

# Four-Mallet Sticking Options for Marimba

## Part II: Advanced Techniques

By Nathan Daughtrey

Part I of this article (*Percussive Notes*, December 2007) focused on defining and illustrating the five basic sticking options for four-mallet marimba performance and provided guidelines for determining such stickings. In order of difficulty, they are:

1. **Alternating Sticking:** right and left hands alternate every stroke;
2. **Consecutive Sticking:** groups of two, three, or four notes are played in ordered succession (consecutively) across the mallets;
3. **Double Sticking:** two consecutive notes are played by the same hand (double vertical) or the same mallet (independent);
4. **Plane Sticking:** each hand plays notes on a different horizontal plane (accidental or natural bars);
5. **Multiple Independent Sticking:** one mallet plays three or more notes (usually scalar motion) using an independent stroke while the other hand does something different.

Part II expands these basic four-mallet sticking options to cover advanced techniques and to provide exercises for further development. As in Part I, all topics in this article are discussed through the scope of Independent (or Stevens) Grip, and the mallets are numbered from 1 to 4, low to high (or left to right).

Example 1. "Caprice, No. 5" by Niccolò Paganini / Daughtrey, m. 24

4 3 2 1 4 3 2 1 4 3 2 1 4 3 2

Pull Push Push Pull Pull

### PUSH-PULL TECHNIQUE: AN ALTERNATIVE

One may apply the definition of Consecutive Sticking to Push-Pull Technique: two consecutive notes in one hand moving from accidental to natural bar, or vice versa. The difference between Consecutive Sticking and Push-Pull Technique is in the physical arm position and motion used. Instead of changing arm/elbow position to accommodate successive natural/accidental bar combinations, the performer remains in a frontal arm and body position and pushes (moving from natural to accidental) or pulls (accidental to natural) the mallets away from or back toward the body.

To reduce the number of awkward arm/body position changes, one should use Push-Pull Technique in figures or passages that involve several combinations of naturals and accidentals. As seen in Example 1, Push-Pull Technique helps to maintain a particular sticking pattern in a melodic sequence. It is very important to play on the extreme edges of the accidental bars when using Push-Pull Technique.

The question then arises, "How does one decide whether to use normal Consecutive Sticking (with changing arm positions), Push-Pull Technique (frontal position), or Plane Sticking?" It boils down to three factors:

**Time:** Is there time (dependent upon tempo and/or note values) to get into the proper arm/body position to perform a given passage? If yes, normal consecutive sticking would be appropriate.

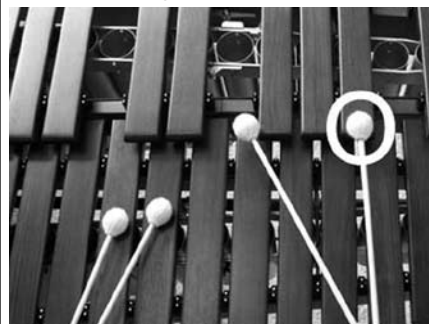
**Frequency of Change:** How frequently does the given passage (and selected sticking) require the performer to change arm/body position? If it is very frequent, Push-Pull or Plane Sticking would be most appropriate.

**Melodic Sequence/Patterns:** Is there a melodic sequence that would be aided by a corresponding sticking pattern/sequence? If yes, Push-Pull Technique, and possibly even Consecutive Sticking, would be most appropriate.

First four notes of Example 1:  
Consecutive Sticking  
(outward arm position)



First four notes of Example 1:  
Push-Pull Technique  
(frontal arm position 1)



First four notes of Example 1:  
Push-Pull Technique  
(frontal arm position 2)



All three factors are interrelated and dependent upon one another for determining the most appropriate sticking for a given passage. The same concepts may be applied to performing scales and arpeggios as well.

### SCALES AND ARPEGGIOS: UNNECESSARY PRACTICE?

Although we perform on a 20th-century instrument with primarily 20th- and 21st-century repertoire, adaptations and transcriptions of violin, cello, piano, and guitar works of past style periods require us to revisit tonal scales and arpeggios. We need to acquire the same dexterity, accuracy, and grace while performing a four-octave arpeggio on an eight-foot-long instrument as a violinist displays with the flick of a bow and flutter of fingers. Therefore, we need to be aware of the sticking options for performing such passages.

We now have three primary sticking options for performing scales and arpeggios.

- Alternating (inside and four-mallet)
- Plane
- Push-Pull/Consecutive

### Scales

In determining stickings for scales, any one of these options will work. However, the performer will most likely favor one, or use a combination of the options depending upon the context. In Example 2, each of the three sticking options are applied to an E major scale.

Example 2. Sticking options for E major scale



Alternating:	L	R	L	R	L	R	L	R
Plane:	2	3	4	1	2	3	4	2
Push-Pull:	1	2	3	4	1	2	3	4

When playing scales with Plane Sticking or Push-Pull Technique, one needs to be proficient playing close-interval independent alternating and double lateral strokes.

Alternating Sticking for scalar passages is most appropriate for very quick figures, especially those played at a loud dynamic. For example, look at the passage from David Gillingham's "Gate to Heaven" shown in Example 3.

Example 3. "Gate to Heaven" by David Gillingham, m. 74



This scalar figure could be played with Plane Sticking, but to obtain the necessary dynamic, a great amount of rotary motion would be required, making it much more challenging to playing loudly and accurately.

Plane Sticking for scalar passages is most appropriate for softer, more legato figures. The passage shown in Example 4 from the second movement of Gillingham's "Concerto for Marimba and Wind Ensemble" falls in the middle of a long string of descending thirty-second notes.

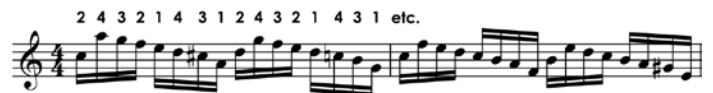
Example 4. "Concerto for Marimba and Wind Ensemble" by David Gillingham, Mvt. II, m. 21, b. 3-4



There are many sticking possibilities here, but using primarily Plane Sticking allows for very legato playing, a reduced number of strokes/wrist motions, and smooth transitions from the bottom of the scale back to the top of the next one.

Push-Pull Technique/Consecutive Sticking is best utilized in scalar passages involving melodic sequences for which you want to use a consistent sticking. The violin caprices of Paganini are filled with sequences and, more specifically, the "Caprice Number 5" is filled with scalar sequences, as shown in Example 5.

Example 5. "Caprice, No. 5" by Niccoló Paganini / Daughtrey, mm. 51-52



Using Push-Pull Technique to accommodate sticking/melodic sequences best serves the music in this case by bringing out the intended musical lines.

Finally, to show that none of these scalar sticking options exist in a vacuum, a longer passage from the same section of the second movement

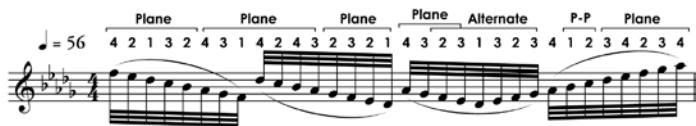
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of Gillingham's "Concerto for Marimba," shown in Example 6, reveals the necessity of allowing the three options to live in harmony.

Example 6. "Concerto for Marimba and Wind Ensemble" by David Gillingham, mm. 22



Notice that Plane Sticking is employed for most of the passage. The different segments of Plane Sticking show where the hands switch roles from accidental to natural bars, or vice versa.

### Arpeggios

The same sticking options of Alternating, Plane, and Push-Pull/Consecutive can be applied to arpeggiated passages as they were for scalar passages. Since the requisite intervals for arpeggios are wider than those used in scales, it is unnecessary to employ alternating sticking as frequently.

Example 7. E Major arpeggio sticking options

Alternating:	L	R	L	R	L	R	L
Plane:	1	3	1	2	3	1	2
Push-Pull/Consecutive:	3	2	3	4	2	3	4

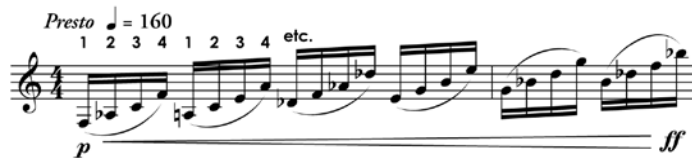
Plane Sticking is typically the most logical option for performing arpeggios, since there are usually two consecutive notes on the same plane followed by one note on the other plane, evident in Example 7. Paganini's fifth violin caprice begins and ends with rapid ascending arpeggios, which are easily accomplished using Plane Sticking, as shown in Example 8.

Example 8. "Caprice No. 5" by Niccolò Paganini / Daughtrey, final measure



However, arpeggios do not fit quite so neatly in a box. As with scalar passages, melodic sequences/patterns might help to dictate the sticking. In another section of Gillingham's "Gate to Heaven" there is an ascending sequence of arpeggiated chords that is most easily played with Push-Pull Technique, as shown in Example 9.

Example 9. "Gate to Heaven" by David Gillingham, mm. 206–207



One could use consecutive sticking and change arm position throughout the passage, but remaining in a frontal position with Push-Pull Technique decreases awkwardness and inaccuracy.

A performer can make a case for Consecutive Sticking in some arpeggiated passages, especially 7th chords, as in the final two measures of the first movement of Gillingham's "Concerto for Marimba," shown in Example 10.

Example 10. "Concerto for Marimba and Wind Ensemble" by David Gillingham, mm. 244–245



In this case, the performer would face the instrument at a slight angle toward the lower end of the marimba so that the F-sharp and D in the right hand are played using a frontal arm position. This allows one to practically walk from the upper end to the lower end in a very comfortable manner.

### CONCLUSIONS

The majority of this article centered on introducing Push-Pull Technique as a possible alternative to some of the other sticking options we have available. Remember, when you are first trying to determine the sticking for a certain passage, be it scales, arpeggios, or anything else, start by going through each of the five basic four-mallet sticking options and decide which combinations of each will best serve you and the music. Then, decide whether Push-Pull Technique would be useful in conjunction with the sticking options you chose.

The information presented here is not meant to be all encompassing, but rather an impetus to propel the marimba and its technique into the future. All are encouraged to experiment with new sticking options so that our instrument can continue to grow to its full potential. Use the following supplemental exercises to become more comfortable playing with Consecutive Sticking, Push-Pull Technique, and Plane Sticking on scales and arpeggios.

### EXERCISES

#### Scales

Starting at a very slow tempo, play through each of the 12 major scales with close intervals in each hand using 1. Consecutive Sticking (with changing arm position), 2. Push-Pull Technique (in frontal position), and 3. Plane Sticking. As each option becomes more comfortable, gradually increase the tempo. Strive for evenness of tone throughout each scale so no individual note sticks out more than another. In other words, view each scale as a long musical line with a legato marking over the passage.

Exercise 1. Consecutive Sticking/Push-Pull Technique



Exercise 2. Plane Sticking



Arpeggios

Exercise 1. Consecutive Sticking/Push-Pull Technique

Play through each of the 12 major-key arpeggios using the sticking permutation outlined in Exercise 1. Start with a very slow tempo until you are comfortable with the technique, then gradually increase the tempo.

Exercise 2. Plane Sticking

Play through each of the 12 major-key arpeggios using Plane Sticking. The D Major arpeggio is provided below, but the sticking will not apply to all other keys. As a general rule, play any two consecutive notes on the same plane in one hand and notes in the other plane with the other hand. For arpeggios in keys that remain on the same plane throughout, I recommend the following sticking permutation: 1-2-3-4-2-3-4-etc. Again, start with a very slow tempo until you are comfortable with the technique, and then gradually increase the tempo.

MUSIC EXAMPLES

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Gillingham, David. *Gate to Heaven*. Copyright ©

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Paganini, Niccolò. *24 Caprices, Op. 1, No. 5 in A Minor*. Adapted by Nathan Daughtrey. Copyright © 2001 C. Alan Publications, Greensboro, NC.

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**Dr. Nathan Daughtrey** is a freelance percussionist and composer based in Greensboro, North Carolina, where he also performs with the Greensboro and North Carolina Symphony Orchestras. He holds degrees from the University of North Carolina at Greensboro, where he also taught as a Visiting Lecturer in Percussion. He has appeared nationally and internationally as a soloist and clinician, and has also been involved in many recording projects, including his own solo marimba CD, *Spiral Passages*, and his upcoming second CD. As second- and third-place winner of the 2005 PAS Composition Contest, Daughtrey is also very active as a composer, with his band and percussion works being performed worldwide. His compositions are published by C. Alan Publications. He was recently invited to serve on the PAS Composition Contest Committee. PN

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