

## Music Through Motion

*A 21<sup>st</sup> Century Approach to Marimba*

Dr. Adam Davis

### **Know Thy Instrument** – Some Facts

The only things that really matter:

Where you hit it

What you hit it with

How much energy is transferred ( $E = \frac{1}{2} MV^2$ )

#### Acoustics of the Marimba

- Resonators
  - Resonators  $\neq$  Longer Ring
  - Resonators = Louder Ring
  
- Bars and Playing Areas
  - Center/Edge = Darkest Tone
  - Node = Brightest Tone
  
- Mallets
  - How heavy?
  - How are they wrapped?
  - Think about attack profiles - *piano, strings, brass, woodwinds, etc.*
  
- Stroke Modifiers
  - Height
  - Weight
  - Stroke Direction (Up, Down, Full)
  - **Velocity**

### **Know Thy Motion** – Efficiency is the Name of the Game

Small Muscles use less energy than Large Muscles

- Interval Shifts - *most efficient*
  - **Method of Movement - Exercises 227 – 258**



- Arm Shifts - *less efficient*

- Method of Movement - Exercise 203

$$\overset{3}{\text{trill}} = 40 - \text{trill} = 68$$

**203**

The image shows musical notation for Exercise 203. It consists of two staves, treble and bass clef. The treble staff has a triplet of eighth notes on the first line (G4, A4, B4) with a slur over it. The bass staff has a triplet of eighth notes on the first line (G3, F3, E3) with a slur under it. There are additional notes and slurs on both staves, including a triplet of eighth notes on the treble staff (D5, C5, B4) and a triplet of eighth notes on the bass staff (D3, C3, B2).

- Body Shifts - *least efficient*

- Method of Movement - Exercise 430

**6** Arpeggios utilizing Double Lateral Sequential Stickings  
Play in all keys around the circle of fifths

The image shows musical notation for Exercise 430. It consists of two staves, treble and bass clef. The treble staff has a series of arpeggios with fingerings: 1 2 3 2 3 4 1 2 3 2 3. The bass staff has a series of arpeggios with fingerings: 1 2 3 2 3 4 1 2 3 2 3 4. There are also fingerings for the right hand: 4 3 2 3 2 1 4 3 2 3 2 1 and 4 3 2 3 2 1 4 3 2 3 2 1.

### Know Thy Music – Employ Technique Musically

The path that the mallet travels is determined by your sticking

*The motion of the mallets is the music!*

- General Rules for Sticking with 4-Mallets
  - Use efficient motion
  - Incorporate all four mallets
  - Work backwards to realize the best sticking
  - Minimize shifting between upper and lower manuals
  - Be comfortable crossing hands
  - Separate polyphonic music into individual hands or mallets
  - Visually group notes into single gestures with Sequential Sticking

- Sequential Sticking

- Method of Movement - Exercise 590

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

F# Major 1 2 3 4 2 3 4 1 2 3 4 2 3 4 2 4 3 2 4 3 2 1 4 3 2 4 3 2 1

- Applications and Examples

Gigue JS Bach - Cello Suite #3 in C major

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

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

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

Eric Sammut - Indifference

mf

mp

cresc. - - - - - f

f sub.

g/ris/

mf

12342 312 3 2 3 12 3 2 32 4323

2 4 3 2 3 2 3 2 3 2 3 4 2 4

4 3 2 3 2 3 2 3 2 4 2 3 2

Alejandro Viñao - Khan Variations

Musical notation for measures 218-220. The piece is in 2/4 time. The melody is written in the treble clef and the bass line in the bass clef. The key signature has one sharp (F#). The melody consists of eighth and sixteenth notes with various accidentals. The bass line consists of eighth notes. There are accents (>) above several notes in both staves.

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

221

Musical notation for measures 221-223. The piece is in 2/4 time. The melody is written in the treble clef and the bass line in the bass clef. The key signature has one sharp (F#). The melody consists of eighth and sixteenth notes with various accidentals. The bass line consists of eighth notes. There are accents (>) above several notes in both staves. Measure 223 has a triplet of eighth notes in the melody.

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

224

Musical notation for measures 224-226. The piece is in 12/8 time. The melody is written in the treble clef and the bass line in the bass clef. The key signature has one sharp (F#). The melody consists of eighth and sixteenth notes with various accidentals. The bass line consists of eighth notes. There are dynamics markings: *f* (forte) in measure 224, *mp* (mezzo-piano) in measure 225, *mf* (mezzo-forte) in measure 226, and *mp* in measure 227. There are accents (>) above several notes in both staves. Measure 227 has a triplet of eighth notes in the melody.

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