ADVANCED MARIMBA TECHNIQUES:
AN ANALYSIS WITH MUSICAL APPROACHES TO PERFORMANCE PROBLEMS IN
WEST SIDE SUITE
Music by Leonard Bernstein
Lyrics by Stephen Sondheim
Adapted and Arranged for Unaccompanied Marimba by John Serry
by
Dean Warren Gronemeier

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ADVANCED MARIMBA TECHNIQUES:
AN ANALYSIS WITH MUSICAL APPROACHES TO PERFORMANCE PROBLEMS IN
WEST SIDE SUITE

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This document presents a systematic study of advanced marimba techniques. Although the focus is technically based, special consideration has been taken to present the various topics in a musical setting. This methodology provides the student with a school of marimba playing that deals with the technical and musical aspects of marimba performance simultaneously.

Each chapter focuses on a specific technique. A detailed explanation of the technique is given followed by exercises that aid in developing the psycho-motor controls to master the technique. The technique is then applied to musical excerpts which immediately provide the interaction of technical and musical elements. The chapter topics include: mallet permutations; the one-handed, two-mallet roll; octave playing; interval changes; peripheral accuracy; ostinato patterns; polyrhythmic playing; and chorale style playing.

The musical excerpts in the body of the paper are taken from John Serry’s West Side Suite, an unaccompanied marimba arrangement of music from Leonard Bernstein’s West Side Story.
CHAPTER I

REVIEW OF EXTANT MATERIALS

Before presenting the main body of this document and my concepts of “advanced marimba techniques” it is important to first survey existing pedagogical materials. In this chapter I will briefly examine significant keyboard percussion texts that address four mallet performance techniques.

Most of the materials examined in this chapter pertain to four mallet performance on vibraphone and marimba, however the techniques are also applicable to bells, xylophone, and, although rarely called for, crotales and chimes. The reviewed materials are both texts and video tapes and are presented chronologically by publication date.

A significant feature of each text is the type of four mallet grip it employs. There are three common grips, with some slight variations, used in four mallet percussion keyboard playing. These grips are: the “traditional cross grip”, the “Burton grip”, and the “Musser/Stevens grip.”

The “traditional cross grip” is the earliest grip found in the pedagogical literature. This grip is formed by holding one mallet, commonly called the inside mallet, between the thumb and index finger while a second mallet, commonly called the outside mallet, is inserted between the index finger and the middle finger. The two mallets cross in the palm of the hand with the outside mallet under the inside mallet. The “traditional cross grip” was used in most of the early vibraphone tutors, but it became less popular with the arrival of another cross grip developed by the great vibraphonist Gary Burton and called, appropriately, the “Burton grip.” However, some great keyboard percussion artists such as Keiko Abe, continue to employ the traditional cross grip.

The “Burton grip” is much like the “traditional cross grip” except that the inside mallet crosses in the palm under the weaker outside mallet. This crossing of the mallets adds additional support and strength to the outside mallet. The “Burton grip” has become the preferred grip among such great vibraphone players as David Samuels, Bill Molenhof, David Friedman, and Jerry Tachoir.

The third common four mallet grip is referred to as the “Musser/Stevens grip.” This grip is formed by holding the inside mallet at the end of the mallet shaft between the thumb and the index finger and the outside mallet near the end of the shaft between the middle finger and the ring finger. Detailed photographs
illustrate this grip in Leigh Howard Stevens’ *Method of Movement for Marimba* (pages 10–15). The mallets in this grip do not cross, which allows for a larger interval spread than is possible with any other four mallet grip. This increased spreading feature is preferred by many marimbists.

Four mallet keyboard techniques have been discussed in percussion pedagogical texts since the early part of this century. The National School of Vibracussion in Chicago published a fourteen lesson tutor entitled *Home Study Course in Vibracussion*. Lesson number thirteen is entitled *Special Lesson on Four Mallet Playing* and has a copyright date of 1922. There are diagrams in this lesson describing the correct and incorrect ways of holding the “traditional cross grip.” There is a section entitled *Practical Application* which describes the proper hand positioning of the mallets and correct arm motion when simultaneously playing natural and accidental bars. Page seven of the lesson provides two very brief sections entitled *Execution or Technic* and *Silencing One Mallet*. *Execution or Technic* refers to the ability of a player to change from one body position to another and correspondingly position the mallets. *Silencing One Mallet* refers to “elevating” the outside mallet in situations when a single line passage is more efficiently played between the inside mallets. The entire lesson is only eight pages in length including a piece entitled *Aloha* on page eight.

Circa 1930 Howard A. Green wrote a book entitled *Marimba Method*. The text, published by Jenkins Music Company of Kansas City, Missouri, gives no exact publishing date. This book briefly discusses both two and four mallet playing techniques. The section on four mallets includes photographs that illustrate proper hand positioning of the “Musser grip” for all chord positions.

Harry C. Thompson published the text *Instructor for Vibra-Celeste, Vibraphone and Vibraharp* through G.B. Tuthill in 1931. This text deals with the techniques of holding the “traditional cross grip”, spreading the mallets, and dampening the bars (for vibraphone). He also discusses double note and chord playing.

Howard M. Peterson’s text of 1937 entitled *Peterson’s Xylophone and Marimba Studies* presents three and four mallet playing. Photographs are provided to illustrate proper “traditional cross grip”, spreading techniques, and the stroke. There are also photos that illustrate the shifting of body positions and the turning of the hands for certain intervallic changes. Peterson also attempts to cultivate the ability to read three and four note chords, and supplies many etudes and folk tunes for musical application of the techniques.

Lionel Hampton’s *Method for Vibraharp, Xylophone and Marimba* edited by David Gornston first appeared in 1939 and a renewal was released in 1967. This method is organized in three sections, each
focusing respectively on two mallet playing, three mallet playing, and four mallet playing. Throughout the book the student is introduced to new scales, exercises, and jazz tunes. Photographs are used to illustrate the “traditional cross grip.” There are exercises to strengthen “the manipulation of the hammers” (spreading technique). Photographs are used to illustrate the proper movement of the hands and body positioning when playing chords which contain natural and accidental bars. Thirteen pages provide examples for musical application of the techniques. The last section concentrates on four mallet playing and includes a photograph illustrating the “double wrist turn.” The book ends with a section on four mallet arranging and transcribing.

About two decades after the Hampton book appeared Phil Kraus published three texts entitled Phil Kraus’ Modern Mallet Method for Vibes, Xylophone, and Marimba. The third volume in the set, copyrighted in 1960, focuses on four mallet playing. The text contains forty-one lessons in all, each based on an element of music theory with a progressive lesson plan that combines technique, theory, and harmony.

The text Four Mallet Studies, written in 1968 by Gary Burton, is considered by many to be the first significant text which approaches the study of four mallet keyboard percussion technique. Burton uses photographs from above and below the instrument to illustrate the proper “Burton grip” and spreading techniques. After thoroughly describing these techniques he includes exercises to develop them. He presents fourteen of the possible twenty-four consecutive single line mallet permutations. (All twenty-four are listed for the first time in Marj Holmgren’s text Developing Four Mallet Technique, written in 1978.) Burton concludes his book with a section on voicing techniques in the jazz idiom.

Graded Reading Exercises for Four Mallets by Max Neuhaus is a collection of musical etudes that was published in 1971 but contains no explanation of four mallet technique. The book supplies a good study for the somewhat ignored topic of four mallet sight reading. The work functions well as an etude book, and in that respect is a contribution to four mallet texts. The book does not, however, supply the foundation for a complete school of four mallet technique.

Fred Wickstrom’s Keyboard Mastery for Mallet Percussion is a two volume set published in 1972. The first volume concentrates on two mallet playing while the second volume deals with three and four mallet playing. In the second volume Wickstrom uses diagrams to illustrate the “traditional”, “Musser”, and “Burton” grips. Wickstrom discusses mallet spreading and demonstrates chords with different intervals. He also includes a section on chord progressions.
Four Mallet Technique Studies for Xylophone, Marimba, and Vibes by Garwood Whaley is a general and basic approach to four mallet playing that was published in 1975. Whaley’s text, along with Raymond E. Meyer’s Multiple Mallet Studies for Marimba (1975); Karen Ervin’s Contemporary Solos and Contemporary Etudes for 3 and 4 Mallets (1977); Linda Lorren Pimental’s three works, The Solo Marimbist, volumes I and II (1976), The Marimba Goes Baroque, (1978), and Bar Percussion Notebooks, volumes I and II (1978 and 1980); along with Gordon Stout’s three books of etudes (1975, 1982, and 1989), are good representative sources for four mallet etudes and studies. None of them, however, specifically address the development of four mallet keyboard percussion techniques as they are merely collections of etudes and short pieces.

To date the most complete technical approach to the study of four mallet marimba playing is Leigh Howard Stevens’ text Method of Movement for Marimba, published in 1979. In this text, which is divided into three parts, Stevens carefully and completely examines all of the technical considerations involved in playing four mallet marimba. Excellent photographs along with detailed graphs are used to help explain body positioning, the “Stevens grip”, and the various strokes. Stevens categorizes four different strokes as they correlate with four different motions. These include the Single Independent (pp. 26–29), the Single Alternating (pp. 30–31), the Double Vertical (pp. 32–34), and the Double Lateral (pp. 35–37). Part Two of the book contains 590 exercises that develop the techniques explained in part one. This text is a complete system for studying four mallet marimba technique, however, it lacks examples for musical application of the techniques.

In 1990, Stevens published a revised edition of Method of Movement for Marimba which contains a supplemental third part entitled Ten Years Later. This supplement, while only ten pages in length deals with some very important aspects of playing that were not previously addressed, or upon which Stevens wished to expound. Section I of the supplement is entitled Other Ways to Use MOM (Method of Movement) and focuses on how to practice the exercises. Stevens further explains the details pertaining to hand positioning, height, recovery, interval change, and striking area.

Section II is entitled Daily Exercise Routines and focuses on the “core” exercises that need to be practiced daily. He supplies a chart which designates how much time is to be spent on each technique. Section III, entitled Table of Repertoire, simply lists various etudes and major works according to the techniques which they contain. Section IV is entitled Amplifications, and describes the three aspects that Stevens feels need a wider range of volume amplification. These include hand positioning, inner mallet
length, and keyboard height. Section V is entitled *A Retrospective* and is a short history of the development of keyboard percussion technique. Stevens lists contributions from artists such as Clair Omar Musser, Vida Chenoweth, Gary Burton, and Joe Morello. He then concludes part three with a section called *First Edition Errata* in which he corrects the errors of the first edition.

*The New Lionel Hampton Vibraphone Method*, written in 1981 by Lionel Hampton and Jean-Claud Forestier, contains a complete and detailed school of vibraphone playing within its 327 pages of text and musical examples. The text is divided into three parts, plus an introduction discussing the fundamentals of music. Part One focuses on vibraphone techniques and scales. The grip that is pictured is the “traditional cross grip” and discussions include six mallet playing. Parts two and three focus on musical examples. The examples in part two are orchestral vibraphone excerpts in contemporary classic style. Part three contains vibraphone transcriptions in the jazz idiom. Hampton’s text supplies a complete foundation for advanced vibraphone playing.

The videos *Mallet Keyboard Musicianship, Steps to Excellence, volumes 1 and 2*, by Dave Samuels appeared in 1988 and provide a good introduction to four mallet vibraphone playing. Although Samuels demonstrates on the marimba, the focus is on the vibraphone and the jazz idiom. Samuels explains the “Burton cross grip”, spreading techniques, the proper stance in front of the vibraphone, striking the bars, mallet dampening and pedaling technique, some mallet permutations, and improvisation. The video tapes are organized to reinforce Samuels’ books *A Musical Approach to Four Mallet Technique for Vibraphone, volumes 1 and 2*, written in 1982. These books contain excellent technical and musical examples.

*Master Technique Builders for Vibraphone and Marimba*, edited and compiled by Anthony J. Cirone in 1985, presents the playing philosophies and styles of thirteen different keyboard percussion artists. There are many excellent technical and musical approaches presented throughout the book, but there is not enough elaboration from any one artist to consider the book a school of playing. The merit of this compilation is the presentation of a variety of ideas and approaches for consideration from many great keyboard percussion artists.

The video *Master Study Series, volume 1*, was produced in 1988 by Jerry Tachoir and is a basic outline of the various keyboard percussion techniques as they pertain to the vibraphone. He explains the “Burton cross grip”, how to strike the bars, motion of accuracy, and some mallet permutations. Tachoir also discusses the techniques of pedaling and dampening.
Teaching Percussion by Gary Cook was published in 1988 and is an excellent survey of teaching techniques of many percussion instruments. The keyboard chapter is extensive and provides a solid foundation for a school of four mallet playing. Photographs illustrate in detail the three types of grips and various techniques. Cook also supplies musical examples and continues with a section on phrasing and musical expression.

Of all the materials examined herein, the Method of Movement for Marimba by Leigh Howard Stevens is the only complete system for the study of four mallet marimba technique. However, in order to be a complete technical and musical approach to playing, the Stevens’ book needs a fourth part which applies the techniques to musical settings. This approach would not only develop a mastery of the technique, but would also cultivate a musical interpretation as well. The phrasing and shaping of the musical line would be incorporated into the study, thereby giving the student a more meaningful and musical learning experience than merely the development of the technique.

The intent of this lecture document, Advanced Marimba Techniques: An Analysis with Musical Approaches to Performance Problems in West Side Suite, is to present a complete technical survey of advanced marimba techniques and apply them to musical excerpts taken from John Serry’s West Side Suite.
CHAPTER 2

MALLET PERMUTATIONS

A mallet permutation simply refers to the order in which a keyboard percussionist plays his or her mallets in a given passage. This is analogous to the drummer’s stickings and the pianist’s fingerings. There are two mallet numbering systems used in four mallet keyboard percussion music, 1-2-3-4 and 4-3-2-1, left to right respectively. This document uses the former numbering which assigns the bass mallet #1.

Mallet permutations may vary considerably. Some permutations may employ all four mallets, while other permutations use only two or three mallets. Some permutations may feature a single line succession of notes, while others may employ a mixture of single and double notes. No matter what type of permutation is being used, the advanced marimbist must have complete facility and command of the coordination involved with all mallet permutations.

Single Line Permutations

The following exercises are used for developing basic single line mallet permutations using four mallets. There are six possible permutations that begin with and therefore emphasize each of the four mallets. This results in a total of twenty-four single line mallet permutations. Example 2.1 employs the interval of a fifth throughout, with the right hand playing the same pitches as the left hand an octave higher. The six mallet permutations in examples 2.1A – 2.1F emphasize mallet #1. These are also the first six mallet permutations as they appear in Marj Holmgren’s book Developing Four Mallet Technique.
Each example should be repeated one scale degree higher until the octave is reached and descend with the form presented in example 2.2. This form should be played with each permutation in examples 2.1A – 2.1F using the respective stickings.
EX. 2.2 Rhythm of Descending Permutations With 1-2-3-4 Permutation
As previously stated, this first set of permutations in example 2.1 emphasizes mallet #1 because each permutation begins with and phrases toward that mallet. The rest of the possible permutations in this format which emphasize mallets #2, #3, and #4 are listed below:

The following are permutations emphasizing mallet #2:

2-1-3-4 (same ordering as 2.1 D)
2-1-4-3 (same ordering as 2.1 F)
2-3-1-4 (same ordering as 2.1 E)
2-3-4-1 (same ordering as 2.1 A)
2-4-1-3 (same ordering as 2.1 C)
2-4-3-1 (same ordering as 2.1 B)

Each of these permutations uses a similar mallet ordering as the permutations in figure 2.1. The difference between the two groups is the mallet with which the permutation begins and therefore emphasizes.

The following are permutations emphasizing mallet #3:

3-1-2-4
3-1-4-2
3-2-1-4
3-2-4-1
3-4-1-2
3-4-2-1
The following are permutations emphasizing mallet #4:

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

Fourteen of these twenty-four mallet permutations were presented from pages 28–36 in *Four Mallet Studies* by Gary Burton. They are also listed in Marj Holmgren’s *Developing Four-Mallet Technique*.

Example 2.3 illustrates the actuation of six mallets in a permutation that creates a triple-grouping effect. The permutation is 1-2-3-4-3-2-1. A version of this permutation is found on page 18 of Anthony Cirone’s *Master Technique Builders for Vibraphone and Marimba*. Page 18 is located in the section dealing with Dave Friedman.

**EX. 2.3** The Triple Group 1-2-3-4-3-2-1 Permutation

![Example 2.3](image)

When this permutation is performed at a fast enough tempo, it creates a rolled effect.

Various combinations of the ordering of four mallets are often used to create different two and three mallet permutations. Examples of these will be highlighted later in the section dealing with musical excerpts. Additional examples can be found in pages 17–22 in Cirone’s *Master Technique Builders for Vibraphone and Marimba*.
Musical Analysis

Single line mallet permutations may be used to musically state a melody, a melody with a harmony or accompaniment, or as a mixture of these compositional devices within the same passage. In any case, musical consideration needs to be employed so as to treat the melody, harmony, or accompaniment properly.

Due to the great variety of mallet permutations, it is difficult and impractical to create exercises which deal directly with each one. Therefore, it is common practice to create specific exercises for the particular passage being studied.

Various examples of advanced mallet permutations in West Side Suite are analyzed below. Most examples are from mvt. #4, with one short example from Mvt. #1.

EX. 2.4 West Side Suite, Mvt. 1, m. 156

Example 2.4 serves as a transition into the “Jets” theme in measure 157. The permutation for the first two beats is 4-3-2-1, and the last two beats alter that pattern.
The two measures in example 2.5 are part of the introduction of the fourth movement. They serve to outline the tritone “Maria” theme in the soprano voice, mallet #4. The permutation used is 1-2-3-4. The melody pitches are F, B, and C, and should be highlighted. The other pitches function as the chord tones and should be played as more of a glissando with emphasis toward mallet #4.

Example 2.6 uses primarily three note permutations with a fourth mallet added in measures 20 and 24 to double the octaves in the bass pitches A and C#. The permutations in measures 17 and 18 are 1-3-4-3-4-3, 2-3-4-3-4-3, 1-3-4-3, 2-3-4-3, and 1-3-4-3. They are varied in the next two measures as the right hand plays the opposite permutation, 4-3-4-3. Measures 21 and 22 are identical to measures 17 and 18, and in measures 23 and 24, once again, there is a slight variation. This type of passage is excellent for creating exercises because it contains its own technical theme with variation.
The passage in example 2.7 deals primarily with hand to hand playing but there are a couple of measures which feature difficult mallet permutations. Measure 28, for example, uses the permutation 4-1-3-2. Once again, in this measure, mallet #4 functions as the melody and the performer should emphasize the pitches B, G♯, and E, as indicated.

There is a very unique permutation in measure 30. The melody is the accented double note pitches and each beat uses a slightly different permutation. The permutations are 43-2-3-2, 43-1-3-2, and 43-2-3-1. (43 indicates a double vertical or double note between mallets 3 and 4). Due to their similarity yet slight variation, they make good exercises. The melodic passage here is based on the “America” theme.
Example 2.8 is an example of primarily a single line melodic effect, in that there is no clear cut separation between the melody and the harmony. There are, however, pitches which Serry accents and therefore, should be treated as the melody. In the second half of measure 96, Serry has given a mallet permutation suggestion. With that, I indicate the permutation which I use for the rest of the example.
Again in example 2.9 there is no song-like melody with supporting harmony. Serry again accents selected pitches that should be treated as the melody. This passage should be looked at as a mixture between single lined and melody/harmony texture. There are many different permutations in this passage and it also contains double notes on some of the accented pitches. Therefore it helps to have facility with various three and four note permutations before attempting this excerpt.

EX. 2.9  
*West Side Suite*, Mvt. 4, mm. 97–104
Example 2.10 illustrates mallet #4 carrying the melody as the other mallets form the harmonic accompaniment. Serry writes accents over the melody notes to emphasize that the melody in this particular passage is not always on every beat. For example, in measures 105 and 107, beat three is not a melody note. From a musical standpoint, the performer must observe this carefully. Serry relies on 4-3-2-1 and 4-3-1-2 for much of the opening part of this excerpt and in the transition measure 112, he adds double notes. This again supports the need for advanced facility with three and four mallet permutations.

EX. 2.10  
*West Side Suite*, Mvt. 4, mm. 105–112, (letter I)
Example 2.11 is another example of single-line melody and harmonic accompaniment. Double notes are used for harmonic emphasis at points throughout the melodic section (mm. 113 and 116). The sound of melody and harmony is lost by measure 119 which functions as a single line transition.

The focus in example 2.12 is on three note permutations which are found in every measure excluding measures 150, 152, and 154. The permutations involved are double notes in the left hand with either 3-4-3 or 4-3-4 mallet combinations in the right. In measures 160–162 double notes end and the three note permutation of 2-3-4-3 completes the passage.
The study of the preceding examples of three and four mallet permutations will develop the technical fluidity of the marimbist while approaching each example within an appropriate musical context.
CHAPTER 3

ONE-HANDED, TWO-MALLET ROLL

The one-handed, two-mallet roll in four mallet marimba playing is mainly called upon when there is the need to sustain two pitches in one hand (sometimes only one pitch) when the other hand is occupied with some other element of a given passage. An advanced example of its most basic form utilizing a sustained chord in the left hand and a melody in the right is seen below in example 3.1.

EX. 3.1  West Side Suite, Mvt. 1, mm. 33–38
Developing the One-Handed, Two-Mallet Roll

The most difficult aspect of this technique is mastering the control of the roll speed. To properly sustain the length of a tone or tones one must be able to adjust the roll speed to accommodate the size of the given bars on which the roll is being played. For example, if a roll is played on the lowest octave (between F and f), the roll speed need only be about sixteenth notes at a quarter note equal to mm. 132 for a forte dynamic, and sixteenth notes at a quarter note equal to mm. 120 for a piano dynamic. When playing an octave roll at the top of the instrument (between c3 and c4) one needs to employ a much faster roll speed. An approximate roll speed might be sixteenth-note triplets at a quarter note equal to mm. 132 for a forte dynamic, and sixteenth-note triplets at a quarter note equal to mm. 120 for a piano dynamic.

In order to be fluent in adapting to these various roll speeds, one must have complete control of a broad spectrum of roll bases. Often times the player starts with what is sometimes called a “nervous” roll, which is basically achieved by effecting a side to-side muscle spasm in the wrist and forearm. Very little control is involved with this roll and certainly no mastery of the controls needed to vary roll speeds and adapt to interval changes. The bottom line is the marimbist must develop the muscular control.

The following is an exercise with variations which when used properly will help develop control of the one-handed, two-mallet roll.
EX. 3.2
Exercise for Developing Control for the One-Handed, Two-Mallet Roll

1) Set metronome at a quarter note equal to mm. 100.

2) Start with a most comfortable interval. This is usually between a fourth and an octave.

3) After reasonable facility is developed, experiment with adjusting the speed of the metronome both slower and faster (quarter note equal to 80–138).

4) Next experiment with adjusting the interval. If the interval of a fifth was originally chosen to start the exercise, expand to an octave and then reduce to as small an interval as possible (even use a unison if possible).
It is common at the beginning stages of developing the one-handed, two-mallet roll that the marimbist feels most comfortable with both slow and fast roll speeds, but not as comfortable with tempos in between. Many players find that the roll is more easily controlled at a slower tempo when each note is given a single alternating stroke. Also, it is easy to get a feel for the nervous roll in that it depends very little on the mastery of the roll base. The main control problem seems to occur during the transition from a slow to a fast roll speed.

Consider example 3.2 at a quarter note equal to mm. 126. Notice the individual attention given to each single alternating stroke for the first two measures of quarter notes and eighth notes. Then notice at the end of the exercise, over the rhythm of sixteenth-note triplets, when the roll speed is closer to that which was used for the nervous roll. But the main focus is on the rhythms of the triplets and the sixteenth notes. I like to refer to this as the “transition” or the “grey” area because of the lack, at first, of muscle coordination. This is very similar to playing the open double-stroke roll from slow to fast on the snare drum. The slow tempo is the easiest part because each tap of the roll receives its own individual stroke. The fast portion of the roll is the next easiest part in that the double stroke with one wrist motion seems to be developed quickly; however, the transition between each note getting an individual stroke and two notes per stroke seems to be most difficult. At first the marimbist (or snare drummer) will probably feel slightly weaker in controlling this grey area. This is normal, and for this reason much attention should be focused on the control of this area by way of either repeating this portion of the exercise, or creating a separate exercise with focus on the “grey” area.

The next addition to the exercise is dynamics. Play through the exercise at piano and forte dynamic levels. Then employ crescendos and diminuendos throughout the exercise. Increasing speed to create phrases based on dynamic and tempo fluctuations adds musical expression to the exercise.
Roll Speeds, Attacks, and Releases

Once the marimbist has developed a reasonable control over roll bases he or she must start applying a specific roll speed to a particular roll. Basically, the marimbist must know what speed to use for the base of the roll and be able to attack it without variance from that speed. This control is developed by practicing rolls on different areas of the instrument which require various roll speeds. The idea is to get the feel of the roll speed at the particular area of the instrument and practice attacking the roll at that speed with consistency.

EX. 3.3  Exercise for Developing Control Over the Attack of the Roll

All rolls for this exercise should be started with each mallet separately and both mallets together, and released with each mallet separately.

Practicing the exercise in example 3.3 at various areas of the instrument, with a variety of dynamics and tempos will help the marimbist develop correct attacks and releases of the one-handed, two-mallet roll. One must also acquire the sound of an appropriate roll speed. This comes through attentive repetition of matching the correct roll speed to the musical interpretation. Through this process the marimbist will develop a “mental-aural picture” of how the passage should be executed. A mental-aural picture is a term first introduced in print by Fred Hinger in his text *Techniques for the Virtuoso Timpanist*.

A musical aspect of the roll is which mallet starts the roll. This is most always based on the musical situation and this will be discussed later under the Musical Analysis section.
Examples 3.4 and 3.5 increase the difficulty of this exercise.

EX. 3.4 One-Handed, Two-Mallet Roll Right Hand then Left Hand

EX. 3.5 One-Handed, Two-Mallet Roll Alternating Hands

The exercises in example 3.4 and 3.5 contain the additional control problem of short duration rolls. It seems to the player that just as soon as the roll is getting started, it comes to an end. The short roll does not allow for the marimbist to really get into a rolling motion. The shorter rolls allow only enough time to focus on the attack and the release of the roll. The following is a musical example demonstrating the short roll duration.
Example 3.6 features rolls of various lengths from a dotted-half to an eighth-note roll. A roll of eighth-note value at this tempo is so fast that it is only about four strokes in duration. This hardly allows the performer to get into a roll, and should probably be thought of as a four stroke ruff starting on mallet #3.

In a more advanced passage, one might come across a roll that changes intervals while sustaining its sound. This adds an additional element to test the control of the performer as the interval must be changed but there is no break in the roll to make the change. A three measure example of this is found in example 3.7. Here the intervals change between sixths and octaves while one pitch is sustained.
Along with determining proper roll speed and dynamics, one needs to decide which of the two mallets is going to start the roll. Obviously, most musical decisions are based on the interpretation of the individual performer, but the following are suggestions for determining which mallet starts the roll.

First consider the right hand. Many marimbists advocate that the soprano voice should be brought out because it is generally the melody and therefore the roll should be started with mallet #4. However, the soprano is the voice that is most present within the texture of a two, three, or four voice chord. This is, of course, assuming proper mallet choice is being used. The second most present voice is the bass voice. These two voices are the most prominent because they define the outer boundaries of the chord. Mallets #2 and #3 are less prominent due to their inner location in the chord.

Generally, the order of prominence among the four voices is mallet #4, then mallet #1, and then mallets #2 and #3. With this in mind, I often like to start the roll with the weaker inside mallet. This tends to make the attack sound fuller because the less prominent voice is allowed to speak slightly before the more prominent one. Also, because the inside voices are heard slightly before the outside voices, the chord tends to be defined faster and clearer.

There are times when a unison attack is more appropriate. The main reason for this would be to increase the clarity in a passage where both of the mallets are changing at a quick tempo. Example 3.8 illustrates this.
EX. 3.8  West Side Suite, Mvt. 1, mm. 13–38
The lengthy excerpt in example 3.8 contains a couple of examples of the one-handed, two-mallet roll. The first examples feature the roll in the right hand serving as the harmonic function with a rhythmic melody in the left hand. These are found in measures 15–20 and again from measures 23–28. The rolls in the right hand change intervals with no apparent break. I suggest striking the roll in unison with mallets #3 and #4 because there is little time between the rolls and a unison striking immediately defines the chord change.
For the roll change in measure 16 of example 3.8, I prefer to use a unison attack to help define the quick change from B and E to B♭ and F. The featured music of this section is in the left hand and the chord changes in the right receive secondary focus. Therefore, these chords in the right hand need to be defined quickly and accurately, and a unison attack achieves this clarity.

For the roll change in measure 26, I prefer leading with the inside #3 mallet to avoid a muddy sound on the soprano leap of a minor seventh. For the chord change in measure 27, I prefer to start the roll with the inside #3 mallet for a different reason. The C in the soprano voice is held from the previous chord and its sound is already established in the ear. The only pitch change is from E to F in the inside voice, thus creating the need to lead the roll with the inside mallet #3.

Other measures in example 3.8 feature the roll in the left hand in a harmonic function. The interval of a seventh, occurs in measures 13–14 and 21–22, and the interval of a sixth occurs in measures 33–38. For these rolls I suggest starting the roll with the #2 inside mallet. This allows for a fuller harmonic sound.

There are also some instances when the best choice is to start with the outside mallets such as in example 3.10 which is discussed below. The decision of which mallet to use to start a roll should be based on the concept of achieving the clearest sound for the given musical passage.

EX. 3.9 West Side Suite, Mvt. 1, mm. 69–73
Example 3.9 contains the familiar “Jets” theme, and an octave E♭ roll. I like to loosely strike this roll with mallet #3 for a fatter and lazier swing feel and sound. Each individual player should experiment with the roll in this passage to determine which way seems most comfortable.

In measure 116 of example 3.10, a one-handed, two-mallet roll begins in the left hand. I choose to start this with a simultaneous attack to achieve a mf p effect (note the dynamic markings). In measure 117 the attention switches to the right hand with a strongly played F to octave B♭s. To match the sharp percussive quality I get from the single strike of the F, I like to start the octave B♭s with the soprano mallet #4. A simultaneous attack of a roll in this register does not have enough sustaining power for a continuous roll effect. Instead, what is heard is an octave B♭ attack followed by a roll. Therefore, a simultaneous attack is not the appropriate technique because the musical intent here is to create a solid sound that immediately sustains throughout the remaining bars of the passage. As the roll continues into measures 118 and 119, I like to treat each new note in the left hand with a rubato feel and a slight accent. During this entire passage there should be two separate one-handed, two-mallet rolls sustaining to create the proper individual effects. Notice the roll speeds differ between the right hand B♭s and the left hand As. A designated roll speed needs to be assigned to each of the two rolls.

EX. 3.10  West Side Suite, Mvt. 1, mm. 116–119
EX. 3.11  *West Side Suite*, Mvt. 3, mm. 1–5

EX. 3.12  *West Side Suite*, Mvt. 3, mm. 17–23
Examples 3.11 and 3.12 illustrate the basic aspects of small interval one-handed, two-mallet rolls. In measures 1, 17, and 18, there is not only the need to roll at the interval of a third, but the need to be playing this roll on a natural bar and an accidental. This particular technique calls for some upper body movement. Marimbists, in general, find it difficult to roll on very small intervals due to the lack of wrist momentum that can be generated from side to side. When playing a roll from a natural to an accidental bar, intervals should be stretched out as far as possible between the bars. It is possible to create the distance of about a fifth if the mallets are placed at correct spots on the bars.

By stretching out the mallet placement, the marimbist can make the distance between the mallet heads larger than the actual interval size. With this in mind, it is actually easier to play a third on a natural and an accidental than it is to play it on two naturals or two accidentals.

There is a one-handed, two-mallet roll in the right hand in measure 21 of example 3.12 on the single pitch F. The upper body must be positioned to find appropriate beating spots on the bar. The #3 mallet is played at the end of the bar and the #4 mallet is played in between the nodes. The best timbral balance between the two mallets is achieved when the distance between the inside node and mallet #3 is equal to the distance between the outside node and mallet #4.

Another example of a one-handed, two-mallet roll on a single pitch is found in measure 60 of the third movement and illustrated in example 3.13. This time the pitch is an E natural.

EX. 3.13  
West Side Suite, Mvt. 3, m. 60
Examples 3.14 and 3.15 are basic examples of octave rolls in the left hand serving a harmonic function to the melody in the right hand. I use a unison attack for both as the passage requires a strong and immediate attack. The attack should be made as a sforzando piano with a crescendo to establish the sound of the roll and create the proper balance between the roll in the left hand and the highlighted melody in the right hand.
Example 3.16 is a short example that combines two types of rolls, one between the two hands on one pitch, and the other a one-handed, two-mallet roll at the interval of a minor seventh. The single pitch D is played hand to hand with mallets #2 and #3. Without a break in the D roll the C should enter and blend in. The difficulty here is to execute the process smoothly. Two ways to approach mastering this technique are given below in examples 3.17 and 3.18.

Ex. 3.17 Adding New Mallet, Deleting Old

Example 3.17 is a rhythmic break down of the roll which demonstrates a smooth approach to the roll in example 3.16. The roll begins on the D with mallets #2 and #3. When the C is added in mallet #4 with the triplet figure, eventually the D in mallet #2 is dropped.

Another rhythmic break down of a smooth roll approach is seen in example 3.18. The difference between 3.17 and 3.18 is the middle triplet section is omitted. This motion simply replaces the D in #2 mallet with the C in #4 mallet.
Ex. 3.18 New Mallet Replaces Old

As illustrated from excerpts of West Side Suite, the one-handed, two-mallet roll is often used in four-mallet marimba playing. It may appear in either hand with various interval sizes. It serves both harmonic and melodic functions. A particular roll might begin with a unison attack or with either the inner or outer mallets. Its release would be with either the inner or the outer mallet. Therefore, the advanced marimbist needs to master the technical facilities involved in properly executing all forms of the one-handed, two-mallet roll.
CHAPTER 4

INTERVAL CHANGES

The most frustrating aspect of changing intervals is accuracy. Even though the muscular controls for interval changes have been developed, there are still those days when the intervals seem to be the slightest bit off. Why?

One reason is that the marimbist never actually comes in direct contact with his or her instrument as does the pianist. The marimbist must rely on small, delicate muscles to control the actuators, which are proportionally large and cumbersome for these muscles. Also, the marimbist is about 15” away from the intended targets. This separation of player from instrument results in inconsistencies in accuracy.

Another reason marimbists experience frustration is each interval on a given marimba is a different length. The Kori model 1200 low F marimba has the lowest octave, F to f, that is 21 inches in length. At the top of the instrument, the distance of the octave from c3 to c4 is only 16 inches long. This can and does pose potential problems with interval consistency while playing interval changes. Additionally, for those who do not have the luxury of playing on just one make of instrument, which is most student marimbists, there is the problem of the intervals being different from one make to another.

What can the marimbist do to increase accuracy? A proper grip is a main factor for changing intervals. I will assume that most marimbists are employing the Musser/Stevens grip due to the additional mallet spread available vs. the Burton, or traditional cross-grip. For a visual reference to the Stevens grip, refer to pages 10–11 in his book, Method of Movement for Marimba. These pictures accurately illustrate the grip that supplies the greatest facility of movement. Along with the pictures, Stevens explains interval changing in detail in pages 12–14. In short, the hand should be in a handshake position. This allows the inner mallet to move freely in and out. This in and out movement is guided by the thumb and the index finger and should be accomplished by turning the mallet between those fingers.
There is a variation of this interval changing motion that many players advocate which can be employed for some very fast interval changes. A guided tossing motion occurs on the up stroke as the grip is loosened just enough to toss the mallets to their desired positions, and then the hands secure the mallets to the desired position on the down stroke. This is all done very quickly in performance but when practiced one should start slowly and relaxed.

Both of the aforementioned methods of interval changing require a great amount of muscle memorization. And even though the change between a third to an octave may be slightly different due to inconsistencies in octave sizes, the marimbist can acquire enough muscle memorization to approximate the distance of the interval change.

Exercises which deal with specific musical excerpts seem to be very popular when developing accuracy of interval changes. This is because normally the marimbist is practicing an interval change for a particular passage. Application of this sort is a great way to get the feel for changing intervals.

Another consideration to increase interval changing accuracy is the instrument height. Set the marimba at a consistent height, one which is comfortable for all types of maneuvers needed for playing the instrument. Always maintain this height for all playing. The following are exercises for general interval practice.

EX. 4.1

Upper Voice Ascends and Descends by Step–Lower Voice Remains Constant

1) Repeat each double-note attack 4 times, 3 times, 2 times, and then 1 time.
2) Be very attentive about the detailed physical movement in the hand necessary for this exercise.
3) Practice both hands an octave apart.
EX. 4.2
Upper Voice Descends and Ascends by step, Lower Note Remains Constant

EX. 4.3
Upper Note Remains Constant, Lower Note Ascends and Descends by Step

EX. 4.4
Upper Note Remains Constant, Lower Note Descends and Ascends by Step

EX. 4.5
Lower Note Remains Constant, Upper Note Arpeggiates Up, then Down
EX. 4.6

Lower Note Remains Constant, Upper Note Arpeggiates Down, then Up

The following exercise involves simultaneous movement by both mallets.

EX. 4.7  Octave to a third

EX. 4.8  Octave to a second

As you increase the tempo for exercises 4.7 and 4.8, entertain the idea of tossing the mallets to their appropriate positions.
Example 4.9 demonstrates two types of interval changes. In measures 14 and 22 the right hand contains the interval spread from a fifth, to an octave, to a tenth. These two measures are a half step apart and require both right hand mallets to change pitches for the interval change. Measures 15–20 and 23–28 also require similar techniques. The left hand contains “broken interval” changes. The right hand, however, has double note interval changes with rolls. Some of these rolled changes require both mallets to change pitches as in the last change in measures 16, 18, and 19. Other changes require only movement of
one pitch as in measures 17, 25, and 27. Since this passage contains examples of these two types of interval changes it is good to create exercises for each type.

EX. 4.10  *West Side Suite*, Mvt 1, mm. 35–38

The left hand in measures 35 and 38 contains very difficult interval changes as shown in example 4.10. The difficulty in these measures is changing between a second and a sixth during such a quick tempo. Start this example very slowly to coordinate the rhythms between the two hands and develop the feel of the passage. Increase the tempo accordingly as this coordination becomes more fluent.

EX. 4.11  *West Side Suite*, Mvt. 1, mm. 53–62
Example 4.11 contains broken interval changes in the left hand. Measure 53 has the broken interval of a sixth (E to C) which changes to an octave (C# to C#). Measure 54 has a sixth (D to B♭) which changes to an eleventh (B to E♭). The key to mastering a passage like this is to start changing the interval while the next note is being played. For example, after the E is played in measure 53 mallet #1 should expand to get to the C# while mallet #2 is playing the middle C. A similar situation occurs in measures 61 and 62 with double note harmony in the right hand.

EX. 4.12  West Side Suite, Mvt 3, mm. 1–5

The prominent interval changes of example 4.12 are those in measures 2 and 5. Measure 2 has interval changes in both hands involving quick arm motion. The difficulty in measure 5 is changing the arm position. While the right hand plays C and A♭, mallet #3 is on the level of the natural notes, and mallet #4 is on the level of the accidentals. Within the time span of an eighth note the mallets must reverse their levels on the instrument, as mallet #3 moves to E♭ and mallet #4 to a G. This creates a very fast arm movement. This movement needs to be a smooth, sweeping motion as opposed to a movement which is jerky. This approach is needed to achieve the flow of the melodic line.
Throughout these measures in examples 4.13 and 4.14 the right hand is called upon to make very quick interval changes, many of which contain very fast arm motions. The musical line in example 4.13 and 4.14 are more staccato than those in example 4.12. In this case it is fine to use a quick, jerky arm motion in playing these two examples.

**EX. 4.13  West Side Suite, Mvt. 3, mm. 6–9**

![Ex. 4.13](image)

**EX. 4.14  West Side Suite, Mvt. 3, mm. 15 & 16**

![Ex. 4.14](image)
Here in example 4.15 the right hand plays the melody A, B♭, and C twice. The first time mallet #3 plays the same notes an octave lower then adjusts to harmonize it at the interval of a sixth. The difficult part of executing this properly is keeping the focus on the repeating three note melody in mallet #4 while the interval change mainly effects the ascending harmony line in mallet #3. The player may either musically “lean” towards the melodic line or consider a gradation in mallet hardness between mallets #3 and #4.

A similar passage occurs in example 4.16 using the repeating melody of G♯, A, and B. This example is transposed down a half-step from example 4.15 which creates an opposite arm movement as all the movements from the natural pitches to the accidentals are switched to movements of accidentals to naturals. The same musical considerations must be employed in regards to the melodic line as in example 4.15.
This passage in example 4.17 is an expanded version of the passage in example 4.13. It is important to work this passage slowly at first and gradually increase tempo so as to insure the correct arm motion and kinesthetic muscle memory.

In measures 25, 27, and 29 of the passage in example 4.18, the right hand is called upon to make very quick interval changes. Isolate the movement of each hand separately when practicing, first the right hand then the left. When combining the two hands give each hand individual attention. This will increase the performer’s awareness of all the details involved between the two hands.

Musically this is difficult in that the “I Like to be in America” melody must be distinctly heard even though most of the note changes are those which form the harmony. It may be to the performer’s advantage here to use a slightly harder #4 mallet to help bring out the melody.
EX. 18  West Side Suite, Mvt. 4, mm. 25–32 (letter B)
Examples 4.19 and 4.20 illustrate very fast interval changes in both hands. In measures 37, 39, 44, and 46, the changing pitch in the right hand is in the top voice, therefore making it easier to bring out the melody in this passage. Even though the interval changes directly involve the melody, the performer still
needs to “lean” on the changing pitches because it is difficult to clearly hear the soprano voice in the upper register of the marimba.

EX. 4.21 West Side Suite, Mvt. 4, mm. 61 & 62

There are broken interval changes in the right hand of the passage in example 4.21 harmonized by the one-handed, two-mallet roll in the left hand. The interval changes from a third at the end of measure 61 stepwise to a sixth at the end of measure 62. The technical difficulty here involves controlling the expanding broken intervals as they occur with fast harmonic rhythm. The sixteenth notes in the right hand need to be played alternately between mallets #3 and #4. This will allow the marimbist to better emphasize the melody in mallet #4.
In example 4.22 there is a broken interval change in the left hand while the right hand is playing a rolled interval change between the intervals of a sixth and an octave. The one-handed, two-mallet roll in the right hand functions as the harmony to the melody which is arpeggiated in the left hand between mallets #1 and #2. Therefore, the left hand melody needs to be emphasized and the trill in the right hand needs to be treated as the supporting background harmony.

The preceding examples thoroughly demonstrate the various types of interval changes that occur in the advanced marimba literature. For every example that deals with a difficult interval change the marimbist needs to start slowly and increase the tempo as fluency and a good feel for the passage are acquired. This approach develops the kinesthetic muscle memory of a passage which is needed for accurate execution. Musically the performer must always be aware of what voice, if any, of the interval change needs to be emphasized. With these considerations the marimbist will best develop an appropriate musical product.
CHAPTER 5

OCTAVE PLAYING

Throughout marimba literature there are many examples of octave playing. All can be classified into two types, 1) octaves played hand to hand, and 2) octaves played with one hand. There are four possible sticking combinations for the octave played hand to hand. These include octaves between mallets #1 and #3, #1 and #4, #2 and #3, and #2 and #4. There are two possible combinations for the octave played with one hand. These are between mallets #1 and #2, and #3 and #4. This chapter will primarily focus on octaves played with one hand.

As with any interval, the most difficult aspect of playing octaves is accuracy. I feel the octave should be studied separately because it is so exposed and so commonly used in the marimba literature.

Similar to interval changes, accuracy problems with octaves are greatly due to the inconsistency of the bar sizes. The distance in mallet spread which may be an octave in one case may be as small as a sixth in another. The difference in octave size is dependent upon the location of the octave on a given instrument as well as the differences in octave lengths from one make of instrument to another.

The following are suggestions for increasing octave accuracy.

1) If possible, use mallets of equal length. The marimbist should have a mallet selection of various degrees of hardness. The marimbist should also have mallets of equal shaft length. There are, of course, special exceptions when longer mallets might be needed to facilitate ease in playing a piece with an extraordinary amount of large interval spreads. But for general usage, the marimbist should use mallets with equal mallet length.

2) Make every effort to practice and perform on the same make of instrument. As previously stated, the octave distance will vary between two different makes of instruments, and switching from one make to another will adversely affect accuracy.
3) Make every effort to memorize a particular passage kinesthetically, or by feel. As the marimbist increases his or her kinesthetic memory the grip will eventually adjust to the feel of expanding and contracting to the octave. A strong kinesthetic memory is most important in a passage like that which is found in example 5.1. Here there is a series of octaves which ascend by skip, and a strong kinesthetic memory is of great help.

EX. 5.1 

West Side Suite, Mvt. 1, m. 166

4) Develop the peripheral vision to be able to see the lowest note in the left hand and the highest note in the right. Even though constant repetition of a passage will increase the kinesthetic memory, it is also beneficial to be able to see the passage.
Exercises for Octave Practice

For stepwise motion: All exercises are to be played in all keys.

Exercise 5.2 should be played with the left hand then by the right an octave higher.

EX. 5.2 Octaves in Each Hand

The octaves with stems down are played with the left hand and stems up with the right.

EX. 5.3 Octaves for Both Hands

Conclude exercise 5.3 by descending in reverse.

EX. 5.4 Hand to Hand Double Notes
EX. 5.5  Left Hand Double Notes, Right Hand Broken Octaves

The right hand in exercises 5.5 can also be reversed and played with mallet order #4 to #3.

EX. 5.6  Right Hand Double Notes, Left Hand Broken Octaves

The left hand in exercise 5.6 can also be reversed and played with mallet order #2 to #1.

For Skips and Leaps:

Play exercises 5.2, 5.3, 5.4, 5.5, and 5.6 arpeggiated two octaves up and down a major triad.
Additional Exercises for Octave Accuracy

The following are ideas for musical exercises that combine stepwise motion and motion by skip by using a common tune such as *Mary Had a Little Lamb*.

1) Each hand separately similar to exercise 5.3.

EX. 5.7

*Mary Had a Little Lamb*, Simultaneous Octaves in Right and Left Hand

2) In octaves with hand to hand double notes as in exercise 5.4.

EX. 5.8

*Mary, Had a Little Lamb*, Alternating Double Note Octaves in Each Hand
3) With a triplet on each beat as in exercises 5.5 and 5.6.

EX. 5.9

*Mary Had a Little Lamb*, Double Note Octave in Left Hand, Broken Octave in Right

Use the same three ways to play *Twinkle Twinkle Little Star* and any other favorite melodies.
Musical Analysis

EX. 5.10  West Side Suite, Mvt. 1, mm. 5–7

The octave roll between e2 and e3 in example 5.10 begins with mallets #4 and #2 then switches to #4 and #3 as indicated in the part. I choose to play the entire three bars with mallets #3 and #4 to avoid the mallet change from #2 to #3 in the lower voice. Avoiding the mallet change allows for more control of the roll marked \( p \) through its gradual crescendo to fortissimo in measure 12. I see no musical reason for this request. The basis for this instruction is simply to show off technical facility, and other than that there is no real purpose for it.

The difficulty with this passage lies in producing a smooth roll at the dynamic level piano. For a trill on this range of the marimba the roll speed must be quite fast and it is difficult to play softly and fast simultaneously. Therefore, this roll requires a good deal of control.

EX. 5.11  West Side Suite, Mvt. 1, mm. 15 & 16

The left hand in example 5.11 contains a rhythmic melody which consists of broken octave B♭s. The left hand needs to be emphasized here as the harmony is in the right hand with a one-handed, two-mallet roll.
The same musical pattern occurs in example 5.12 as first presented in measures 15 and 16. In this case, the broken octaves continue for four measures instead of two. Once again, the eighth notes must be emphasized in the left hand.

EX. 5.12  *West Side Suite*, Mvt. 1, mm. 23–26

EX. 5.13  *West Side Suite* Mvt. 1, mm. 120–123
The beginning of example 5.13 contains chromatic scale passage work which collectively establishes the harmony for the upcoming melody. Measure 120 begins with octaves in the right hand and
continues in measure 121 over an octave roll in the left hand. Measure 122 separates the octaves hand-to-hand and transfers the octaves to the left hand in measure 123.

In example 5.14, on beat 5 of measure 128 broken octaves begin again in the left hand. From measure 129 through 140 the left hand contains a chromatic countermelody with a few broken octaves occurring in measure 131, 132, 134, 136, and 138–140. Make sure the left hand does not overpower the right hand dynamically. A correct balance is difficult to control due to the fast octaves and the resonance of the lower range in which the left hand is playing. It is very important to bring out the melody in the right hand.

EX. 5.15 West Side Suite Mvt. 1, mm. 145–153

The musical theme of example 5.15 is the introduction to the “rumble” music.

Serry uses octaves both together and broken to add tonal and rhythmic intensity. Tonally, the right hand represent the Jets making their preparations for the rumble. The left hand represent the Sharks. Serry uses broken octaves in sixteenth notes to create the rhythmic vitality of a rumble.
The dynamic throughout this section is marked $f$ with a crescendo to $ff$ in measure 153. This section features tonal dissonance and rhythmic intensity and should be played in a way which represents a gang fight.

EX. 5.16  
*West Side Suite*, Mvt. 1, mm. 162–166

The music of example 5.16 represents the fleeing of gang members away from the unexpected deaths of the rumble. The left hand is playing broken octave sixteenth notes which represents the gang members running away from the scene of the battle. This should be performed with fleeing intensity.
The octaves in the left hand of measures 6–9 in example 5.17 function as a V-I harmonic progression in E♭ with the melody in the right hand. Similar music occurs in example 5.18, measures 15–17, but this time in D.
The left hand harmony in example 5.19 functions as V-I, this time in G♭. This passage is similar in style to the previous two examples using a new melody in the right hand.

EX. 5.20  *West Side Suite*, Mvt. 3, mm. 65–70

The music in example 5.20 ends the third movement and is a variation of measures 24 and 25 of example 5.19. Example 5.20 is an extended variation with octave melody in the right hand. Musically this passage needs to be played with driving intensity to the end of the movement.
EX. 5.21  West Side Suite, Mvt. 4, mm. 56–61

The chromatic sextuplet ending measure 57 of example 5.21 is the anacrusis to letter E. This needs to crescendo into letter E and establish the quick tempo. Although the dynamic marking is $\text{piu f}$, the melody in the left hand needs to be emphasized. The harmony in the right hand is rhythmically staggered with the left hand as the harmony is played on the off-beats.

EX. 5.22  West Side Suite, Mvt. 4, mm. 92 & 93

Example 5.22, the final excerpt of this chapter, contains trilled octaves in the right hand. These octaves function as the harmony and are of different durations. The difficult eighth-note rolls in measure 93 are better thought of as four stroke ruffs between the octaves because they are so short and hardly can be
considered a roll. I prefer to start these four stroke rolls with mallet #3 so the last of the four strokes is in the higher octave in mallet #4. Ending with the higher octave helps bring out the pitch at this quick tempo. Exercise 3.5 would be helpful in mastering this skill.

The preceding examples of octave use within each hand demonstrate the octave in a variety of forms. The different forms include single-note and double-note struck octaves by leap or stepwise, and rolled octaves of various duration. In any form the octave appears, the performer must have a solid command of the distance between the notes. This is a technique that requires much study and concentration.
CHAPTER 6

PERIPHERAL ACCURACY

Peripheral accuracy for advanced marimba playing pertains to the ability to accurately execute a passage that is comprised of pitches that are located beyond one’s peripheral vision. Successful execution of a marimba passage that extends beyond one’s peripheral vision can be very frustrating and requires the development of peripheral accuracy. This accuracy is best developed by learning each passage three different ways: auditorily, kinesthetically, and visually.

The marimbist should learn the passage auditorily by first getting the sound of a group of notes in the ear. This is best achieved by playing each note slowly and accurately to hear it correctly. Then set the mallets on their respective notes and strike a unison to hear the passage as a chord. Repetition of this process will accurately define the auditory goal for the passage. Also, review this process from time to time while working the passage to performance level. This will help retain the accurate sound of the passage and avoid inaccuracies which may have slipped in by sloppy or inaccurate practicing.

The advancing marimbist must also learn to practice kinesthetically with a conscious awareness of the feel of the passage. The stretch the body needs to play a particular passage and what it physically takes to play it should be carefully noticed. For instance, the arm spread and the bodily lean required to play the simultaneous A and e3 on the down-beat of example 6.1 should be both felt in the marimbist’s body and consciously registered in the mind. Then take note of both hands closing together as the right hand plays the triadic melody and the left hand closes to the interval of a second. Continue this kinesthetic awareness as each peripherally difficult passage is repeated.

Often times the marimbist rushes through the details of practicing a particular passage and develops a false familiarity with the kinesthetic movement. The movement then tends to get taken for granted and never really is learned on a conscious level. For this reason it helps to repeat the passage at many different tempos to truly realize each bodily movement.
When learning a passage that is beyond one’s peripheral vision the marimbist also needs to learn how to glance effectively at the notes before he or she plays. A “snapshot glance” should be developed when all the notes cannot be seen simultaneously. The following is a step-by-step analysis of the “snapshot glances” I use to execute example 6.1 from Mvt. I of West Side Suite.

The player should quickly take a “snapshot glance” at the low A in the bass before looking at the high E which is played on the down-beat. This glance helps to put the distance the left hand must extend in perspective for accurately striking the low A. Because the Jet theme melody in measure 69 is so exposed, one should focus on the right hand to increase its chances for accuracy. As the two hands come together in measure 69, look at the C⁰/D⁰. Once the octave Eᵇ roll is attacked with the right hand, look to the left hand to accurately play the F⁰ and the A. In a similar manner, look back to the right hand at the anacrusis to measure 71 to once again watch the melody. This is an effective example of a “snapshot glance” for this passage.
The following are exercises for developing peripheral accuracy.

**EX. 6.2**  Scalar Unison Pitches, Two Octaves Apart

![Scalar Unison Pitches, Two Octaves Apart](image1)

**EX. 6.3**  Alternating Scalar Unison Pitches, Two Octaves Apart

![Alternating Scalar Unison Pitches, Two Octaves Apart](image2)

**EX. 6.4**  Arpeggiated Unison Pitches, Two Octaves Apart

![Arpeggiated Unison Pitches, Two Octaves Apart](image3)

**EX. 6.5**  Alternated Arpeggiated Unison Pitches, Two Octaves Apart

![Alternated Arpeggiated Unison Pitches, Two Octaves Apart](image4)

Practice examples 6.2–6.5 with the following mallet combinations: between #1 and #3, between #1 and #4, between #2 and #3, and between #2 and #4.

Next try some favorite folk tunes with the format of examples 6.2 (unison) and 6.3 (alternating hand to hand).
Musical Analysis

The passage in example 6.6 is similar in many respects to that in example 6.1. Special attention needs to be devoted to the melody which is very exposed. It is advisable to focus on mallet #4 and rely on the kinaesthetic feel and auditory triggering for the left hand harmony. The harmonic movement is repetitive and not too spread out, therefore it is not that difficult to get the feel for this pattern. The right hand, however, needs additional visual attention since the melody is so exposed and since it is an octave higher than the harmony notes.

EX. 6.6 West Side Suite, Mvt. 1, mm. 92–97

The tricky pitch d1 which is played with mallet #3 in example 6.6, appears each time the left hand plays the tri-tone interval between G♯ and C. Together these pitches form a D major, minor seventh chord. This chord along with the F natural in the melody creates a “bluesy” flatted third effect. To musically enhance this harmony the passage needs to be played with a jazz swing feel.
EX. 6.7  *West Side Suite*, Mvt. 1, mm. 98–103

The passage in example 6.7 requires a rather large arm spread to reach the melody played at 8va in the right hand. Once again, the marimbist should memorize the feel and sound for the left hand pattern and visually focus on the right hand to secure better accuracy.

EX. 6.8  *West Side Suite*, Mvt. 1, mm. 162–165

To help the peripheral difficulty of the passage in example 6.8, the marimbist must hold a solid octave in the left hand. Also, a feel of the half step movement that occurs between the octave Ds and Es
must be developed. The visual attention needs to be on the triplet variation of the “Jets” theme melody in mallet #4. This visual attention will help secure better accuracy of this melody which is very exposed. Musically, the difficulty is creating the proper balance between the two hands.

EX. 6.9 West Side Suite, Mvt. 1, mm. 190–201

There needs to be a strong kinesthetic awareness of the rhythmic variations of the eight note bass pattern of e, c1, c°, c°1, d, b°, b, and e°1, which occurs in the left hand in example 6.9. This pattern appears in three different rhythmic forms: with quarter and eighth notes in measures 190–193, with continuous eighth notes in measures 194–197, and with sixteenth notes in measures 198–201. The key to this section is to master the feel of the rhythmic variations. This allows for visual attention to be focused on the right hand melody.
The “Jets” theme in measures 190–193 is transposed up a minor third to C major from its original form in A major. Measures 194–197 contain a continuation of the theme and emphasis needs to be made on the eighth notes in the right hand to create the jazzy swing feel of the triplet figures. The end of the movement, measures 198–201, is the original Jets theme played with a very fast sixteenth-note rhythm. The difficulty here is simply the tempo.

EX. 6.10  West Side Suite, Mvt. 2, mm. 40–49

The most difficult aspect in performing the passage in example 6.10 is to clearly define the melody in mallet #4 while smoothly playing the rhythmic counterpoint. The performer’s visual focus is best centered upon the middle voices, mallets #2 and #3. Most of the rhythmic activity is in the middle voices and focus here helps to establish a balance point toward the center of the body. The only other reasonable focal point would be toward mallet #4 to secure accuracy of the soprano voice. The danger with this is it may cause too many inaccuracies within the two inner rhythmic voices. To be consistently accurate with mallet #1 is very difficult.
Example 6.11 above has technical difficulties concerning peripheral accuracy similar to those in example 6.10 in that the main visual focus should be centered upon the two inner voices. The main problem in example 6.11 is clearly highlighting the melody in the soprano voice as it has the least rhythmic activity of all the voices. I suggest both using a slightly harder #4 mallet and “leaning” toward the melody.

In example 6.12 strive to keep the left hand octave solid and for accurate movement between the octave B♭s and E♭s. Rely on kinesthetic memory for the left hand and visually focus on the right hand melody.
The main difficulty in the five bar passage in example 6.13 is the wide intervallic separations. The spread is three octaves in measure 10, and it stretches as far as four octaves simultaneously struck on beat four of measure 12. It is very helpful to look quickly with a “snapshot glance” between the two hands. The “snapshot glance” will allow the marimbist to prepare for the kinesthetic movement involved.

The following is a step-by-step analysis of the “snapshot glances” I use for example 6.13. In measure 10 look at the right hand octaves until the B♭ roll is reached, then look left to play the rest of the measure which consists of larger intervallic skips than the right hand. Look right again to set up the quarter-note triplets upcoming in measure 11, and quickly return visual focus on the left hand to play measure 11. By watching the larger intervallic spread in left hand part of measure 11 the marimbist must rely on kinesthetic memory for the quarter-note triplets in the right hand. This combination of visual and kinesthetic coordination needs to be an integral part of the learning process when attempting passages of this difficulty.

Beat four of measure 12 contains the difficult four octave simultaneous attack between mallets #1 and #4. To increase the accuracy of this four octave unison, very quickly look left to set up the low B♭ and then back to the right hand for the high B♭ attack. A similar technique can be employed for the end of
measure 13. Immediately following the d3 with mallet #4 on beat three, quickly look left for the B♭ with mallet #1; then immediately look back to set up the upcoming melodic descent in measure 14.

A similar passage is found in example 6.14, however, it is slightly varied from 6.13 and a half step lower in the key of A.

EX. 6.14  **West Side Suite, Mvt. 3, mm. 36–40**
This phrase in example 6.15, which ends the movement, is an extended version of example 6.12. Even though the left hand octave is not used until measure 65, be certain it is set by the start of measure 63. Then, merely add the #1 mallet on the octave in measure 65.

The demand for peripheral accuracy, as seen in various difficult forms in the preceding musical examples, occurs throughout much of the advanced marimba literature. Mastering the technique requires auditory, kinesthetic, and visual awareness, all of which must be programmed into the mind and body with a high level of conscious awareness in practice.
CHAPTER 7

OSTINATO PATTERNS

The first movement of West Side Suite contains many examples of ostinato patterns. In most cases, these patterns establish a harmony over which a melody is played. Serry uses the ostinato pattern to sound a chord or a chord progression longer than the bars can naturally sustain.

Since four mallet marimba playing allows for only two mallets to sustain a chord in either hand, the only way of controlling the duration of the sound is with a one-handed, two-mallet roll. The roll is adequate for harmonies of just two pitches, but for fuller chords, an ostinato pattern is often employed.

Suppose there is a melody in the right hand, and the desired harmony in the left is an A major seventh chord. An option is to play the third and the seventh of the chord, which are the pitches which define the quality of the chord. This, however, could lead to confusion because it does not define the tonic in the bass. Another feasible option is to use an ostinato rhythmic pattern. Example 7.1 demonstrates an ostinato rhythmic pattern in $\frac{3}{4}$ time which defines an A major seventh chord.

If the pattern in example 7.1 were to repeat over a period of time, the chord would appear to the listener as sustained. This ostinato way of “fooling” the ear is a popular compositional technique due to the nature of the marimba’s short sustaining quality. If the vibraphone was being used, however, the extended repetition of the ostinato pattern would not be needed to sustain a chord. The chord tones could simply be struck or arpeggiated and sustained by use of the pedal.

EX. 7.1 A Major Left Hand Pattern in $\frac{3}{4}$ time

Another reason for the use of ostinato patterns, is to supply rhythmic vitality and stability to a passage or to define a rhythmic theme. Even when the ostinato pattern is used to define a rhythmic theme, the pattern still normally supplies a harmonic function.
The following are some ways of developing the coordination needed for playing this technique.

1) Create a pattern which defines a given harmony. The pattern could vary from defining a single chord, such as example 7.1, a chord progression, or even a particular scale or chromatic run.

EX. 7.2 Ostinato Chord Progression: I-V\(^7\) in C major

EX. 7.3 Ostinato Chromatic Run

2) Repeat the ostinato in the left hand while playing the tonic pitch or any related tone in the right hand. This gets both hands involved and creates an additional element to coordinate.

3) Play a simple folk tune with the right hand and create an ostinato pattern to harmonize it. Example 7.4 illustrates the first two measures of *Mary Had a Little Lamb* in the right hand harmonized with an ostinato pattern on the tonic chord C major in the left hand. The third measure should harmonize with the dominant GM,m7th chord, but continue with the tonic for the entire tune for ostinato practice.

EX. 7.4 First Two Measures of *Mary Had a Little Lamb* Over Single Chord
4) Vary the ostinato to harmonize a I-V-I progression with the folk tune. This is an example of changing ostinato. Exercise 7.5 continues *Mary Had a Little Lamb* with measures 3 and 4. Measure 3 is harmonized with the dominant GMm 7th chord in second inversion and measure 4 is harmonized with the tonic C major chord.

**EX. 7.5**
Second Two Measures of *Mary Had a Little Lamb* With V7-I Chord Progression

Have fun with this idea and do the same with additional folk tunes.
The passage in example 7.6 contains an eight note harmonic pattern in D minor played in the left hand. The right hand is a syncopated melody. Because the ostinato pattern is coupled with the syncopated melody, a systematic learning approach to this passage is necessary.

1) Play the rhythm hand to hand without mallets. This allows a clear focus on the relationship of the two rhythms involved without concern for the pitches or mallet permutations.

2) Assign the mallet permutation to the rhythm and play it with constant, non-changing pitches. This allows for the feel of the rhythm with mallets in hand without concern for the pitch pattern.

3) Finally, combine the pitches of the passage with the rhythms. Make sure to have a solid feel for the pattern before attempting this step; if not, it will simply lead to much frustration.
Example 7.7 is a similar passage based in A minor. The right hand melody is in sixths which is slightly more difficult than example 7.6. The same systematic approach should be used in learning this section.
The “Jets” theme in example 7.8 is being harmonized with a repeated three stroke pattern in the left hand. The left hand pitches form a $D^\#$ half diminished seventh chord in second inversion. This chord progresses to the dominant chord of the melody which is based in A major. This progression finally arrives at the dominant E major, minor 7th chord in second inversion on the second half of measure 73. This chord is the anacrusis to the repeat of the melody in A major in measure 74. The dominant chord only sounds for 1/2 of a measure, therefore I suggest a slight fermata pause on the last eighth note of measure 73 to highlight the V-I relationship. The A chord outlined in the melody and the harmonizing $D^\#$ chord have their roots a tritone apart. This is the interval on which much of the music for West Side Story is based.

Example 7.9 is another passage which is harmonized in the left hand with a repeated three stroke ostinato pattern. The pitches support the key of D and modally fluctuate between major and minor. The difficult part of this passage is coordinating the pitch d1 with mallet #3. As progress is made on coordinating the passage, do not focus on the d1 as the melody is the highlight and needs to be brought out in mallet #4.
EX. 7.9  
West Side Suite, Mvt. 1, mm. 92–97

EX. 7.10  
West Side Suite, Mvt. 1, mm. 98–104
Example 7.10 continues the same tonality as example 7.9 with a slightly different three stroke ostinato pattern in the left hand. A plagal resolution in measure 104 settles in A major for a repeat of the “Jets” theme. There is a lengthy stretch between the two arms in this passage as the melody is played an octave higher than written as notated 8va. Attention must be focused clearly on bringing out the melody in example 7.10. The three stroke ostinato pattern defines itself naturally and more emphasis is required to balance the right hand to the left hand when the right is playing at such a high register.

EX. 7.11  
*West Side Suite*, Mvt. 1, mm. 123–140
Example 7.11 contains alterations on a seven note chromatic pattern. The best approach to learning this altered ostinato pattern is to obtain the feel as it appears in its single line basic form. Serry suggests sticking the whole passage with mallet #1, saving mallet #2 only for the altered versions of the pattern. It is also a good idea to get a feel for the pattern as it appears in the octave. Getting a feel for the pattern will help specifically for measure 123, 128–140, and for all the octaves in the variations.

Measure 123 features the pattern in octaves. The upper voice is dropped for a single lined version in measure 124. The octave accompaniment then reappears with a slightly different chromatic pattern in measure 129.
Throughout the recurrence of these chromatic patterns, there is rhythmic alteration in the left hand through added sixteenth notes that appear right before the start of each right hand melodic riff. These alterations function as the beginning of the flurry of sixteenth notes which comprise these melodic segments.

The phrases do not enter on any consistent beat of the 78 measures, therefore they should not be thought of as in seven, but instead, shorter phrases of various odd time signatures. Musically, this unbalanced phrasing creates added tension which is exactly what Bernstein is portraying as the ensuing possibility of a rumble exists. This passage must be played with a high level of intensity to compliment this mood.

The left hand pattern in example 7.12 involves two pitches, $B^b$ and $C^b$, with the sporadic addition of the A in the tenor voice. The pitch a, which appears as the fourth sixteenth note of beat 1 in measures 157 and 159, and the second sixteenth note of beat 3 in measure 159, should be played with mallet #3 in the right hand as Serry’s notation suggests. This will help to clarify the sixteenth-note line that contains the “Jets” theme. The other As that appear should be treated as part of the ostinato counterpoint and should be played with mallet #2.

EX. 7.12  
*West Side Suite, Mvt. 1, mm. 157–160*
The two note pattern between octave Ds and E♭s in the left hand in example 7.13 is an example of an ostinato pattern in simplest form. The pattern of four sixteenth notes repeat every beat for four bars. The key to mastering this excerpt is to lock the octave in the left hand and get a feel for the half step movement back and forth from D to E♭. When this is fluent, all visual attention can be devoted to the right hand to help secure accuracy of the exposed “Jets” theme.

EX. 7.13  
*West Side Suite* Mvt. 1, mm. 162–165

EX. 7.14  
*West Side Suite*, Mvt. 1, mm. 178–185
The left hand in example 7.14 has an ostinato figure in $\frac{2}{4}$ time which contains a diminished scale that encompasses two bars. The right hand melody is again part of the “Jets” theme. I suggest learning the feel for the melody while the visual focus is applied to the ostinato pattern of a half/whole diminished scale in the left hand. A secure sticking for the left hand results when the scale is played with mallet #2 with the exception of the low A in measures 180, 182, and 184, and the low C in measure 178, which are played with mallet #1. Visual focus is best placed on this scalar passage because it is easy to get off track by one note, which throws off the entire ostinato run. A solid right hand sticking for these measures is 4-4-3 (m178), 4-4-4 (m179), 3-3-4 (m180), 4-4-4 (m181), 4-4-3 (m182), 4-4-4 (m183), and 4-4-4 (m184). All the mallet movements of this section are short, thus aiding the kinesthetic memory.

EX. 7.15  
West Side Suite, Mvt. 1, mm. 194–197

The eight note left hand pattern in example 7.15 is made up of the same pitches as that in measure 53–54 of example 7.6. In this instance, however, there is the added difficulty of a triple grouping eighth-note rhythm. Because the eighth-note pattern does not divide equally into the triple grouping, a different note begins the triple figure every time. This creates an asymmetrical phrasing of the four bar section and a great deal of attention needs to be devoted to visual, aural, and kinesthetic awareness.
These four bars in example 7.16 end the first movement of *West Side Suite*. Unlike the previous four measures, the phrasing for the ending is symmetrical to the meter. The eight-note ostinato pattern is divided into sixteenth notes which allows the pattern to repeat once per measure. The most difficult aspect of this section is its tempo. It is very fast and requires a lot of technical facility. The left hand needs to be memorized kinesthetically so as to allow the visual attention to be focused upon the melody in the right hand.

There are many examples of ostinato playing in the first movement of John Serry’s *West Side Suite* that vary in level of technical difficulty depending on the amount of coordination involved. The marimbist needs to line up all rhythms between the two hands and develop a strong kinesthetic feel for the ostinato pattern as it relates to the entire passage. Regardless the degree of difficulty, the marimbist needs to start slowly and develop speed gradually, never sacrificing accuracy.
CHAPTER 8

POLYRHYTHMIC PLAYING

There are many examples of polyrhythms found throughout the percussion repertoire, and in particular, the marimba literature. A polyrhythm is created when two or more rhythms occur simultaneously. Some polyrhythms are more complex than others, and therefore more difficult. Often times playing polyrhythms correctly requires a good amount of concentration and coordination.

A first consideration when approaching a polyrhythm is to figure out the exact mathematical relationship between the rhythms in question. This process is common knowledge to the experienced player and will not be discussed in this discourse on advanced marimba techniques.

A second consideration when approaching a polyrhythm is to acquire the sound and feel of it. The first step in acquiring a sense of the polyrhythm should be without the hinderance of mallets. The sound of the exact polyrhythm should be sung and played in the hands only until it is internalized. When this is accomplished it is time to experience all of the possible combinations of mallet permutations.

If the polyrhythm is made up of two rhythms and four mallets are being used, there are various possibilities of stickings. First of all, the rhythms might be played hand to hand using mallet combinations 1&3, 1&4, or 2&3, or 2&4. Second of all, the rhythm might be played within each hand allowing for the sticking possibilities between 1&2 and 3&4. In any case, all the different permutations should be practiced to master every combination. The various mallet combinations are presented in examples 8.1–8.4 along with a rhythmic notation of the polyrhythms 2 against 3 and 3 against 4.

EX. 8.1 The Polyrhythm 2 Against 3 Rhythmically Notated

(2) 
(3)
EX. 8.2 The Polyrhythm 3 Against 4 Rhythmically Notated

(3) \[4\]
(4) \[4\]

For further reference of rhythmically diagramming the preceding polyrhythms see pages 171 and 172 of *Teaching Percussion* by Gary D. Cook and my book, *The Inner Relationships of Polyrhythms* (in progress).

EX. 8.3 Mallet Possibilities For Each Hand Separately With 2 Against 3

Use the same combinations for the polyrhythm 3 against 4 as seen in example 8.2.
EX. 8.4 Mallet Possibilities For Hand to Hand With 2 Against 3

Use the same combinations for the polyrhythm 3 against 4 as seen in example 8.2.

After reasonable facility is developed with the various mallet permutations, a third consideration is to apply the mastered polyrhythms to a musical situation such as that in example 8.5.
Musical Analysis

There is a fourth consideration for the polyrhythms, and it is a musical one. Often times the rhythm will be realized and then applied, but due to the natural confusion of polyrhythmic playing, the phrasing and musical highlighting of particular pitches tend to be overlooked. If the passage is to be executed smoothly and correctly, the musical considerations must be carefully realized and observed. The technical aspects are to be thought of as serving to enhance what is happening musically.

EX. 8.5 West Side Suite, Mvt. 2, m. 18–24

Measure 20 of example 8.5 contains the first occurrence of the polyrhythm 3 against 4 between mallets #2 and #3 in $\frac{3}{4}$ time. Although the technical focus needs to be on the polyrhythm, the musical highlight is the a1 in the melody and needs to sound clearly.

EX. 8.6 West Side Suite, Mvt. 1, mm. 178–185
The quarter-note triplets in the right hand in example 8.6 state part of the “Jets” theme and divide each bar of $\frac{2}{4}$ time into three equal parts. At the same time, the left hand contains a half/whole diminished scale using a steady eighth-note rhythm which divides each bar into four equal parts. Therefore, each bar contains the polyrhythm of three against four. From a musical standpoint, the triplet melody needs to float over the ostinato bass line. To achieve this flow, the relationship between the two rhythms must be mastered by first getting the feel of three in the right hand and four in the left hand before using any mallets at all. Then by using mallets, stickings are assigned to the passage which are the most conducive for creating the smoothness needed. As I suggested in chapter 7, a comfortable left hand sticking for this diminished scale is, 1-2-2-2-2-2-2-2. The right hand, however, has more alterations in stickings, although still with a focus on mallet #4. Review the right hand sticking suggestions for this passage that were presented in chapter 7. Also as stated in chapter 7, it is a good idea to focus visual attention on the left hand in this passage due to the faster rhythms and its small stepwise interval movement.

There are two reasons for focusing on a particular mallet in each hand whenever possible. One is to coordinate the polyrhythm by making the passage similar to a two mallet, hand-to-hand movement as opposed to permuting the four mallets in a more random fashion. The second reason, is to help keep the musical direction of the line, and consistency of sound.

Each voice in movement 2, as partially shown in example 8.7, is assigned a specific mallet. Mallet #1 plays the bass line, #2 plays the tenor, #3 plays the alto, and #4 plays the soprano. This assignment determines all stickings.
To successfully approach long passages with many polyrhythms like those in examples 8.7 and 8.8 one needs to practice diligently and secure the precise rhythmic relationships among all four voices. In these passages in particular, the focus is on the polyrhythm 4 against 3. The polyrhythm, however, is passed from voice to voice in a manner which avoids any real pattern. This adds to the difficulty and challenge of this passage.
No matter how rhythmically difficult a passage like this is, the main focus still needs to remain on the musical intent. If the melody is not clearly projected, or improper phrasing occurs, all the work the performer did to master the technical aspects of the piece is in vain.
In example 8.9, the polyrhythm formed between the two hands is derived from 3 against 4. During the first two beats of measures 1 and 3, the rhythm in the right hand is equivalent to three quarter-note triplets, although only the first two are struck. The left hand has a rhythm equivalent to four eighth notes, although only the first and fourth are struck. Therefore, this polyrhythm has a 3 against 4 relationship. I refer to this as a polyrhythm with missing parts. Measure 2 has the same variation in the left hand with a complete set of quarter-note triplets in the right hand. The stickings for these three measures are logically dictated by the passage itself due to the double notes and large interval spreads.

EX. 8.10 West Side Suite, Mvt. 3, mm. 17–23

The passage in example 8.10 is similar to the 3 against 4 polyrhythms with missing parts discussed in example 8.9. There are, however, two variations that deserve mention. Beats three and four of measure 17 represent a 2 against 3 polyrhythm with missing parts and beats three and four of measure 23 represent a 3 against 4 polyrhythm with missing parts. The left hand of the latter measure has only the second and fourth notes of the four note pattern.
The most important element in executing a polyrhythm correctly is having a thorough understanding of the interrelationships of the rhythms involved. The best approach to understanding the polyrhythm is to internalize it by singing and playing it in the hands without mallets, and then play the polyrhythm with the mallets to acquire the actual feel of the passage. The performer must be fluent enough with the polyrhythm that the technique used to execute it does not inhibit the musical statement, but instead enhances it.
CHAPTER 9

CHORALE PLAYING

Chorale playing for the marimbist involves generally a legato style of playing created technically by sustaining tones or rolling. In some respects, playing a piece in this style is easier than playing a piece which employs multiple mallet permutations and variations. In other respects, there are technical difficulties which are unique to this style and need careful consideration and thorough understanding.

Generally the rate of chord changes, or harmonic rhythm, in a chorale is slow due to the legato, sustained style. Also, accuracy tends to be better due to the longer duration of each sustained chord. To sustain a chord, a certain number of repeated strokes or articulations are needed on each bar which allows for the possibility of error between bar rearticulations. However, the repeated articulations also allow for inaccuracies to be corrected between bar rearticulations.

All technical aspects of chorale playing require good facility. Only when the techniques involved with playing this style are mastered and executed properly will the marimbist be able to have control over the desired smooth legato style. Large interval changes are much more difficult in chorale playing than in single struck tone playing due to the speed of rearticulations between changes. In order to create a large interval change with a smooth legato connection, a break must not occur between the changing pitches. Depending on the rhythmic base of the roll, which is generally quite fast, there is not much time to make the change. Keep in mind that the change not only has to be made very quickly, but very smoothly so as not to break the legato flow of the passage. Example 9.1 demonstrates large interval changes.

A musical consideration for playing in a chorale style is to emphasize the voice movements. Due to the sounding of the four voices the soprano and bass tend to be heard a little clearer than the alto and tenor voices. With this understanding about the prominence of the four voices certain musical decisions must be made. First, analyze to determine if a particular voice is most prominent throughout the piece. If, for example, the soprano voice is prominent, a harder mallet might be chosen for mallet #4 to help project the voice. If no single voice is prominent one might choose to use mallets of equal hardness, or graduated hardness. Finding the exact combination of hard, medium hard, medium soft, and soft mallets can greatly enhance a piece musically. Other mallet gradations consist of any other combination that the marimbist
feels will help to convey the proper musical intention. This is something that needs careful and deliberate consideration, and generally much experimentation.

Another way of highlighting a particular voice in chorale style playing is through a technique best referred to as “leaning.” This involves a combination of adding physical force to a given pitch and mentally focusing upon it. The combination of the two lend to compliment one another. When the marimbist is in control of the musical line and concentrates on the prominent voices he naturally tends to “lean” on these prominent voices and play them a little louder than the other voices. Being aware of the musical intention helps to master this technique.
Musical Analysis

EX. 9.1  *West Side Suite*, Mvt. 5, mm. 1–4

Example 9.1 is the beginning of the fifth movement entitled “Chorale.” In measure 3, the “and” of beat one in the left hand and beat two in the right hand both have large interval changes. The rhythms in the first part of the measure between the two hands are off set which helps the legato texture by one hand overlapping the other.

Example 9.2 contains examples of many aspects of chorale style playing. Most of the melodic interest is in the soprano voice, therefore making it the most prominent voice. There are, however, times when the prominence transfers to other voices. In example 9.2, measure 25, the soprano melody is emphasized until beats three and four when the middle voices receive the harmonic spotlight. The melody resumes again on beat two of measure 26 where voice prominence returns to the soprano voice. This type of voice prominence occurs throughout the movement and a successful performance depends on a thorough awareness of them.
EX. 9.2  *West Side Suite*, Mvt. 5, mm. 25–33

EX. 9.3  *West Side Suite*, Mvt. 5, m. 35
Mallet emphasis is necessary for chords that contain voice suspensions or retardations such as that which appears in measure 35 of example 9.3. Voice retardation is between beats one and two of measure 35 to form an A major triad; the chord is in root position and uses a 2–3 retardation from B to C° in the tenor voice. In this case, the marimbist must employ the “leaning” technique with mallet #2 so as to support the moving pitch.

EX. 9.4  *West Side Suite*, Mvt. 5, m. 36

The beginning of measure 36 in example 9.4 uses a 2–3 retardation in the alto voice to reach a B♭ major triad in second inversion. This time mallet #3 needs to be “leaned” on to support the retardation. On beat four of the same measure there is a 4–5 retardation to get to the B♭ major triad in root position. The “lean” here is applied to the alto voice with mallet #3.

In example 9.5, the 2–3 retardation happens in the soprano voice to get to the intended C major triad in root position. In each of these cases, a theoretical analysis provided the musical understanding for emphasizing the prominent voices.
A carefully chosen set of mallets and good control of note articulations are two factors necessary for playing in a chorale style texture. However, for mastering the technique of playing in this legato style, the marimbist must always be aware of the musical direction of the piece. This awareness will enable the performer to accurately emphasize particular voices and bring out the musical line.
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