

# The Marimba Roll: A Necessary Evil?

By Nathan Daughtrey

**H**istorically, percussionists have relied on one tool for sustaining sound: the roll. Whether referring to buzz and multiple-stroke rolls on snare drum or single strokes on practically every other percussion instrument, we're talking about finding the best (smoothest) way to create the illusion of sustain. Thanks to centuries of trial and error, rolls on all of the orchestral instruments (snare drum, timpani, bass drum, triangle, tambourine, etc.) are as good as they are going to get, but the modern marimba is much younger. There is an assumption that what sounds good on those orchestral instruments will sound good on the marimba as well. Is that a correct assumption?

## TERMINOLOGY

There is also the assumption that we should use the same terminology for keyboard percussion as battery percussion, but the word “roll” is a little fussy. When you say, “roll that chord” to pianists, they perform a quick arpeggio. Say the same thing to marimbists and they will, without hesitation, alternate their hands quickly, attempting to sustain the chord. Like pianists, marimbists can also perform quick arpeggios. How, then, do we label those if the term “roll” is already taken? I propose a return to using the term “tremolo” when referring to sustaining sound on marimba by quickly alternating strokes. There are two reasons for this: (1) It eliminates confusion between the words “tremolo” and “roll,” as already discussed; (2) Technique-wise, it is a more accurate description of the sound.

When string players either alternate bow strokes rapidly on a single pitch or alternate between two pitches with longer bow strokes, they are performing a *tremolo*. These can be metered or un-metered. Similarly, wind players perform a tremolo through the alternation of two pitches with longer breaths. When marimbists play a “roll,” the same effect is created. On every other instrument, the tremolo is a special effect or technique that creates a “trembling” sound. Perhaps marimbists should use the term in the same way. Instead, it has become a crutch for composers (and performers) of marimba music, using it as the primary means of sustaining sound rather than reserving it for something more musically special.

## TWO WEDDINGS AND A LIGHT BULB

Two experiences presented themselves to me over the past year that helped solidify my thoughts on marimba rolls and general marimba performance. The most recent occurred the day before a wedding for which I was providing all of the music with unaccompanied marimba. Both the pastor and the organist/cantor questioned me individually about the music I would be playing for the service/ceremony.

“You *are* playing all sacred music, *right?*”

“You can't be playing pop music like the Beatles in this church.”

“I was so relieved when I heard you practicing.”

From this, I gather that we (classical marimbists) still carry with us this stigma of vaudeville, ragtime, and jazz. Do we perhaps perpetuate the stigma by our approach to rolls?

The other experience occurred at my house in the weeks leading up to my own wedding. I decided to arrange all of the ceremony music myself

for flute, cello, and marimba—a lovely combination. For the prelude music, the performers simply read string trio arrangements of typical wedding music—flute playing violin 1, marimba playing violin 2, and cello playing...well...cello. As they were playing through one of the tunes, the flutist and cellist started giggling and saying things like, “Welcome to Jamaica, mon!” The marimbist and I were confused, but then, realizing the marimba was the butt of their joke, we were immediately offended. What we heard was a beautiful, legato musical line. What they heard were tremolos being played on a steel drum. After I finished being self-righteous and defensive about it, a lightbulb in my head lit up.

## LISTEN WITH DIFFERENT EARS

When was the last time you took a step back and listened to a marimba roll—whether with two, three, four, six, or eight mallets—not with a percussionist's ears, but with those of another instrumentalist or a layman? For decades we have been trying to achieve the smoothest, most expressive sustained sound on the marimba with the perfect combination of mallet hardness/weight, model of marimba, roll speed, roll type, etc. Have we found it? I always thought so, but now I'm not quite so sure. That being said, there are several instances in which marimba rolls are used effectively.

## WHEN DO ROLLS WORK?

*Long chordal sustain without much dynamic alteration.* Played with soft mallets and a fairly slow roll speed, this passage has the potential to sound sustained and organ-like because of the lower, resonant range of the instrument.

Example 1. Nathan Daughtrey, “Edge of the World,” mm. 7–8.

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*As a short ringing effect at the end of a phrase.* With each strike of the roll being softer than the previous strike, one can extend the natural decay of a chord. In the first measure of Example 2, the roll finishes the phrase by extending the duration of the repeated chord preceding it. In the second measure, the roll simply helps the chord to “ring” softly after being struck at a louder dynamic.

Example 2. Martin Blessinger, “Shattered Dreamscapes,” mm. 88–89.

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*Going into/coming out of arpeggiated figures.* This may be found in much of Klatzow’s marimba writing, as well as that of Eric Sammut. The roll seems an extension of the arpeggio and vice versa.

Example 3. Peter Klatzow, “Song for Stephanie,” m. 13.

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*Using the roll as a tremolo (effect).* In Example 4, Zivkovic uses a one-handed “mandolin roll” to simultaneously create sustain and emulate the tremolo of an Italian mandolin.

Example 4. Nebojsa Zivkovic, “Il Canto del Gondolieri” (from *Funny Marimba, Book 2*), mm. 3-4.

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## WHEN DO ROLLS NOT WORK?

*Extended sustained passages with much dynamic variation.* This is especially true when there are louder dynamics. It sounds less and less like sustain and more and more like individual notes, regardless of roll speed or mallet hardness.

*Upper range of the marimba.* Because of the lack of resonance, rolls in the upper half of the instrument do not produce the same smooth sustain that the lower half of the instrument has the potential to produce.

*Widely-voiced chords.* If the hands are spread too far apart or if the mallets in each hand are spread too far apart, we hear the beating of those individual hands or mallets during rolls.

*Too much roll speed variation.* Because we have accepted rolls as one of the sole means of sustaining sound, we have tried to be as expressive as possible, especially by altering roll speed. Some might argue that this is our *vibrato*. Does it actually have that effect? Ask a few non-percussionist musicians you respect what they hear.

## NON-PERCUSSIONISTS' APPROACH TO SUSTAIN

It is also helpful to look at other instruments with a similar short sustain and decay and examine how they create or emulate sustain. For

example, harpsichordists use arpeggiated chords, trills, and other embellishments to elongate harmonies/chords. In her recent book, *Historical Harpsichord Technique*, Yonit Lea Kosovske discusses this very phenomenon: “Tones decay quite rapidly on the harpsichord. Because of this attribute, harpsichordists are forever faced with the need for ‘expressive moulding of a continuum of sound.’ One of the principal ways to sustain the sound on a harpsichord is through arpeggiation: when the notes of a chord are played in broken succession rather than simultaneously.”<sup>21</sup>

She provides as an example the opening two measures of Froberger’s “Tocatta No. 2,” which starts simply with a D-minor whole-note chord.

Example 5.1. Froberger, “Tocatta no. 2 in D Minor” (1649), mm. 1–2.

“The opening chord would sound boring if played as literally notated—that is, as block D-minor chords that just sit and wait for the next chord to be played. Through different ways of arpeggiating and ornamenting the chord, this opening harmony may be transformed into a powerful, emotive statement.”<sup>22</sup>

Here is one possible realization of the first measure played on harpsichord using only arpeggios.

Example 5.2. Froberger, “Tocatta no. 2 in D Minor,” m. 1 realization.

How would we approach this same figure on marimba? Our first inclination would likely be to reduce the chord to four notes by eliminating the A in the treble clef and the upper D in the bass clef, and then alternate our hands quickly, creating (in our minds and ears) a sustained sound. Try sitting down at the piano and doing this, even with the sustain pedal depressed. Is that a desirable sound? If not, why would we perform it that way on marimba?

## EMULATING SUSTAIN WITHOUT ROLLS/TREMOLOS

While I am not suggesting that we play every rolled chord we encounter as a series of arpeggios, I am suggesting that the marimba roll/tremolo is a *crutch* for performers and composers alike. With that being said, there are several ways that composers have created the illusion of sustain successfully in their marimba writing.

*Written-out/measured tremolo.* A common technique for guitarists, the tremolo rhythmically fills out the sound and can create a soaring, legato melody atop an ostinato bass line, like in Barrios’ popular work, which works equally well on marimba. You find this technique throughout the marimba music of Keiko Abe as well.

Example 6. Barrios/Daughtrey, “Una Limosnita por Amor de Dios,” mm. 3–4.



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*Written-out/syncopated tremolo.* Found throughout this section of “Halcyon Days,” the chordal figures serve two purposes: creating rhythmic interest/groove and emulating sustain.

Example 7. Nathan Daughtrey, “Halcyon Days,” mm. 124–126.



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*Written-out rubato with repeated notes.* Ignatowicz approaches the marimba much like a piano in her writing. In this passage, take note of the smooth legato line created by the repeated notes in the right hand.

Example 8. Yo Goto, “Valse Éxcentrique,” mm. 32–35.



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*Arpeggios.* Originally written for piano, the arpeggios in this short piece work well on the marimba, giving more “ring” to the accented melody notes by connecting them with arpeggios.

Example 9. Sibelius/Daughtrey, “Carillon” (from 13 Morceaux), mm. 2–3.



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## TAKEAWAYS

The purpose of this article was not to provide concrete answers to all of the posed questions, but rather to encourage more questions and critical thought about the coveted marimba roll.

1. Terminology: *roll* vs. *tremolo*?
2. Does a marimba roll/tremolo actually create a smooth, sustained sound, or should it be reserved for musical effect? Listen like a non-percussionist.
3. When are rolls used effectively in marimba music?
4. When are rolls used ineffectively in marimba music?
5. How can we better emulate sustain on marimba without relying on rolls/tremolos?

I am convinced that the marimba has not yet reached its full potential as a classical concert instrument. Let us keep thinking and listening critically so this potential might be realized.

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2. Ibid. Kindle Locations 1187–1188.

**Nathan Daughtrey** travels the country as a soloist, clinician, and guest conductor working with ensembles and performers playing his works. Dr. Daughtrey teaches Music Composition and Percussion at High Point University (N.C.) and he works as an editor and staff composer for C. Alan Publications. Active in the PAS community, he serves on the Composition Committee, organizes the PASIC Fun Runs on behalf of the Health & Wellness Committee, and is the Keyboard Editor for *Percussive Notes*. **PN**

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is the self-titled debut of the NYC-based new jazz/new music trio featuring guitarist Mary Halvorson, bassist Michael Formanek, and drummer Tomas Fujiwara. The album represents the sophisticated compositional prowess of all three musicians, each contributing three works. Halvorson and Fujiwara, members of a pack of exciting young generation of NYC jazzers, have profound improvisational chemistry and have worked together on several previous projects/groups: Tomas Fujiwara & The Hook Up, The Thirteenth Assembly, and the Taylor Ho Bynum Sextet. Driving the bus from his bass, Formanek's considerable years of experience bring depth and refinement to the group.

Brooklyn-based Fujiwara's drumming style is displayed in its full sublimity on one of his own compositions, "Goddess Sparkle." The tune begins in a pliable 12/8 pulse, quickly expands into an array of complex free improvisational textures, lands back to almost unrecognizable, yet effortless 12/8 unison syncopated grooves, finally dissolving into crackling, pointillistic texture.

Fujiwara's drumming is an exciting and constantly shifting array of colors/articulations, rhythmic textures, and mind-bending grooves—punctuating and wildly hard driving, but never without control or command. Nate Chinen of *The New York Times* described his drumming this way: "He has a way of spreading out the center of a pulse while setting up a rigorous scaffolding of restraint..." Dig it.

—John Lane

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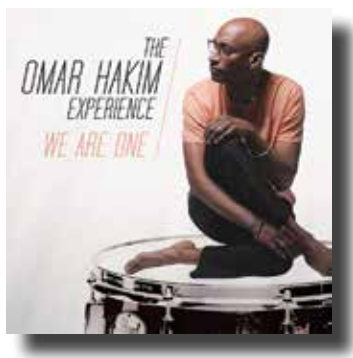
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I've heard him play straight-ahead jazz with Mike Mainieri, high-energy electric jazz with Weather Report, and rock 'n' roll with Sting, so I wasn't sure what to expect from Omar Hakim's new solo album. In some respects, he draws on all of those past experiences, producing music that reminded me of early 1970s albums by such artists as Return to Forever, The Eleventh House, and Billy Cobham. Although those artists were playing music labeled "fusion" in those days, it tended to be more musical than what that label came to represent later,

when self-indulgent chops displays gave the term a bad name. There is virtuoso playing on this disc to be sure, and there is no question that Hakim has plenty of chops, but he only uses them when called for. He also displays a gift for moving the music forward with a slow, soft groove, and on a couple of tracks he displays a pleasant singing voice. A number of different musicians contributed to the tracks, with several notable contributions from multi-instrumentalist Rachel Z and some nice harmonica by Chieli Minucci.

There is too much energy on this CD to be labeled "easy listening," but pleasant melodies with melodic solos, delivered by players who know how to use a full range of dynamics and tempos to keep the music interesting, make it easy to listen to.

—Rick Mattingly



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WWI Siren, Ricochet "Crotale Rifle" and Locomotive Imitation

Donated by Emil Richards, 1993-06-10 and 1997-04-01, and Mrs. Charles Rowe, 2014-01-01

One of the most crippling weapons used during the First World War (1914–18) came in the form of chemical bombs containing chlorine gas. When the gas came in contact with a soldier's skin—and especially mucous membranes such as the eyes, nose, and throat—it caused severe burns. As a result, a special siren was devised to alert the troops to the presence of the gas and to signal them to don protective gas masks. The siren, which is operated by a hand crank, draws air into the horn and creates the sound by forcing air through a rotating "stator" that interrupts the flow of the pressurized air stream. Its unique sound, or timbre, is instantly recognized by the sustained rising and falling pitch based on the speed of the rotors.

This siren is labeled "10765 / SERIAL NO. 14394 / Stewart MODEL 749A / MADE FOR / CHEMICAL WARFARE SERVICE US ARMY / BY / STEWART WARNER SPEEDOMETER CORP / CHICAGO USA."

Measuring 11 inches in length and 10.5 inches in height, with a 4-inch diameter horn opening, this siren was used by Emil Richards on the soundtrack of the 1965 film *Dr. Zhivago*. The scene with the siren was removed from the final version of the movie.

Also used in several movie and television soundtracks is an original "Crotale Ricochet Rifle," invented by Richards in the 1960s. Richards modified a wooden rifle stock to include a water container (made from an aluminum canteen) and a trigger-operated Zildjian crotale pitched at C3. After striking the crotale with a metal mallet, the trigger enables a player to quickly and easily dip the crotale into the water basin, thus creating a downward bend in the pitch. The instrument, which measures 33 inches in length, was originally conceived as a toy to be marketed for children.

The Ludwig Locomotive Imitation was designed for use in theatres for live performances and silent movies. The wooden box, measuring 13 x 9.75 x 4 inches, contains rows of suspended metal springs. They are activated by a metal lever with a wooden handle (missing from this instrument), which slides back and forth in the opening to create the sound of a steam locomotive. By speeding up and slowing down the handle, one can easily imitate the accelerating and braking sounds of the engine. Also missing from this imitation is a nine-inch diameter circular bell plate, which was suspended on the back of the box by a wire hanger. The bell plate imitated the bell of a train when struck by a rawhide or metal hammer or beater. Ludwig's 1932 catalog price for this instrument was \$6.00 for the box, \$2.50 for the bell plate, or \$8.50 for both. This sound effect was sold during the first half of the 20<sup>th</sup> century.

—James A. Strain, PAS Historian, and Otice C. Sircy, PAS Museum Curator and Librarian



Detail of the WWI Gas Siren showing manufacturer, model, and serial numbers.

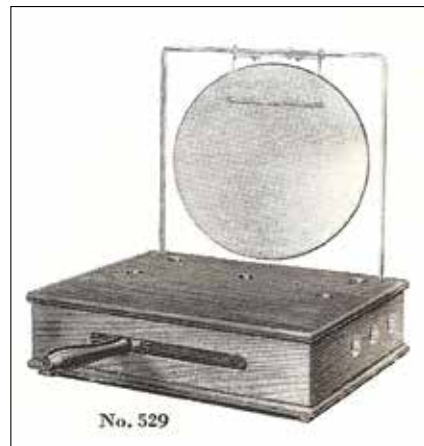


Image from 1932 Ludwig Catalog showing Locomotive Imitation with handle and attached bell plate.

