music. It is every teacher's responsibility to share new discoveries with the next generation of innovators. The word "educate" comes from the word "educe," meaning "to draw forth or bring out." To me EDUCATE is also an acronym: Effort Determines Understanding, Creativity And Technical Excellence.

In rare instances, a student who is halfway into a semester might ask a fundamental question that I thought was addressed in the beginning. I am always grateful that this happens. Students may think they understand a given concept but are either too insecure or shy to ask, or even unsure if they *don't* understand. Whatever tools we use to reach our students, there may be some who do not grasp complex discussions that are foreign to their way of learning and applying. And still we keep trying. After all, if a passionate teacher (and student) is not exhausted at the end of the day, they are not doing it right.

Jerry Leake is an Associate Professor of Percussion at Berklee College of Music and the New England Conservatory of Music. He is leader of the world-rock-fusion octet Cubist, which has released an acclaimed studio and live CD. He is also cofounder of the world-music ensemble Natraj, and the dub/trance groove collective Club d'Elf . Jerry performs regularly with R.A.R.E, C-Jammers, Another Realm, and the Agbekor Drum and Dance Society. On tabla, he has accompanied Ali Akbar Khan, Steve Gorn, Sharafat Ali Khan, Nandkishor Muley, Kumkum Sanyal, Chitravena Ravikiran, Purnima Sen, and Shyamdas. Jerry graduated from Berklee, where he studied jazz vibraphone with Gary Burton and hand percussion with Pablo Landrum. He studied tabla in Pune, India with Rajiv Devasthali and Carnatic rhythm theory and mridangam with T. K. Ramakrishnan. He has learned African music for 20 years with Dolsi-Naa Abubakari Luna of the Dagomba tradition, Ewe music with Godwin Agbeli and David Locke, and balafon/djembe with the Coulibaly family in Burkina Faso. Jerry has written eight widely used texts on North Indian, West African, Latin American percussion, and rhythm theory; manuals for playing world rhythms on drumset; and articles published in *Percussive Notes*. Jerry is former president of the Massachusetts PAS chapter and has been a composer and member of the Portland Symphony Kinder Koncert percussion ensemble since 1984. **PN**

Example 6

