
# Percussionist

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PERCUSSIVE ARTS SOCIETY
(PAS)

PURPOSE--To elevate the level of music percussion performance and teaching; to expand understanding of the needs and responsibilities of the percussion student, teacher, and performer; and to promote a greater communication between all areas of the percussion arts.

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# In this issue

# PREFERENCES IN PERCUSSION - 1973

By Allen Otte

## About the Author:

Allen Otte is a founding member of the Blackearth Percussion Group. Members of the group are faculty artists-in-residence at Northern Illinois University, DeKalb, Ill., where each holds the position of lecturer in percussion. Mr. Otte received his BM from the Oberlin College Conservatory, and has performed with the Toledo and Cleveland Orchestras.

I approach this writing with the formulation of two basic concepts. The first, that it is at least as important to speak of music (in general, or a specific composition) in relationship to society, as it is to speak about some given music in relationship to the world of music. I insist that my profession be relevant to the world in which I function; and I believe it is as simple as that. Everyone is invited to be aware of a relevance between the thoughts they consider important and the medium in which they create, simply through their desire for such relevance and the consequent opportunity to establish analogous systems. No one should be a percussionist in 1973 by accident. My second premise, that thoughts I consider important enough to appear in this writing are not merely my personal preferences -- that no such thing as "mere" personal preferences exist, but that such expression of opinion should be regarded as one of our immediate tools in productive communication. No one should underestimate his responsibility to "value judgements." We currently exist in a social-political system where its own maintenance seems to come before that of its elements. It maintains problems which perpetuate it (capitalistic exploitation, war, inflation . . .) and solves the problems which assail it (factions -- its word, not ours -- such as "unrestful" students). What is one to do? The important thing is to begin with his personal preferences -- know and understand his desires, articulate them as wants, communicate them to others, this resulting in feedback, dialog, and the generating of a necessary input to the social system; an input which, without you, would not have occurred. A useful definition: conspiracy -- to breathe together (also: joining in a secret agreement to do an "unlawful" act or to use such means to accomplish a lawful [desirable] end).

If a more concrete example of such a relationship among percussionists in and against the system in which they function would be helpful, I can cite a recent project concerning a qualitative acoustic notation for percussion by percussionist-composer Michael Udow. His paper begins with the definitions and connectivity of these terms: Manufacture/Business/Capitalist/Capitalism/Exploitation/Consumer.

Udow desires to "expand the concepts of 'percussion', 'a percussionist,' and 'music for percussion' to encompass a categorical relationship of man and his environment." These concepts (manufacturer, capitalist, etc.) are the problems which our system maintains, thereby exploiting percussionists (and composers), who are forced to accept poor quality instruments at exorbitant prices.

As an alternative to "doing your *own* thing", or an alternative way of doing it, percussionists must become collectively aware of their position, both in the system and in the world of music. I further suggest that this "conspiracy" must be expanded to include composers. Not only does the system discourage awareness of and articulation of individuals' desires, but also that people with unsolved problems should become anything more than opposing "factions". If and when performers (here, percussionists) accept the invitation of composers who share this same awareness of their situation in society, there exists the opportunity for mutual support and a consequent strength in the statement because of its collectivity. Composer: one who creates systems -- through music, for example -- in which his stipulated desires are fulfilled. Once initiated, the chain of mutual support can extend beyond composer-performer, to performer-performer (ensembles), performer-audience, audience-community.

Once aware that this approach to music/musicians exists along with a number of other approaches, the significance of personal preferences and value judgements becomes clearer. An awareness of the potential of reflective commentary and dynamic social input must be reflected in the amount of time and energy a musician expends in selecting, preparing, and performing compositions. Not that the quantity expended is the issue, but that the performance of any music be regarded as an intended statement on the musician's part, who will surely want to put his time to the best possible use. Care must be taken in the choosing of what to play. If the performer will clearly determine what his criteria are, he will be able to recognize when both he and a composer want the same thing, or whether their motives and desires are different. Given the vast amount of music available today, no one should go unaware of his opportunity to conspire with another musician (the composer) in achieving a desired and desirable end, to their mutual benefit. The following connections help clarify my conclusion:

- There is a vast amount of music being written by composers all over the world.
- Most of this music is available for performance.
- There is more music published and sold in retail stores than any performer could hope to know about.
- Given this tremendous amount of available music compositions, a performer must exercise a selectivity with well defined intentions.

- Though the intent of any given composition may be unknown or unclear, it can become a useful tool for communication in the hands of the right performer.

- There is the music of composers who are related to any given performer in the immediate senses of age and location.

- To further understanding, communication, and mutual support, a performer might choose to play the music of his colleagues.

- There is enough music and there are enough performers that no composition should suffer under a performer who wants anything other than what the composer wants, nor should a performer suffer with a piece by a composer who does not know what he (the composer) wants.

- The problem of this search for the correct music for the correct performer is multiplied when dealing with a cooperative group of musicians (an ensemble).

- Given both the difficulty of the search, and what is to be learned by an astute performer conducting his own search, performers are invited to become composers.

The percussionist's repertoire then, drawn from the four categories of 1) published pieces by known composers, 2) the music of his colleagues, 3) the music (by little known composers) which he has sought out, 4) his own music, has the further possibility of representing one of two basic approaches. Either he will choose compositions which reflect most clearly his own musical and/or social position, or he will choose a diversity of musics, in an attempt to reflect upon or be a reflection of the current state. For example, one might choose compositions which support the schools of technology, ritualism, traditional techniques, improvisational structures, etc. Another criterion is to consider how a piece functioned at its date of composition. How is any given piece a reflection of or a reflection upon the conditions (social/musical) under which it was written, and why have some composers been more successful than others in protecting their music from decay? (Bach and Beethoven are but two good examples) An awareness of such characteristics and how they worked for that piece, at that time and today, will aid in further defining criteria for successful compositions, rather than inviting the recomposition of that piece. What is needed now is an advancement in the art of composing for percussion, rather than the sustenance of the percussive arts.

A few specific examples:

In 1959 Stockhausen wrote Nr. 9 Zyklus. With this composition he invited the percussionist to join him in certain experiments; there is the concept of composed elements in fixed or mobile states -- an experiment in improvisation within composition. On a larger scale, the cycle of the piece itself is mobile, in being able to function either clockwise or counterclockwise. Further, there is the attempt at a

notation which communicates clearly all of (and only?) the possibilities which the composer intends, and at the same time provides the percussionist with a printed analog to the acoustic world in which he must function. Finally, Stockhausen's experiment attempts the combination of multiple timbres into one musical instrument. Which, if any, of these experiments are relevant today, fourteen years later, and under what circumstances can these relevancies be projected? In approaching the piece, I provided myself with the following outline:

1. Why play the piece?
    a. What needs to be done?
    b. What have past performances shown?
    c. What can *I* bring to it?

2. The score.
    a. Why to prepare a performance copy and how.
    b. Which way to go and where to begin.
    c. Interpretation of all rules.

3. Realization
    a. Coherence with contrast.
    b. Musical phrases.
    c. Gestures -- aural and visual.
    d. Interpretation, and compromise if any.

4. The instrument(s)
    a. Best possible sounds.
    b. The physical layout.
    c. Sticks and hands.

5. Practice
    a. Refining techniques.
    b. Choreography.
    c. Accuracy in all parameters.
    d. Living with the piece.

The same examinative reasoning can be applied to any piece. Morton Feldman's "King of Denmark" from 1964 deals with two significant concepts. First, an interest (characteristic of the previous decade) in certain stipulations and certain freedoms, as conveyed by an experimental notation. Secondly, an attempt to draw both performer and listener into an acutely focused relationship with the sound of music and with the instruments upon which music is produced.

If a percussionist deems the experiments of Stockhausen or Feldman to be uninteresting, irrelevant, or at best, no fun, then he would not perform the pieces. That these two pieces are published by

major companies has made them "standard repertoire" simply through accessibility. When does a publisher cease being a service to the composer and become a disservice to music?

One historical perspective of this question of advancement vs. sustenance begins in the 20's with the chamber music of Varese. There followed the development of a music for ensembles of only percussion instruments; but what became of all the experimental activity of the 30's and 40's -- Becker, Strang, Cage, Russell, Harrison, Cowell, others -- when these composers turned their attention to other facets of music? The percussion ensemble literature of the 40's is closely connected with the development of electronic music in the 50's. Many composers who wanted new sound sources chose to by-pass percussion and seek the aid of technology. Another major school in the 50's was the second generation of Viennese serialism, and the interest in totally deterministic and/or mathematically derived musical systems. When composers who were most interested in new and experimental music found mediums other than percussion more useful in realizing their desires, the need for a literature to follow that of the 30's and 40's was, at least momentarily, unfulfilled. One underlying reason that percussionists began to write their own music was simply to sustain the field which was full of life in the 40's. Rather than finding the need for utilizing percussion instruments as dictated by the wants of a composer through his musical system, (to the mutual advancement of new music and the field of percussion) a literature was created in order to sustain the percussion ensemble. (Among notable exceptions, a favorite is Ben Johnston's Concerto for Percussion, 1952) Basically, too few pieces written too many times, and now known too well through often insufficient performances.

A significant aspect in the cultivation of this collective consciousness among percussionists must be an awareness of the existing literature which has made percussion a vital part of music today. Any serious student of percussion would want to be familiar with numerous compositions of the following types. As an alternative to a list of the most familiar composers and pieces in our field, which I contend would be no more than a report of how the percussion ensemble currently perpetuates its own existence, the following survey shows a list of composers, most of whom seldom, if ever, appear on percussion ensemble programs. Those mentioned here are composers with an examinable (through recordings, published scores, articles by and about, public performances outside their own immediate circle) output (input) of experinental music, who have, at some point(s) in their career, turned their attention to percussion. There are surely other experimental compositions for percussion which at this date share the same lack of recognition as do some of the unfamiliar names and works to be mentioned here. Such omissions come from the same lack of information and awareness

which this paper is a first attack against. An individual composer or composition may have been forgotten, but as for general types, styles, periods or currently popular genres, conspicuous absences are just that.

A. Varese: chamber music of the 20's; *Ionisation*; Deserts.*
Bartok: *Sonata for Two Pianos and Two Percussion;* (and orchestral writing).
Crumb: chamber music of the Lorca cycle.
Foss: *Time Cycle* (chamber version); *Echoi.*
Berio: *Circles;* other chamber pieces.
Kagel: *Transicion; Match for three players.*

B. Stockhausen: *Zyklus*; Kontakte; Refrain; Schlagquartett 1952;* (and orchestral writing).
Brun: *Plot*; Touch and Go*; Stalks and Trees and Drops and Clouds*;* two trios (one percussion in each); quartet with piano; various small mixed-ensemble pieces.
Haubenstock-Ramati: *Liaisons*; Jeux 2*; Jeux 4*; Jeux 6*;* other chamber pieces.
Akira Miyoshi: *Torse III* and *Conversation* for marimba solo.

C. compositions for the Strasbourg percussion ensemble.
Xenakis: *Persephassa**
Shinohara: *Alternances**
Messian: larger ensemble pieces with wind instruments.

D. Hiller: *Machine Music.*
Wolff: *Trio II,* piano 4-hands and percussion.
Carter: *Eight Pieces for Timpani*; Double Concerto;* (and orchestral writing).
Wourinen: *Janisary Music*; Ringing Changes.*
Feldman: *King of Denmark**

E. small ensemble pieces of the late 30's and 40's, especially those of Cage and Harrison.
pieces being composed for the Blackearth Percussion Group.
Harry Partch: His own music for his own instruments.

*denotes compositions for percussion instruments only.

This is a good point to return to a previous statement: Given both the difficulty of the search, and what is to be learned by an astute performer conducting his own search, performers are invited to become composers. In the "conspiracy" I advocate for percussionists and composers, each would be continually learning from the other.

In the mid and late 60's the University of Illinois-Champaign was at a peak of activity with experimental music. Composers Johnston,

Martirano, Brun, Hiller, Gaburo and Cage were all working there. The percussion department, well established in the 50's, actively participated in the music of these men as well as providing its own music. Formerly, McKenzie and Colgrass had written music for the ensemble, and at this time performers O'Connor, Youhass, Parsons and Ranta were all writing and playing pieces together. Here was a good example of such a mutually supportive relationship between the two groups of musicians -- composers and percussionists. However, I choose to draw a clear distinction between those pieces which were 1) a vital part of both sustaining percussion music in that place at that time, functioning in part, as communicative feedback to the composers present, and 2) the composers' pieces which still live on their own merits as advancements in the art of composition for percussion, most notably those of Herbert Brun.

An introduction to some of Brun's works and the study by Udow mentioned earlier should serve as clarification for my concept of an advancement in the art of composition for percussion. With Udow's *Acoustic Study 1 for a Qualitative Percussionist,* 1972, and Brun's three separate solo works, *Plots, Touch and Go,* and *Stalks and Trees and Drops and Clouds,* 1967, it is first significant to note that both composers have used experimental graphic notation for their compositions; Brun with the aid of a computer. Two works cited previously, *Zyklus* and *King of Denmark* also use individual notations, as did Cage with his solo piece *27' 10.544" for a percussionist.* Udow intends that his acoustic notation give percussionists the opportunity to respectfully teach composers more about the still relatively unexplored world of percussion, and the scores of Brun, Stockhausen, Feldman and Cage might be viewed in something of the same light. The models we have show that when a composer whose skill is in the design of systems and structures, makes allowance for the contribution of the percussionist, whose skill is in the exhaustive knowledge of his instruments, the results invite (not insure) mutually beneficial advancement. Experimental notation then, is one significant tool. However, in the formulation of a musical composition, there should be first a concept (desire), then a musical structure, then the necessity of certain acoustical properties to convey the message (instrumentation) and then a language by which this can be conveyed to the performer, and through the performer, to the listener. Therefore, experimental notation follows the instruction of a musical want, and is neither a generator nor an end in itself. There is also a connection between new musical ideas, experimental notations, and (consequently) unspecified instrumentation. Many such pieces are important in the development of percussion, in much the same way as the solo pieces mentioned above. A few notable examples are the computer graphics of Herbert Brun *(Mutatis Mutandis)* and Tom

Horazak, the numerous ensemble pieces of Christian Wolff, and the process pieces and visual structures of Edward Miller.

The concept of the notational system which Udow offers "stems from a personal need to introduce a more qualitatively controlled approach to instrumental scoring from an acoustics standpoint . . . With such a notation, any percussionist could perform any given work with or without the standard manufactured percussion instruments." In Udow's system, the composer chooses a symbol and assigns to it specific characteristics (on a number scale) of pitch, timbre (material and spectrum), duration, attack and decay (techniques and implements of actuation), vibrato, and intensity. The symbols, as defined at the outset of any composition, are to be translated by the performer into any sound producing instrument with the specified acoustic properties and capabilities. The score of his first piece is three pages with large geometrical shapes (the instrumental symbols) within which are lines and shapes, drawn free-hand, in representation of the aural gestures to be reproduced on that instrument. Mike's work is based on a consciousness of the relationship of the percussionist to his environment, a commitment to the conspiracy advocated here, and a positive feedback situation from percussionists to composers. That the notation system aims at qualitative control of instrumental scoring makes it an experiment in progress. Rather than to allow that the notation become an end in itself through the superficial use of the graphic symbols as visual design, the next step is for composers to stipulate their desires through musical systems which utilize the notation system. The difference has been articulated by Brun in a previous statement regarding computer-generated sound. "In the first case one prefers those events to happen that one wishes to hear; in the second case one prefers to hear those events one wishes would happen. These are not only two different approaches to the composition of music but also two different political attitudes."

Brun's three solo pieces (to be discussed in a separate article) are each prefaced with a few rules which show each piece to deal with a specific challenge to the percussionist's relationship with his instruments. Success in any of the three pieces presupposes discoveries: a new awareness of the instruments and their capabilities, new techniques for the performer, to understand psycho-acoustics and gestures -- physical and aural -- the creating of new moments in music and performance, which can become available resources in the world of percussion.

The Blackearth Percussion Group, founded in 1972, is a professional new music ensemble "dedicated to experimental music and the intermedia of percussion with electronics, film, slides, jazz and theater as a tool for communicative, artistic expression." As a first step in establishing a literature which would allow for such communicative expression, we formulated the "Notes on

Composition" -- a collection of ideas and desires particular to our group, from which the following general considerations are excerpted:

1. A piece might be designed for one large instrumental setup, where all players perform in close proximity. Or, if it should function as a spatial piece, it might require players in different locations throughout the hall. Any setup warranted or demanded by the composition will be implemented by the group. A further consideration in staging: the group currently has no piece where movement of the players and movement on the stage is as composed as the music itself.

2. A composition might play-up or play-down the conflict of combining instruments from different traditions. 19th century orchestral; military; oriental; popular; found objects (junk yard).

3. A preference of ours is to make each player obtain the most from a given instrument, (timbres, unusual techniques, "subversive" techniques, the visual element) rather than avoiding the question by filling the stage with a vast number of instruments. Also, the group need not be projected as such, but is in reality, four individuals.

4. Problem: Given that one does not wish to rely only on the instruments' timbres, what sustains interest in an entire evening of percussion music?

(The opinions expressed in this writing reflect on the Blackearth group only to the extent that I am an input to that group, and are otherwise the sole responsibility of the author.)

There are many reasons given by composers for writing percussion music in 1973. The concept which is important to me however -- that it be accepted as being of equal importance to any other -- is for the composer, as an individual with acute consciousness of the world in which he lives and functions, to stipulate his desires in a musical system demanding a percussionist and his resources in order that the composer's statement be communicated to the listener, and be viewed as a creative input to our society. What is needed are systems in which new views and uses of existing resources will lead to the discovery of new resources. If some would have it that music be *used* by man as diversion, pass time, entertainment, then I would call attention to the other existing approach -- that man *make use* of music as the articulation of his desires, and as one more linguistic tool in communication with his fellow man.

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## EVOLVING SOLO TECHNICS FOR THE MARIMBA

**by Linda Pimentel**

*(cont. from PERCUSSIONIST, Vol. XI, No. 2, page 81.)*

**Four Mallet Usage**

When the marimba is employed as a solo instrument of importance, performers seem to desire the use of more than two

mallets, while playing in the lower registers. There are two reasons for using more mallets. The Vendu tribe in Africa, early users of the marimba, use three or four mallets to make long reaches easier. The Guatamalans use multi-mallets for harmonic purposes. In the United States three and four mallet usage has been primarily limited to chordal performance, often with the highest mallet carrying the melody. Presently marimbists are becoming aware of the potentials for playing contrapuntally with four mallets, by using each mallet as the pianist uses separate fingers.

Marimbists are not in agreement concerning the "proper" way to hold more than one mallet in each hand. At least five different grips are advocated by well-known teachers, but a thoughtful student could conclude that a trained performer might well take advantage of a number of different grips within the course of a complete recital.

The basic-V grip seems to be the most used; its advantages are obvious. First, as a single mallet is gripped between the thumb and the *index* finger, its same position may be continued when two mallets are in the same hand. It is a simple matter to pick up a second mallet or drop an extra one if not needed. Also, the extra mallet can readily be moved back into a "non-use" position, with the palm holding the mallet head. A second advantage of the basic-V pattern is the ease with which the player can extend or contract intervals. The reverse-V position is the basic-V grip with one mallet between the index and *middle* fingers next to the palm, and the second mallet between the thumb and index finger on the outside.

The two-finger grip seems to stem from an effort to more readily reach extended intervals. It is less successful in sections where rapid manipulation is required. The Musser grip was developed by Clair Omar Musser in an effort to extend separate manipulative freedom to each mallet, and to achieve a sonorous, legato roll. As the outside mallet has no thumb to grip it in this arrangement, and not enough muscle tension to hold it firmly, the Musser grip is not especially valuable in contrapuntal performance. Its considerable advantage lies in the unique roll that can be created with it, and the extended positions which can be reached with minimal strain.

It is possible to alter the Musser grip, using one finger only between the mallets. Thus it is possible to switch from the basic-V or the reverse-V grips to the one finger alteration of the Musser grip between the phrases in a piece. This presents interesting and useful possibilities.

The so-called Burton grip can best be described in Mr. Burton's own words:

> My preference is for the following grip, which is not too widely used. My justifications for it are as follows: (1) the outside right hand mallet will always function in the melody role and not be changing functions constantly, (2) the striking

> motion is up-and-down whether with two or four mallets, (3) with proper positioning of the idle mallets, there is no excess movement of the unused mallet in the playing of two mallet passages (this offers a greatly increased facility), (4) the second mallet is in a position where it can easily be used as additional harmonic support of the melody line as might be desired, without causing the upper mallet to change its function, (5) this grip offers a sureness and control of the mallets with the fingers.[3]

Burton states that the striking motion should be up and down. As previous sections of this work have indicated, when performing on the marimba, horizontal motions are often necessary or to be preferred. In the field of classical performance the top mallet does not always carry the melodic line; Burton's stress on the use of the top mallet is thus not so essential. Burton is an outstanding performer and his mallet control and freedom while working with four voice lines are exceptional.

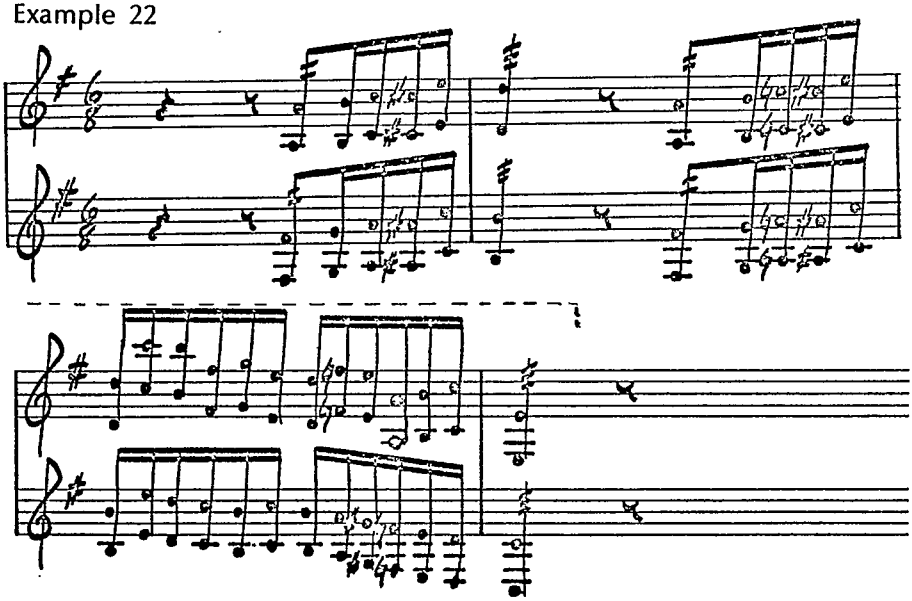
The advanced marimbist now tends to avoid a set pattern of grips, and instead is turning to problems of muscle balances. A mallet can be grasped in any way that suits a purpose as long as the two oppossing gripping forces are firm enough to hold it in place. With this in mind, a performer may use any grip or combination of grips, or combination of hand positions, justified by the music he intends to play.

The basic three mallet and four mallet technics consist of learning to play chords, usually rolled, in various positions. The muscles of the forearm, shoulders, trunk, and hands are involved. While the hands determine the spread opened or closed position chords, the elbow, shoulders, and trunk are employed in making sure that the mallet heads strike the notes firmly and in the best location for optimum after-ring.

Though marimbists do at times use three mallets in one hand, the ability to move dexterously is hampered by the lack of a versatile thumb between the two outer mallets. Positioning between the two outer mallets seems limited to intervals of thirds and fourths. With three mallets in one hand, a performer can readily play simple triads and inversions. The two outer notes can maintain intervals of a third or fourth while the inner mallet stretches various interior intervals. An interesting combination is produced by rolling the melody, using the right hand in the natural mandolin-type roll, and playing simple, three part chord accompaniments in the left hand.

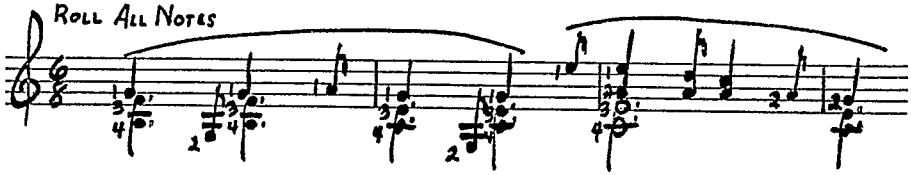
Combinations of juxtapositioning and mallet crossing are sometimes useful. Example 22 illustrates Hurtado's "double-octave" technic. Example 23 and Example 24 are phrases in which the moving of melodic lines indicates the hand positionings.

Example 22



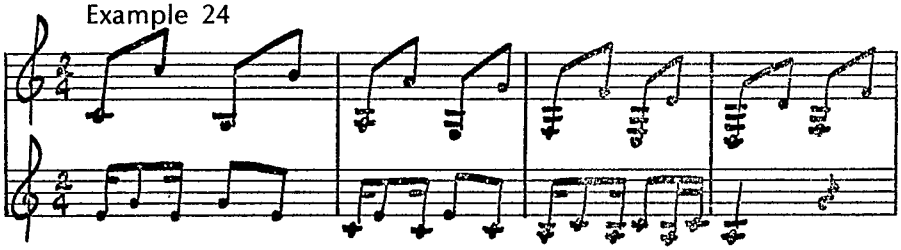
NOCTURNE 12,[4] "double-octave" technic

Example 23




NOCTURNE 12, unusual hand positioning

Example 24



EXERCISE, for the development of combined technics

**Contrapuntal Co-ordination**

Marimbists tend to gravitate toward considering four mallet work in terms of harmony. This is natural, due probably to our European musical heritage training. Most marimbists begin three and four mallet training by playing simple harmonies; chords in easy positions are uncomplicated to play. Too much of this chordal style could be harmful if a student is inhibited from attempting contrapuntal performance. Uncomplicated keyboard music composers of Bach through Bartok has provided stimuli for early contrapuntal piano training. Marimba composers could attempt something similar by working out small contrapuntal pieces for beginning marimba students.

**Challenge**

Let us examine some problems now facing the ambitious marimbist. A number of mallet keyboard artists in this country have indicated exciting potentials in a freer contrapuntal technique for their particular instrument. They have edited and performed simple harpsichord and piano works of early Baroque composers, and in an opposite direction have developed a complicated improvisational technic for jazz and popular styles. To extend the acceptance of their work, these artists have trained students along similar lines of performance, urging them to think contrapuntally on their instrument and to develop three and four mallet technics early in their training. Several of the mallet keyboard artists are composing and arranging for their instruments, and certainly young students need challenging materials to practice and perform in order to develop needed contrapuntal technics. Publishers are hesitant to publish method books dealing with new technics, few advanced solo works by well-known composers are published, and even fewer are performed. Marimbists seem trapped within a circle of (1) lack of interest, (2) shortage of suitable published study books, (3) inadequacy of teaching programs, (4) few exciting performers, (5) limited attractive performance material, and (6) lack of an affordable instrument of at least a four octave range. Could a key to the problem lie in improving communications and awareness within the marimba-teacher-player-composer world?

## FOOTNOTES

[3]Gary Burton, op. cit., p. 4.
[4]Frederic Chopin, NOCTURNE 12, arranged by Linda Pimentel.

## THE HISTORY OF THE TIMPANI

**by G. Finger**
**Percussion Instructor**

The timpani, or kettledrums, are said to have come from the Hebrews, who used them in their religious ceremonies. However, the historians' theory is questionable since, on an old Babylonian tablet, minute instructions are given for re-heading the instrument, which was also called Libus, and on another tablet a scribe has presented to us a line drawing of its shape. These allusions are found to be from the fourth millennium B.C.[1] Placed on a foot stool or pedestal, it was pre-eminently a ritual drum, within which images of their gods were deposited.

It is also said that the timpani came from the Arabians, who used them while going to battle. During the Mohammedan conquests (700-800 A.D.), Arab music, well planned and organized, spread as the Arab went on his conquering way, in Egypt, Morocco, Greece, Italy and Spain.[2] The Egyptians also played an important part in the development of the timpani. There were three kinds of drums, the largest of which, two or three feet in length, was of parchment and was beaten upon by the hands. The Egyptians used them to make raucous noises. Some were made of earthenware bodies and were called Darabòukeh.

Many decades after the Egyptians had used the Daraboukeh, the kettledrum appeared in Europe around the fourteenth century, about the time of the Crusades. During this period, the oriental name was used and was later changed.

The Bosnian Deoubles came into being at this time also, with its leather covered hemispherical body, resembling the early Egyptian type. In a larger form, as cavalry drums, their use in Hungary in the fifteenth century set a fashion for other European regiments. These drums may be seen in today's movies, such as *The Egyptian*, and *Ivanhoe*.

A trace of their Asiatic origin remains in the German name pauken; in Italian they are called, timpani; in Spanish, atabales; in French, timbales; the two latter evidently from the Arabic Tabe and the Persian Tambal.

The Parthians devised a very clever method of getting rid of the invading armies. They would set up hollow vessels that were covered with skin and would beat upon them. The sound produced on the vessels was supposedly frightening, so the invading armies would leave peaceable.

Up until this time, there had been no actual record of any definite pitch, except for a loud noise which the drum produced when beat upon.

Finally, someone discovered that by tightening the head of the drum, a tonal sound could be rendered. Eventually, the kettledrum became a tonal member of the orchestra, as we know it today. It is said, however, that the stretching of the skin by tightening of chords, either with constricting tabs, as on the Chinese "hour-glass" drum, Chang Ku, a survival of the ancient Sumerian Balag, or by inserting a reel shaped wedge, as is the custom in Africa, was nothing new.

The method, adopted in Europe, of increasing the tension by side screws on the rim, is far more efficient, and is displayed in Virdung's illustration of the Herpaucken (1518)[3]. Upon its introduction in Europe, kettledrums were permitted only to barons and other high officials for honorable use.

Even early writings made reference to the timpani, such as the case in Chaucer's Knightes Tales:

"Ye men on foote, and knaves may oon,
With schorte stave, as thikke as they may goon;
Pypes, trompes, nakers, and clariounes,
That in the betail bleive Bloody sownes."

In ancient Persia the kettledrums were used to hunt wild birds; the violent striking of the drums causing the birds to fly about, enabling the huntsmen to shoot them down. Today, in place of the kettledrums, we use various forms of wind whistles and other noise-making devices to accomplish the same results.

The most glamorous period for kettledrums occurred during the middle ages, when the kettledrummers formed themselves into guilds, the entry into which called for a long period of apprenticeship. At this time, the most honorable privilege of the kettledrummer was to participate at the tournaments of the knights and nobles.

In 1821, Stumpff invented a revolving frame which tightened or relaxed the head. However, by the 1830's, a method of rapid tuning by means of pedals (at first seven, but later only three, and now only one) was advocated in France, probably suggested by the action of the harp. Their introduction is attributed to Lully of France (c. 1670), as far as this writer can determine.

Cornelius Ward, in 1837, produced a kettledrum with a single central key in the side, which worked on the head rim by a system of pulleys, achieving the same results.

In the Highlands of Scotland the people expected better crops of grain when they sowed their seed in the moon's increase. When their new moon came into view they would greet it with the beating of many timpani.

One Roman festival, which was the annual solemnization of the death and resurrection of Attis in spring, was further insulated by eating from a round copper drum, which was a modern timpani of that day.[4]

Ludwig von Beethoven (1770-1827) was the first to tune the timpani in diminished fifths (A, E-Flat) as in his *Fideilo*, and a minor sixth (A, F) in his *Symphony Number Seven.* After his initial venture into new usuages of the timpani, other composers started following his example. Some mention should be made of his *Emperor Concerto*, or, as it is sometimes called, Beethoven's *Concerto for Timpani and Piano.* It is so called because he has placed within the symphony an unusual passage for timpani and piano, which is typical of the composer's endeavor in new fields. In his *Symphony Number Nine*, Beethoven has the timpanist strike both timpani simultaneously.

Gounoud has a similar chord in Ballet music of La Reine de Saba. Berlioz, in his *Requiem*, besides fifty brass instruments, has eight pairs of kettledrums, played by ten drummers, two of the pair have two drummers each.[5]

In addition to their obvious use in forte passages, the drums are capable of beautiful piano effects. Observe a passage several times repeated in Mozart's overture to *Die Zauberflote*, beginning at the forth-first bar from the end, notice also, the mysterious effect of the thirteenth bar in the introduction to Beethoven's *Mount of Olives;* and that of the A natural against a tremolo of the strings in the first movement of Weber's overture to *Der Freishchutz* on the return of the subject in the middle movement.[6]

Next to be discovered was the fact that one can take the range of a low drum to D, as does Gustav Mahler in his *Symphony Number Nine.*

Rimsky-Korsakov discovered a small, high pitched kettledrum, and in his Mlada written for the drum in B-flat above the F Clef.

Several of the modern composers have used notes for the timpani which are beyond the normal range. Janacek used the high B-flat and the high B-natural. The celebrated conductor, Stokowski, in his orchestral transcription of Bach, used the low C. These notes do not often occur as is evident. In order to produce them, specially built timpani have to be used to give good quality for this note. In the case of the low C-natural, timpani of thirty-five to thirty-six inches in diameter would have to be employed to give good quality.

The history of the timpani is very interesting and fascinating. As is the case in most fields of musical knowledge, laymen (and, quite often, professional musicians) are prone to harbor misconceptions about their instruments.

**FOOTNOTES**

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[2]Goodman, Saul, Modern Tympany Method (N.Y.: Mills Music, INC., 1948) p. 3.

[3]Montgomery, Elizabeth Rider, The Story Behind Musical Instruments (New York: Dodd, Mead and Co., 1953) p. 50.

[4]Frazer, Sir James George, Adonis Attis Osiris, I, II. (New York: Mac Millian Co., 1951) p. 247-248.

[5]Vizetally, Frank H., New Standard Encyclopedia of Universal Knowledge. (New York: Funk and Wagnalls, 1931) p.69.

[6]Goodman, Saul-Modern Method for Tympany. (New York: Mills Music Inc.) p. 109.

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Holy Bible Ref:

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|---|---|
| Amos VI:5 | XIV:11 |
| Exod XV:20 | XXIV:8 |
| Gen IV:21 | Judith III: 8 |
| Gen XXXI:27 | I Kings I:40 |
| Isa V:12 | I Maco IX:30 |

## AN EXPERIENCE IN AFRICAN DRUMMING

**by F. Michael Combs**

*(Mr. Combs' "Study in Africa" was made possible through a Faculty Research Award from the University of Tennessee.)*

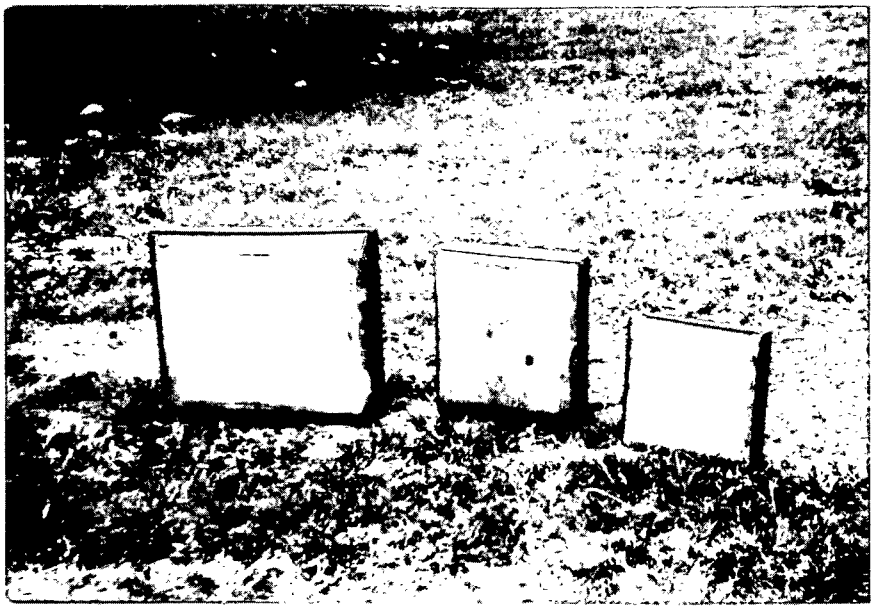
A whole new world of music that most have yet to discover exists in our neighboring country of Africa. Although it would take years to make a complete study of the music of just one area of Africa, the following is a brief account of some of the types of drumming and xylophone playing that are found in the country of Ghana in West Africa.

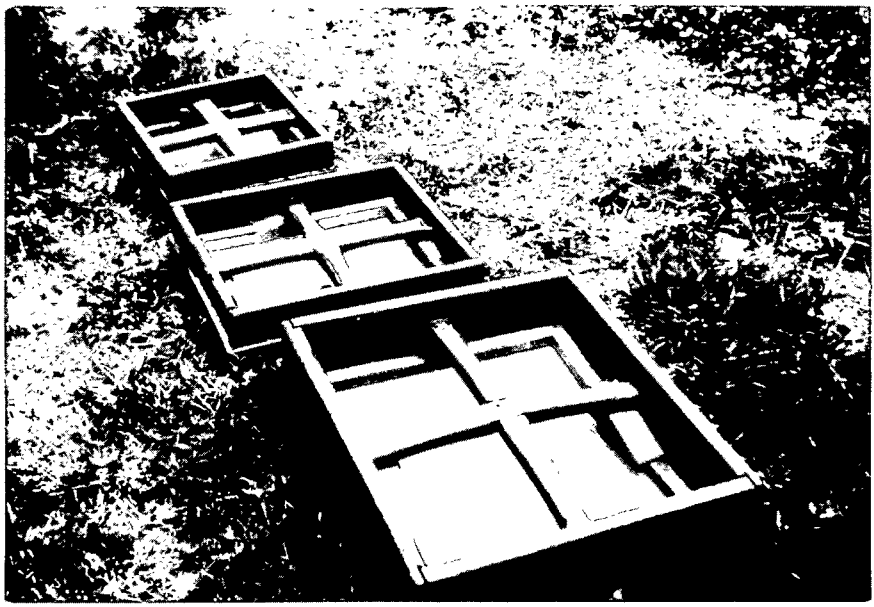
The University of Ghana is situated about ten miles north of Accra, the capitol city, and has within its structure an Institute of African Studies. The Institute employs several master drummers and xylophone players from various tribes of Ghana. The information in this article was obtained by the author while studying with these master drummers during a time when the University was not officially in session, and it is through the assistance of the Institute of African Studies that this article is possible.

THE DRUMS

The function of each particular African drum is very specific. The Ashanti tribe, for instance, will use only certain types of drums constructed in a particular way. Photo 1 shows an Ashanti master drummer giving instruction in playing some of the drums typical of his region. This particular teacher speaks no English but is completely versed in the language of the drums and is knowledgeable of the function of all the drums in the ensemble. Each drum has been constructed entirely by hand and, to be official Ashanti drums, has been covered with alternating red and black squares of cloth. The drum on the left is called "apentima." It is medium sized and usually is played with the hands. The large drum in the center is called "quandum" and is played with sticks. The two drums on the right are both called "abrukwa" drums. The man in the back is playing a "dono" drum. The pitch is controlled by squeezing the drum.

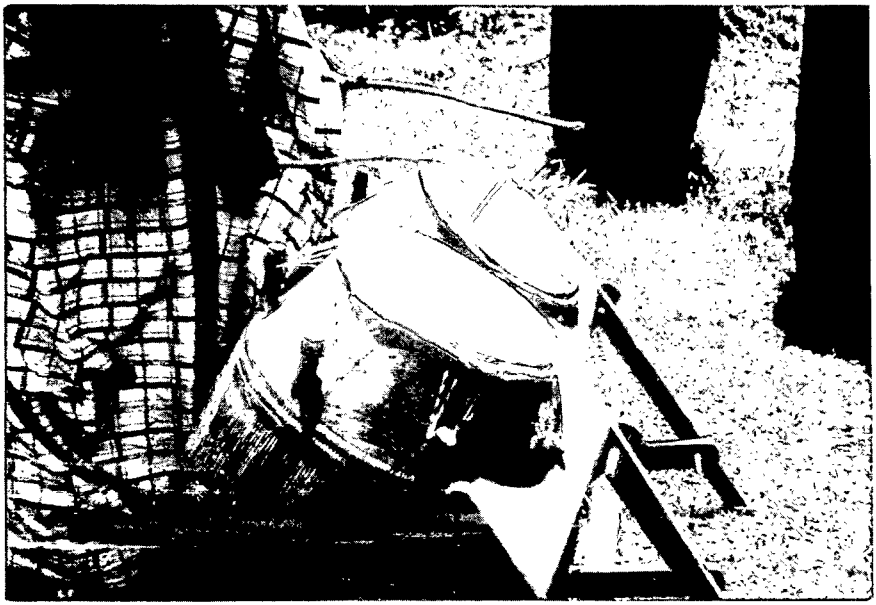
The tribe predominant in the Southern region of Ghana is called the Ga tribe. The drums pictured in photo 2 are constructed in such a manner that they look quite similiar to barrels. Strips of wood that taper at the ends are strapped together by metal bands. The antelope skin heads are kept taut by adjusting pegs in the sides of the drums. The village of Achiasi, a few miles northwest of Accra, is one of the main centers producing these drums. A family was observed making the drums completely by hand - one member of the family would carve the wood, one would prepare the head, and others would make their contribution to the finished products. In photo 2 the small drum on the left is called "krobota" followed by the "kidi" and then by the large "sogo." The tall slender drum on the right is called a "kangam"

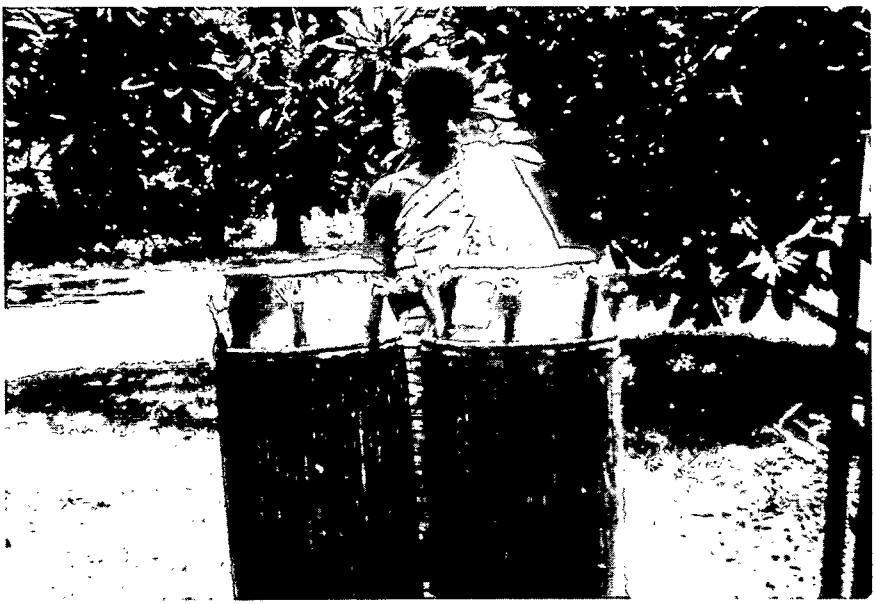




and the very large drum in the center is the master drum of the ensemble and is called "achimevu."

One of the most interesting types of drums in West Africa is the "timalee" pictured in photos 3 and 4. The drum heads are stretched over a square frame under which another frame, somewhat smaller, presses against the underside of the head by the force of wedges driven between the two frames.





The well-known talking drums, or "atumpani," pictured in photo 5, are connected with the Akan tribes and have a sound that carries great distances. Although they are used to accompany dances, their primary function is to send messages from one area to another.

In addition to the drums, a bell is an important element to almost all dance accompaniments. The bell used with the Ewe tribes is called "gakogoi," but is better known in English as a slit bell. Almost the size

of a large banana, the "gakogoi" is hollow and slit from end to end. The bell is struck with a stick and usually plays a steady, repeated pattern. The Akan tribes use a double bell called "dawuro," or, more commonly in this country, gong-gong. A large and small metal bell (which look like cow bells) are fastened together at the tops. Similar to the "gakogoi," the "dawuro" plays a steady rhythmic pattern and is an essential element of the ensemble.

One interesting instrument used in some of the dances is the "torrow" or gourd rattle. Made from gourds of various sizes, a netting of beads is tied loosely around the gourds. The instruments are held by the neck and struck against the knee or sometimes back and forth between the knee and hand.

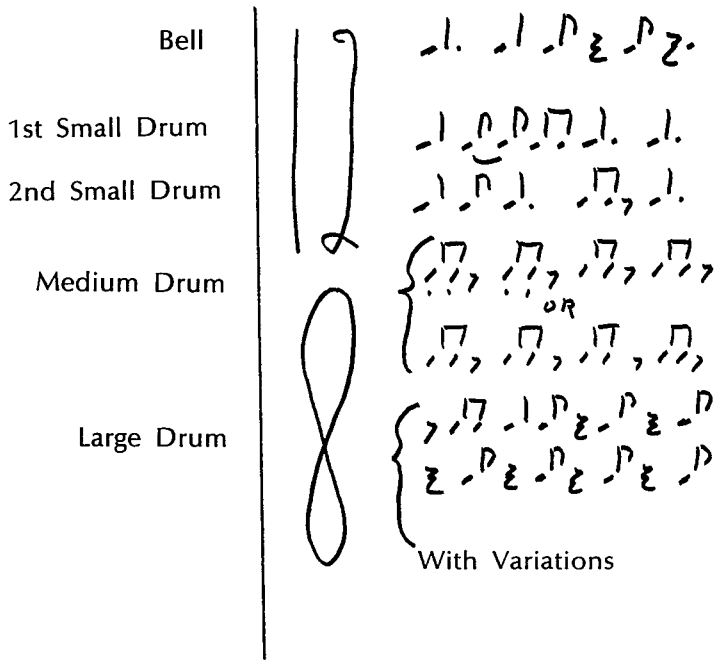
Two other drums that are popular and originate in the North are the "nbenten" and the "berekete" - the latter being a somewhat larger version of the first. These drums have one single cord stretched across one head and are struck with a stick. The resulting sound is somewhat similar to the military drum.

### THE DANCES

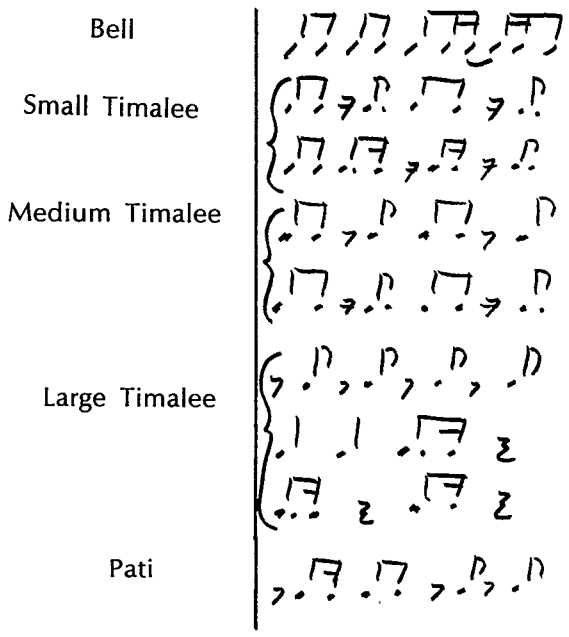
Although some 30 dances were transcribed during the expedition, only a few have been selected to give the reader some idea of how the rhythms of a cross-section of dances are constructed. Basically, each dance uses a bell (gakogoi or dawuro) with two or three small drums and a large master drum. The rattle or other instruments are also used with certain dances. The smaller drums keep a fairly steady beat repeating a pattern over and over until the master drum plays a certain rhythm which signals the smaller drums to change to a variation of the pattern being played. Although the master drum plays a great many variations within a certain style and framework, the other drums are limited to from one to three basic rhythms.

The drummers seem to have no concept of Western notation and cannot even pat their foot to the beat or denote the down beat or phrase. In the dances described below, meter signatures and notational values seem to be the most logical.

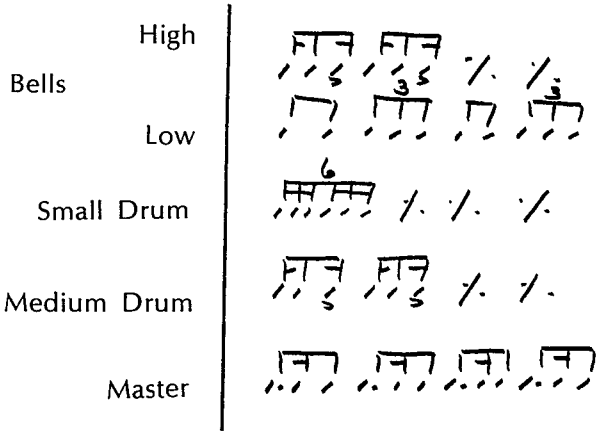
## ADABANKA (ASHANTI)



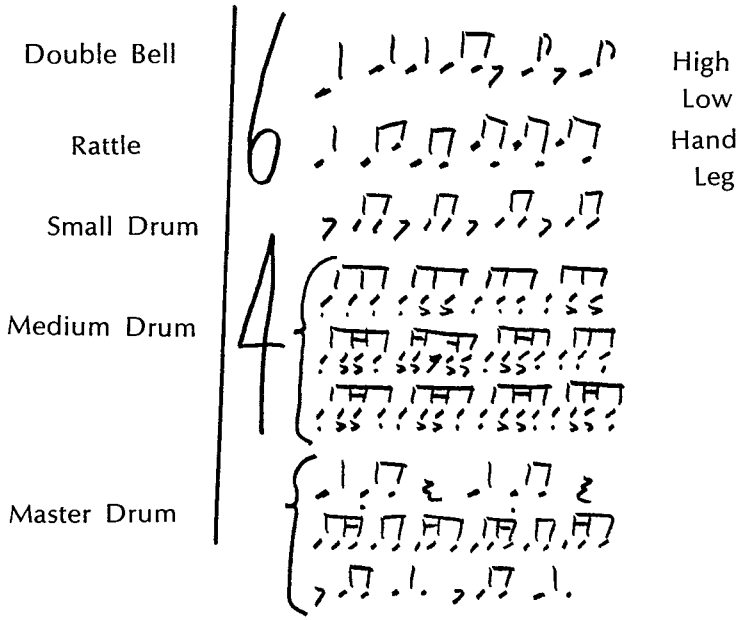

## OYAA (GA)



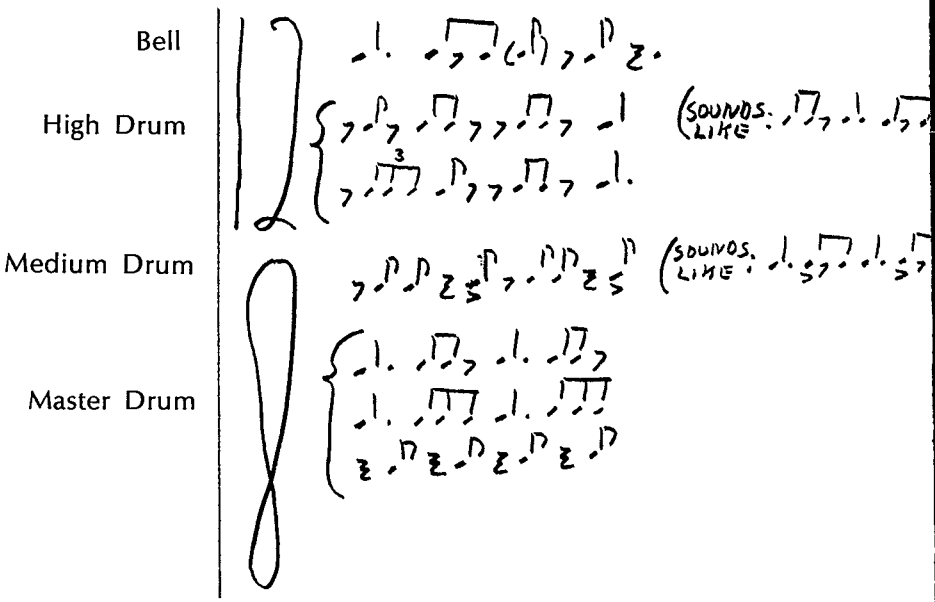
AKOM DENSEU (GA)



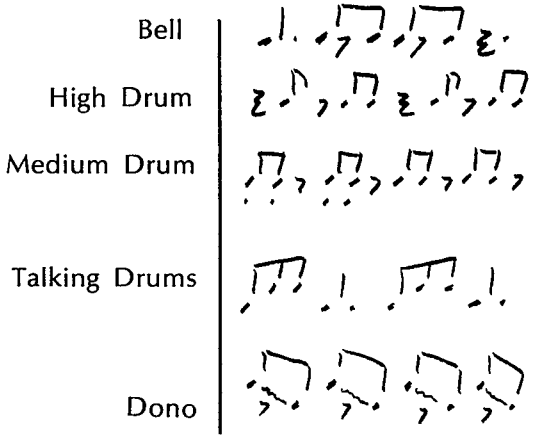

AGBAGA (VOLTA AREA)



## DENSEU (ASHANTI)




## ADOWA (AKAN)



**kumachacha )ashanti)**

Bell

High Drum

Medium Drum

Master Drum

**THE XYLOPHONE**

The African xylophone is particularly interesting. The players learn their skills entirely by rote and usually from their fathers who learned from their fathers, etc. There are several different kinds of xylophones. The "bagyil," pictured in photo 7, is the most common instrument and

consists of three groups of four keys - each an octave from the other. The instrument is constructed by hand and tuned entirely by ear. Although the pitch arrangement is not like our Western system, the tunes produced are quite melodious.

Under each of the bars are positioned gourd resonators. Each gourd has a hole in the side which has been filled with spider webs causing a strong buzzing sound when the bar is struck. The grip used is quite different from anything used in this country - the mallets are held between the first and second fingers. Often two or more xylophones play together in an ensemble. But, even when only one is being played, the technical skills displayed rival technical development anywhere in the world.

In addition to the bagyil xylophone, the kurgyil xylophone consists of 14 keys and is used only for funerals. The largest xylophone is called the gyilmoa.

CONCLUSION

**I am certain that many, after reading this article, will be interested in purchasing African xylophones and drums. The Institute of African Studies, (University of Ghana, Legon, Ghana, West Africa) will be of assistance. Also, a young drummer named Akwasi Asare (Box 19, Institute of African Studies, University of Ghana, Legon, Ghana, West Africa) expressed an interest in assisting Americans in obtaining African drums.**

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# President's Corner

Although it is impossible to thank everyone who contributed to the success of the past PAS National Confeerence, there are, nevertheless, individuals who should be recognized. On behalf of the Percussive Arts Society, I would like to take this opportunity to thank the PASNC Committee: Lloyd McCausland, Mervin Britton, Roy Burns, Gary Burton, Scott Higgins, and Joel Leach; The California State Chapter, David Levine, President; the Conference participants: Santa Clara Vanguards, William Kraft, the Los Angeles Percussion Ensemble, Martin Mailman, Vaclav Nelheybel, H. Owen Reed, Ron George, Gary Burton, Roy Burns, Alan Dawson; the USAF Falconaires, Emil Richards, Danlee Mitchell, the Harry Partch Ensemble; and the PAS commercial members contributing financial support.

It is the hope of the PAS Board of Directors that the Conference was another successful step in the attempt to expand our efforts in the

conference area and bring prominent percussion figures to the membership. Comments on the conference and related activities are always welcome.

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**Board of Directors Meeting**
**March 26, 1974**

Present: Gary Beckner, Gary Burton, Jim Coffin, Mike Combs, Thomas Ervin (proxy for Karen Ervin), Ron Fink, Neal Fluegel, Don Canedy (proxy for Jim Ganduglia), Norman Goldberg, Joel Leach, Martin Mailman, Lloyd McCausland, Jackie Meyer, James Moore, Gary Olmstead, Jim Petercsak, Dick Richardson, Larry Vanlandingham, and Martin Zyskowski.

Sandy Feldstein presented the recommendations of the Ex-Officio Advisory Committee regarding Hall of Fame nominations and procedures. A motion was made by Neal Fluegel and seconded by Jim Coffin to appoint the Ex-Officio Advisory Committee as the nominating committee for the Hall of Fame. Vote passed. A motion was made by Sandy Feldstein and seconded by Neal Fluegel to accept the Ex-Officio Advisory Committee suggestions. The Committee recommends the following related to the Hall of Fame:

1. There shall be no stipulation made as to whether individuals nominated & selected are living or deceased.
2. The exact number of people elected each year should be flexible. However, it is strongly suggested that the smallest number of people receiving the award will make it the most meaningful, and therefore, it is recommended that each year this be re-evaluated and a specific number determined when the slate is suggested.
3. Nominations should be open to the entire membership through our publications, and should then be screened through the Ex-Officio Advisory committee. It is suggested that all nominations be submitted with a brief biographical sketch.
4. The Committee should screen the membership suggestions, add their own, and submit that slate to the Board with biographical sketches whenever possible.
5. The election should be by the Board with a 2/3 majority necessary for any nominee.
6. The awards should be given at the Percussive Arts Society National Conference.

Vote passed.

Regarding the sustaining members' raise in dues, a motion was made to appoint a committee of Dick Richardson, Don Canedy, Jim Coffin, and Norman Goldberg to present a proposal in Houston. Vote defeated. Topic is to be tabled until June.

A motion was made by Neal Fluegel and seconded by Mike Combs to provide an award of $400.00 (maximum of $500.00) to

MTNA percussion winner. This is to be reviewed yearly and PAS is to guide MTNA in judging. Vote passed.

Mike Combs made a motion, seconded by Joel Leach, to re-establish the committee on elementary percussion. Vote passed. Names were presented as possible committee members. Mike Combs is to establish the committee.

Bill Ludwig Jr. and Ludwig Industries offered to donate a bass marimba and shipping crates to PAS to be used by PAS members. Ron Fink moved to accept the marimba and Gary Burton seconded the motion. Vote passed. Don Canedy is to write a thank you letter to Dick Richardson and Bill Ludwig Jr. on behalf of PAS.

Dick Richardson suggested an instrument pool for the next PAS Conference.

After a presentation by Martin Zyskowski concerning Expo '74, a motion was made by Jim Petercsak and seconded by Larry Vanlandingham to write a letter of PAS support to Martin Zyskowski. This will enable Martin and the Washington State PAS to get financial grants, endowments, etc. for Expo '74. Vote passed. Gary Olmstead will write the letter.

PAS Symposium and Conference:

A motion was made by Gary Burton and seconded by Lloyd McCausland to establish a committee for each - Symposium and Conference. Vote passed.

Gary Olmstead appointed the following committees:

**Symposium:**

Al Otte, Co-Chairman
Al O'Conner, Co-Chairman
Gary Burton
Blackearth Percussion Group
Neal Fluegel
Others who would be interested in serving

**Conference:**

Ron Keezer, Chairman
Roger Faulman
Gary Beckner
John Mulvey
Mike Combs
Others who would be interested in serving

Respectfully Submitted
Jacqueline Meyer

## NEW MATERIAL REVIEW
## by
## Sanford Seigel and Mervin Britton

*The composition **African Welcome Piece** by Michael Udow reviewed in PERCUSSIONIST Vol. XI, No. 2 is **not** available from Music Masters as stated, but is published by University of Miami Music Publications, sole distributor: Sam Fox Publishing Co., Inc., 1540 Broedway, New York, N.Y. 10036.*

**BASIC TRAINING COURSE for KEYBOARD PERCUSSION,** John Kinyon; Alfred Music Co., Inc., New York.

**Book 1,** 32 pages $1.25.

This method is part of a series for band instruments and was designed for use either for individual instruction or for beginning groups. It begins with two pitches and adds one to three pitches in each lesson. The rhythm progresses from whole notes to eighth-notes. There is a nice variety of solo and etude selections.

**BOOK 2,** 32 pages $1.25.

Basic theory concepts such as scales and triads are introduced with the lessons in this volume. The rhythmic progression includes sixteenth-notes, cut time and 6/8 meter. As in book one, there is a good variety in the musical selections.

**KEYBOARD MASTERY for the MALLET PERCUSSION,** Fred Wickstrom; University of Miami Music Publications, Sole agent--Sam Fox Publishing company, Inc., 1540 Broadway, New York, N.Y. 10036.

**Volume I--Two Mallets,** 24 pages $2.50.

This book deals with two mallet technique. Scale and chordal exercises are presented in one key with instructions to practice in every key progressing by circles of fourths and fifths and chromatically. Included in the volume are double stop exercises and exercises in some less commonly used scales.

**Volume II--Three and Four Mallets,** 28 pages $2.75.

This book uses triads and the common 7th chords with inversions, position changes and chord progressions. The traditional, Musser and Burton Mallet grips are explained and illustrated with the choice of grip being left to the student and teacher.

**MUSIC for MALLETS and PERCUSSION,** John Bavicchi, score-$3.00 complete performance set $20.00; Oxford University Press, 200 Madison Ave., New York, N.Y. 10016.

As suggested by the title, percussion instruments compliment the soloistic mallet parts in this composition for twelve performers. Required mallet instruments are: glockenspiel, xylophone, marimba (bass & treble clef) and vibraphone. All other instruments are standard percussion. This difficult and rewarding work requires mature players for all of the mallet parts and for the timpani part.

**MAJESTIC PROCESSIONAL,** Tony De Nicola, score and parts-$4.00; Innovative Projects, Box 5201, Trenton, New Jersey 08638.

This rudimental style octet requires: snare drum, tenor drum, castagnets, tambourine, triangles (2), bass drum, cymbals and timpani. The piece is of moderate difficulty for a high school ensemble.

**PHONETIKS,** Ron Delp, $2.50; Kendor Music, Inc., Delevan, New York 14042.

The structure of this sextet is based on a series of short rhythmic figures. There is much "dovetailing" between parts which makes it an interesting piece for a high school ensemble. The percussion instruments used are all standard for the average section.

**FANFARE for DOUBLE PERCUSSION TRIO,** George Frock, $4.00; Southern Music Company, San Antonio, Texas 78292.

This sextet was written for two percussion trios. One of these trios uses the mallet instruments--bells, vibraphone and chimes--with conventional notation. The parts fit together well but are melodically independent of each other with very little doubling. Graphic notation is used for the contrasting drum trio written for bongos, tom toms, tenor drum, bass drum, two pyrex bowls and two clay flower pots. A college ensemble should find this medium difficulty composition quite rewarding.

**REPETITIVO,** Fred M. Hubbell, $1.00; Kendor Music, Inc., Delevan, New York 14042.

The title is self-explanatory in this moderately easy junior high school level snare drum solo. Although the solo is in march style, it doesn't specifically call for rudiments and could be used as supplementary material for any young student.

**RUDIMENTAL RASCAL,** Tony De Nicola, $1.00; Innovative Projects, Box 5201, Trenton, New Jersey 08638.

This moderately difficult high school level solo is aptly described by the title.

**DEBUT,** Frank Derrick III, $1.00; Derrick 111 Enterprises, Harvey, Ill. 60426.

This easy snare drum solo is in rudimental style.

**THREE SHORT PIECES FOR FOUR TIMPANI,** Robert Lombardo, $4.00; Palle D'Oro Press, 1040 West Wellington, Chicago, Ill. 60657.

Although these solos have frequent use of glissando, an optional set of tunings is given for use with hand-tuned drums. The composition is written on two staves, which will require some reading adjustment by an average timpanist, but the manuscript is clear and well spaced. The solos appear to be interesting and challenging for a college level student. The first and third pieces *(Echoes* and *Scherzo)* are un-metered, while the second piece *(March)* utilizes 4/8, 3/8, and 2/4 meters. Some use is made of opposing rhythmic groupings.

**THE INDEPENDENT DRUMMER,** Gary Chaffee, 63 pages $3.00; Alfred Music Co., Inc., N.Y.

The independence exercises in this book are to be used for snare drum, bass drum and hi-hat. While basic patterns are employed in the

exercises, the author only writes out the changing rhythmic parts. The format is presented in this manner so that the student is encouraged to develop a mental awareness of all he is playing.

**THE ART OF ROCK DRUMMING,** Keith Reichelt, 31 Pages $1.95; CIA Publications 7404 S. Mason St., Chicago 60638.

Unlike many rock books available today, this one makes no attempt to put in print all of the hundreds of rock beats that are possible. It does provide a good basic training course to prepare the young drummer--and perhaps even the veteran drummer in need of some practical study for occasional use--to meet some of the demands of today's rock style. The book includes sections on basic beats, fill-ins, sixteenth-note "kickers", two-beat and shuffle rhythms, latin rock, 12/8 blues, and 3/4 rock.

**COORDINATED ROCK BREAKS PHRASED IN THREE,** Joel Rothman, 16 pages $2.00; JR Publications, 3 Sheridan Square, New York, N.Y. 10014.

This book deals with one measure rock breaks in 4/4 meter that are pharased between the bass drum and snare drum in combinations of 3-3-2 eighth-note patterns, while the cymbal maintains a duplet-eighth-note pulse.

**PHRASING ROCK BREAKS FOR ADVANCED DRUMMERS ONLY,** Joel Rothman, 32 pages $3.00; JR Publications, 3 Sheridan square, New York, NY 10014.

The stated purpose of this book is to show the advanced rock drummer how to design complex-sounding breaks or solos in 4/4 meter by using superimposed 3/8, 2/8, and 5/8 type patterns.

**T.C.B.,** Frank Derrick III, $1.00; Derrick 111 Enterprises, Harvey, Ill. 60426.

This solo in manuscript notation may be used as supplementary material for a young drum set student.

**JAZZ ROCK DRUMMING,** Frank Derrick III; Derrick 111 Enterprises, Harvey, Ill. 60426.

**Volume I, Beginning-Intermediate,** 33 pages $2.50.

A general music page covers a variety of terminology for the beginning student. The volume moves rapidly through a series of rhythmic and technical problems. The exercises are presented for cymbal and snare drum with a standard bass drum and hi-hat pattern suggested for each lesson.

**Volume II, Advanced-Pro,** 30 pages $3.50.

The exercises in this volume are presented for cymbal, snare drum and bass drum. A standard hi-hat rhythm is suggested for each lesson. Subjects include jazz exercises in several meters, mixed meter exercises, and a short unit devoted to rock and soul.

**BEYOND THE ROCKIN' BASS,** Charles Perry and John Lombardo, 31 pages $3.00; JR Publications, 3 Sheridan Square, New York, N.Y. 10014.

Two and four bar solos concentrating on the bass drum and snare drum are co-ordinated with constant cymbal rhythms in this book. Eighth note, triplet-eighth note and sixteenth-note cymbal rhythms are employed.

**3, 5, 7, 9 ROCK!,** Don Reid, 32 pages $3.00; JR Publications, 3 Sheridan Square, New York, N.Y. 10014.

Rock co-ordination in odd meters is explored in this text. The exercises are for bass drum and snare drum with a constant eighth note cymbal rhythm. While most of the book is devoted to 3/4, 5/4 and 7/4 meters, the last seven pages deal with the meters--9/4, 11/4, 5/8, 7/8, 9/8, 11/8.

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## THE CONSTRUCTIONAL DEVELOPMENT OF THE MARIMBA

**by Irving G. Jacob**

*(cont. from PERCUSSIONIST, Vol. XI, No. 2, page 76.)*

There are four varieties of the Chopi *mbila*. They are: 1) *tshilandzana*, containing from twelve to fourteen notes; 2) *dibinde*, containing ten notes; 3) *didole;* and 4) *tshikhulu*, containing four notes which are low pitched and sound like a drum.[29] The *dibinde* is one octave below the *tshilandzana* while the *tshikhulu* has no definite pitch.[30]

The slabs of wood for the Chopi *mbila (makhokhoma)* are cut from *mwendze* wood taken from the block houses built in the time of old wars.[31] They are tuned by shaving the center portions of the bottom to lower the tone and the top to raise the tone. When the *makhokhoma* are tuned, holes are drilled at the ends of the shaved portions for cords to pass through. However, unlike the Venda *mbila* slabs containing holes drilled in both ends of the shaved parts, the Chop *mbila* slabs have holes drilled only through one end, with the cord passing over and under the other end.

The cords pass through the slabs and have the same function as that of the Venda *mbila*, suspending the slabs from the frame *(mrwalo)*. The frame is secured by two small legs about two inches in length to which is attached a curved bar serving two functions: 1) holding the ends of the cords on which the slabs are strung; 2) keeping the instrument away from the body since it is worn when played, unlike the Venda *mbila* which is played while on the ground. Attached between every two slabs is a *vamangana*, a carved wooden support serving the functions of holding the cords end helping to keep the slabs from touching the frame.

The frame consists of various parts, the chief of which is a long piece of wood placed under the slabs. (The wood does not touch the slabs, for they would not be free to vibrate were direct contact made). This piece of wood contains as many holes as there are slabs. A hole is drilled under each slab and below these holes fibres of wax secure spherical resonators *(mathamba)* made from the shells of the fruit of the *nsala* tree. These resonators are carefully graded in size and contain an opening which fits the circular opening in the frame. They are tuned to the same pitches as their corresponding slabs by having the opening contracted by a piece of wax. Each resonator also contains a small hole drilled in the side over which small fruits of the *mhungo* or rubber tree are secured by wax. The fruits have holes drilled into them at the point of attachment and at the opposite end, thus enabling them to further amplify the tone. After the instrument is fully constructed, fat is put onto all loose parts in order to prevent rattling.[32]

The mallets used by the Chopis are named *tikhongo.* The wooden part as well as the ball consists of materials made from raw rubber of the *mhungo* tree.

The Chopi *mbila* is tuned to the approximate range of middle C to F, an octave plus a perfect fourth. Also, like the Venda *mbila,* it has serveral defective notes, especially in the lower register.[33]

Every important occasion of Chopi social life calls for the playing of the *mbila.* For example, it is played at the great *mbila* dance, the women's dance, and the boy's dances of winter.[34] Also, it is played at public gatherings for the purpose of discussing current events, social injustices, or any topic of choice. The *mbila* accompanies the speaker and therefore can serve as a type of newspaper or pillory.[35]

Progress in the continuing development of the marimba occurs in Guatemala. The marimba has the distinction of being exclusively a product of the Americas, particularly Guatemala, in its final perfection.[36] During the slave trade, the Venda and Chopi instruments were probably the ones to be taken to Guatemala. Although information of the marimba's introduction into the New World is very incomplete, the popular belief is that it coincides with the slave trade of the 1500's and 1600's.

Since this is considered the situation, the question arises as to why the marimba was known in Guatemala and other countries of the Western Hemisphere such as Brazil, Cuba, and the United States. One answer is that not all African Negroes were acquainted with the instrument. Therefore, depending upon where they lived, the marimba may not have been known to them during the slave trade, since it was and still is known in only a few places in Africa. It is probably coincidental that many African Negroes knowing of the marimba during the slave trade were taken to Guatemala and very few taken elsewhere. Also, many slaves who were taken to the New World

were a generation or more removed from Africa, having been taken from Portugal or Spain. Therefore, these people probably would not have been exposed to the marimba.

Another possible reason for the marimba's developmental occurrence in Guatemala is due to vegetation. The African would need tropical materials such as rubber, gourds, and resonant hardwood corresponding to those of his homeland; and Guatemala is one of the countries in the Western Hemisphere most abundant in these items.

The gourd marimba, *marimba con tecomates,* has been widely used among the Indians since about 1737.[37] Also, it is the oldest type of Guatemalan marimba.[38] There are two types of *marimba con tecomates.* The first, *marimba de arco,* is considered to be the direct descendant of the African instrument. It has no legs, but contains a piece of cherry or birch wood bent into an arc which is fastened to the end of the instrument. The second type, unlike the former, has no special name. It is similar to the former except that four legs are present in place of the arc. Both types are diatonic as is the African instruments.

In the construction of the *marimba con tecomates* the frame consists of two elongated pieces of wood, usually cherry, set horizontally and parallel, which serve as crossrails. Two smaller pieces of wood, usually cherry, are placed in a parallel vertical position on the top and at the ends of the frame to support the frame and arc.

The keys, usually made either from red or white hormigo wood, are cut into a rectangular shape and usually number twenty-six. Between the keys are placed wooden pegs containing holes drilled at the top to allow the supporting string to alternately pass through the keys and pegs. This procedure unlike its predecessor, the Chopi *mbila,* contains the wooden support between every two keys. The keys are held together by two strings placed through holes drilled at both ends, unlike the Chopi *mbila,* having holes drilled in only the top ends.

The holes are drilled in the keys at the nodal points, which are the areas of little vibration. To find the nodal points, the marimba designer drops a handful of sand on the key and taps it with a mallet. The sand bounces off the places of vibration, but some of it falls at the nodal points and remains there. This process determines the area for the drilling of holes and once they are drilled, the sand is removed from the key.[39]

Hollowed-out gourds are used as resonators, calabash being most preferred due to its elongated shape. The lower and middle pitched gourds contain a vibrating membrane, obtained from the intestine of either a pig or cow, contributing to a buzzing sound. The membrane is sealed over a small hole in the bottom of the gourd with beeswax. The resonators are supported under the keys by small sticks piercing them near the top. The ends of these sticks extend over the frame and are held in place by a long strip of *aliso* wood tied by hemp bindings

beneath the frame. The outward extension of the sticks help to keep the gourds in position.

Production of the resonators is the most difficult aspect of constructing the *marimba con tecomates,* for each one must be of the proper size and tuned with its corresponding key. The marimba maker must carefully examine each gourd and choose those appearing to have reached the proper size, small for the treble keys and large for the bass keys. This selection of gourds involves considerable trial and error methods, since there is no way for a gourd's suitability to be tested until it has been chosen and the inside carefully scraped. Even after this procedure, the marimba maker might have to face the possibility of damage to the gourd from scraping of the inside.

Miss Chenoweth recalled a conversation with an Indian cabinet maker about constructing a *marimba con tecomates:*

> "To increase the sonority of a newly-made *marimba con tecomates,* it is customarily placed in a kitchen chimney where heat and smoke can reach the gourd and wood structure. Here again is an example of a practice which the Indians make without being able to explain except that 'it is a better way.' "[40]

A few more differences between the *marimba con tecomates* and its ancestor, the Chopi *mbila,* are that unlike the Chopis, who use metal in fastening the keys, the *marimba con tecomates* uses no metal. (In fact, none of the Guatemalan marimbas use metal). The mallets of both instruments are made of the same material, however, those of the *marimba con tecomates* have the ball part as its end and those of the Chopi *mbila,* the end extends through the ball and comes to a point.

The keys are tuned to the range of F, a perfect fifth below middle C, to three octaves above middle C (equivalent to the Lydian mode). The primary performance function is to accompany Indian folk dances; but the playing becomes very repetitious due to the rhythmic monotony. The meter is usually in 6/8 and there may be no deviation from this except a slight increase or decrease in tempo. The timbre of the instrument is mellow and pleasing to the ear.[41] It is strictly a solo instrument.

The rhythm is the only repetitious element. There is very little melodic repetition. There may be thirty or more variations, but detection is difficult upon first hearing.[42] One may feel a sense of monotony due to harmonic limitations of Indian music. When one listens to music of another culture, he should not compare it by the same standards by which he judges the music of his own culture.

The *marimba sencilla* also is known as the "transitional marimba." This is probably due to its serving as a transition from the *marimba con tecomates* to the most advanced instrument, the *marimba doble,* or "chromatic marimba" (yet to be discussed). The *marimba sencilla* has been in use since around 1840.[43]

The instrument's construction is in many ways like that of its predecessor, except that it has more keys, giving it a wider range (five or six octaves). With its attached legs, the player or players are required to stand while performing, while the *marimba con tecomates,* employs the arc principle enabling it to be carried. The resonators are made of wood, either cedar or cypress. The *marimba sencilla* may employ from three to five players simultaneously simultaneously, with each performer playing a different part.

The instrument may contain as many as forty-five keys. The range may be from A, an octave plus a minor third below middle C, to five octaves above middle C.

The instrument functions as a musical accompaniment to Indian fairs and festivals. Miss Chenoweth recalls a performance by the San Jorge marimba. (In this particular case the word "marimba" also refers to a marimba band or ensemble.) Following is her description of the characteristics of the music:

> "The music played by this San Jorge marimba consisted of simple melodic variations supported by chordal accompaniment. The treble player was responsible for any changes in harmony since the chordal accompaniment of the other two players depended upon whatever melodic material the leader chose. The middle and bass players had to be ready to shift the harmony whenever their ears heard a change in the melodic part because the leader gave no visible indication of his intentions. At times there was a conflict between the melody and its accompaniment while the two players adjusted to the leader's part. This adjustment usually required a measure's duration and, interestingly enough, there was never any hesitation in the metric pulse. It seemed to them a greater offense to break the continuity of the rhythmic pulse than to tolerate a transitional measure whose harmonic accompaniment did not correspond to the melody.
>
> "Some of the characteristics of the San Jorge marimba were: (1) an extraordinary sense of ensemble, so close that sight as well as sound was sometimes necessary to distinguish where the division of parts lay; (2) metrical precision; and (3) a spontaneity of performance, with improvisations made rapidly and clearly."[44]

Since the *marimba sencilla* is much larger than ts predecessor, transportation is more difficult. The *marimba con tecomates,* can be carried in one's hands, but the *marimba sencilla* must be carried on one's back. A heavy strip of cloth is tied to the frame and passes over the carrier's shoulders. Used with the cloth is a leather line wrapped around the carrier's waist and connected to the strip of cloth.

The chromatic marimba, *marimba doble,* was perfected by Sebastian Hurtado around 1874.[45] He discarded the gourd resonators and replaced them with the flaring wooden boxes. Also, he increased

the number of keys to the range of five and one half chromatic octaves, marking the first break from the diatonic *marimba con tecomates* and *sencilla.* Hurtado introduced the chromatic keyboard with the bars arranged like those of the black and white keys of the piano. The chromatic marimba finally became a fully developed musical instrument around 1894,[46] with a range of six and one half octaves. Others aiding in its development were Mariano Valverde, who worked closely with the Hurtado family, and Rosendo Barrios, who standardized the dimensions of the resonators.

The new marimba quickly became popular not only in Guatemala but throughout Central America. In Guatemala it is regarded as the national musical instrument.[47] It is played in parks and hotels, on the radio, and at fiestas.

Construction of the instrument is a slow process, for all work is done by hand.[48] The frame, made of Spanish cedar, mahogany, or rosewood, consists of four rails placed horizontally and parallel to each other. They then are moved in such a way as to be in an almost triangular position, the larger end on the left and the smaller on the right. Attached below the rails are two sets of three legs located off center to support the heavier bass end.

The most demanding task in constructing a *marimba doble* is making the keys, since they are tuned while being shaped.[49] The first step in the manufacturing process is selecting the wood. The wood comes either from the hormigo tree, producing black, white, and red woods, or from the *granadillo rojo* tree, the former preferred by most marimba makers. However, the hormigo tree grows mostly in the coastal regions and since most marimbas are made in the highlands of the interior, the wood must be imported. After the wood is selected, it is shaped into elongated rectangles, thickest at the ends through which a hole is drilled crosswise for stringing the keys, and hollowed out under the center portion. The keys gradually diminish in size from the bass to the treble. The largest may be up to twenty-nine inches long, five-eighths of an inch thick at the ends, and one fourth of an inch thick in the center, while the smallest may be only six inches in length, with the same thickness. Occasionally one may find carved designs at the ends of the keys.

The bars are placed onto the rails in a parallel vertical position, the largest placed on the extreme left and the size diminishing as they progress further to the right. To support the keys and hold them in place, so that they can vibrate freely, two wooden pegs with holes drilled in the tops are placed vertically between each key. The chord is threaded alternately through the keys and pegs. There is no excess chord as with the African ancestor. The chord is made in the fashion of a large loop and when threading is completed at the top and bottom, it is connected to pegs placed at the ends of the frame. This keeps it tight and the keys firmly in place without touching the rails.

The keys are tuned with a tuning fork, F being the usual note. The fork is sounded to find the first pitch and the rest of the keys are tuned relative to it. They usually are tuned separately instead of in octaves. Some marimba craftsmen will use a bottle pitched to the note of middle C for finding the first pitch. To give final adjustment to the tone, the keys are shaved underneath the center portion to lower the pitch and the ends to raise it. After tuning, the keys are vigorously rubbed with a smooth seashell or smooth bottle. This procedure closes the pores of the wood and gives the keys a very high luster, making them appear to have been waxed, but no finish or polish applied.[50]

The range of the large marimba, or *marimba grande,* usually is from G, an octave plus a perfect fourth below middle C, to B, three octaves plus a major seventh above middle C. The smaller marimba, or *marimba cuache,* ranges from F, a perfect fifth below middle C, to E, three octaves plus a major third above middle C.

The resonators aid in producing the full tones when the keys are tapped with the mallets. They are placed beneath each key and the shape is that of an upside down cone, the wider end at the bottom and the narrower end at the top. The bottom becomes a flare, tapering downward to a point and the width of the top does not exceed that of the keys whose tones are amplified. The reasonators, like the keys, gradually dimish in size from bass to treble. The dimensions of the extreme bass resonator usually are three feet long and nine inches wide at its maximum width, while the smallest one at the extreme treble is usually one and one half inches in length and one inch wide at its maximum width. The increase in size from the treble to bass gives the *marimba doble* an unimpressive appearance, for near the bass end the resonators become so crowded that they no longer can hang straight down. This causes the last one to protrude approximately twenty degrees from a vertical position.

The resonators are constructed by gluing together strips of wood, either cedar, cypress, or sometimes mahogany. The strips of wood are glued at right angles to form an elongated box open at the top, with an open end also referred to as the mouth. Wooden extensions, known as "lips," are attached to the front and back ends of the mouth and extend over the rails to support the resonators and keep them in position. They also keep the resonators an inch away from their corresponding keys.

Construction of the resonance chambers is much easier on the *marimba doble* than on its ancestor, the *marimba con tecomates.* The resonators of the *marimba con tecomates,* whose suitability cannot be determined until the insides have been scraped out differs from those of the *marimba doble* whose dimensions can be predetermined. Ever since Barrios standardized the dimensions of all resonators made in his marimba workshop, others have followed suit. Most craftmen copy the dimensions of the resonators from those of other instruments and make use of them when making their next instruments.

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