Percussionist

An Official Publication of
PERCUSSIVE ARTS SOCIETY, INC.

VOLUME IX, NUMBER 3
SPRING, 1972

PERCUSSIVE ARTS SOCIETY, INC.
(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.

Percussionist *VOLUME IX, NUMBER 3*
SPRING, 1972

AN OFFICIAL PUBLICATION OF PERCUSSIVE ARTS SOCIETY, INC.

PERCUSSIONIST is published Fall, Winter, Spring, and Summer by Percussive Arts Society, Inc. Office and clerical assistance furnished by Indiana State University. Resolved: That a copy of each issue of "Percussionist" shall be sent to each member of the Percussive Arts Society, Inc., and that of each member's dues or enrollment fees of $5.00 or $8.00, $2.00 shall be paid for a year's subscription to the publication. Second class permit, Terre Haute, Indiana. All correspondence concerning membership, subscription rate, editorial content and change of address notices should be addressed to: Neal Fluegel, Editor, PERCUSSIONIST, 130 Carol Drive, Terre Haute, Indiana 47805.

In this issue

A DETAILED DESCRIPTION AND ACOUSTICAL STUDY OF THE MARIMBA AND XYLOPHONE

by Gene L. Stoutmeyer

continued from page 37, Volume IX Number 2 of Percussionist

EQUIPMENT AND PROCEDURE

The musical instruments used in this study were of the highest quality available. A four octave marimba and a three and one half octave resonated xylophone were used.

(A Kay Sona-Graph model 6061-A with Contour Display unit 6070-A was used for the tone analysis.) This instrument records a permanent graphic display of the time, intensity and frequency of a tone fund and the partials that comprise the tone.

In discussing the pitches of tones used it should be noted that C1 refers to the pitch commonly called Middle C, 262 cps. In this study tones were sampled at the octave and mid-octave. More specifically, C1, G1, C2, G2, C3, G3. All but the first tone is common to both instruments.

A wide range of mallets were used. They were grey yarn, yellow yarn, yellow rubber, red rubber, blue rubber and white plastic. This included soft mallets used only on marimba, medium mallets used on both instruments and hard mallets used only on xylophone.

The procedure utilized was as follows: Each tone was sounded by each of the mallets and recorded by the Sona-Graph. The graphs were then studied to find trends, differences and similarities.

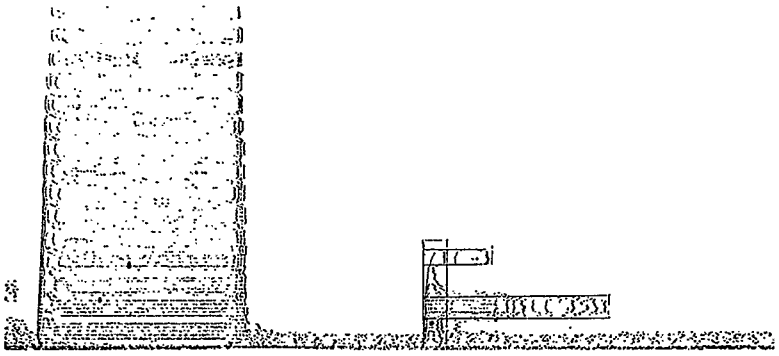
RESULTS

Results of this study showed some tonal properties that were similar to both instruments and others that were only applicable to one instrument.

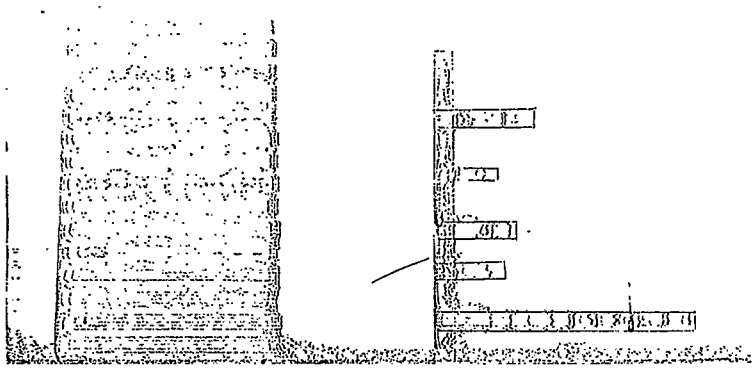
One item that seemed to apply to both instruments was the presence of a continuous frequency band at the beginning of all tones tested. This contained all frequencies and ranged from the 85 cycle base of the graph to the top at 7500-8000 cycles. There was some change in the intensity and frequency range of this display depending upon the hardness of the mallet used to produce the tone. The hardest xylophone mallet produced the widest range and most intense display while the softest marimba mallet produced a minimal display. This can be seen on graphs one and two of page.

A second fact concerning both instruments and their mallets is the fact that the most partials were displayed when a tone was produced by a hard xylophone type mallet. The number and intensity. of partials was diminshed by using a soft marimba type mallet. This can be observed on graphs one and two on page 60.

Similarities of the two instruments began to disappear as the study of the respective harmonic structures progressed. Both instruments produced a strong fundamental but differed from that point on.



Sona-Graph display of a Xylophone tone, C3, with noise factor outlined in red and partials out-lined in blue. The tone was produced by a soft yellow-rubber mallet.



Sona-Graph display of a Xylophone tone, C3, with noise factor outlined in red and partials outlined in blue. The tone was produced by a hard plastic mallet.

The most prominent partials produced by the *marimba* were the fundamental and the octave partials one, three and seven. (The fundamental and first partial were often of equal or near equal intensity and duration.) This intensity was often in the range of 36-42 dbs. The second partial was present but of only about 12 dbs, and of less than .25 seconds in duration. The intensity of this partial tends to increase with pitch. In the lower pitches, this partial decreased to the point of disappearing. The third partial was next to the most prominent maintaining a fairly high intensity of 18-36 dbs. and a duration in time of one third to one half that of the fundamental. Occasionally the fourth and fifth partials were present, however, when these partials were present they were below 12 dbs. intensity and .1 seconds in duration. Refer to the charts on page 61.

The *xylophone* produces a marked difference between the fundamental and the first partial. (The first partial is far less intense than the fundamental.) There was often a drop of 18-24 dbs. between the two. There was also a difference in duration as the first partial was usually about half as long as the fundamental. There were some cases where the first partial did not appear. The most prominent partials over the fundamental were those at an interval of a fifth or partials two and five. (The second partial began to approach the fundamental in intensity) with its duration approximately half of the fundamental. Occasionally the second partial would appear one octave lower or at a fifth above the fundamental as well as an octave and a fifth above the fundamental in the normal position. This is possibly *a combination tone effect.* The fifth partial was somewhat inconsistent, but was often equal in intensity to the fundamental. Very frequently, the third partial was absent altogether. Refer to the charts below.

G1 3[illegible] cps

Xylophone

Red Rubber

Partials	Intensity	Time
Fundamental	42 dbs	.95 sc
Partial 1	18	.42
Partial 2	18	.26
Partial 3	36	.32
Partial 4	12	.04
Partial 5	6	.07
Partial 6	6	.03

Yellow Yarn

Partials	Intensity	Time
Fundamental	36 dbs	? sc
Partial 1	42	.77
Partial 2	12	.26
Partial 3	24	.15
Partial 7	12	.04

Yellow Rubber

Partials	Intensity	Time
Fundamental	42 dbs	.93 sc
Partial 1	42	.65
Partial 2	24	.18
Partial 3	18	.32
Partial 4	30	.18
Partial 5	18	.16
Partial 7	24	.05

Grey Yarn

Partials	Intensity	Time
Fundamental	36 dbs	.97 sc
Partial 1	42	.95
Partial 2	12	.56
Partial 3	18	.18
Partial 4	12	.08

C2 523 cps

Xylophone

White Plastic

Partials	Intensity	Time
Fundamental	42 dbs	.49 sc
Partial 1	24	.25
Partial 2	24	.42
Partial 5	36	.53
Partial 6	18	.16

Red Rubber

Partials	Intensity	Time
Fundamental	42 dbs	.74 sc
Partial 1	30	.35
Partial 2	36	.39
Partial 5	42	.35

Blue Rubber

Partials	Intensity	Time
Fundamental	42 dbs	.70 sc
Partial 1	30	.25
Partial 2	30	.35
Partial 5	42	.49

Yellow Rubber

Partials	Intensity	Time
Fundamental	36	.33 sc
Partial 1	24	.49
Partial 2	18	.39
Partial 3	6	.25
Partial 5	12	.32

CONCLUSIONS

One factor that influences the tone of an instrument is the envelope or noise factor at the beginning of a tone. From the many graphs studied in this report it was found that the hardness of the mallet used to produce a tone controlled this noise factor. This noise factor took a similar appearance in the graphs of both instruments. Therefore, it would seem that one reason for the more harsh sound of the xylophone is the intense noise factor produced by the hard xylophone mallets. The more mellow sound of the marimba is in turn due to a much less intense noise factor from the soft yarn mallets.

Another reason for the tone difference that can be attributed to the hardness of mallets is the fact that more overtones were produced by the harder mallets. From this one can see why the marimba tone begins to approach xylophone tone as increasingly harder mallets are used.

Other reasons for the tone difference lie deeper in harmonic structure. It was found that the primary overtones produced by the marimba were in octaves above the fundamental. Any series of unison tones is less interesting and lacks the color of a chordal or mixed series. Possibly the marimba quality described as mellow is actually a lack of tone quality due to the presence of only unison sounds.

By the same token, the xylophone tone has more color due to its combination of overtones. The sound of "open-fifths" is a harsh quality and is produced in the second and the fifth partials over the fundamental in the xylophone tone. As pointed out earlier, these partials are quite strong in the xylophone tone.

Tone difference in the xylophone and marimba is caused by the different overtones or partials and the relative intensity of the envelope caused by varied mallet texture.

BIBLIOGRAPHY

Books

Culver, Charles A., *Musical Acoustics*, New York, McGraw Hill Book Co., 1956.

Lundin, Robert W., *An Objective Psychology of Music*, New York, The Ronald Press Co., 1967.

Potter, R., *Visible Speech*, New York, D. Van Nostrad Co., 1947.

Richardson, E.G., *The Acoustics of Orchestral Instruments and The Organ*, New York, Oxford University Press, 1929.

Articles

Chenoweth, Vida, "The Difference Among Xylophone, Marimba and Vibraphones," *Instrumentalist*, June, 1961.

Moore, James, "The Mysticism of the Marimba", Percussive notes, June, 1966.

"FINGER CONTROL APPLIED TO PERCUSSION PERFORMANCE"
by Ron Fink

Finger control is a definite asset and valuable technic for the modern percussionist. Too few books and articles have been written about this technic, and they are mainly applied to drum set playing. For example: the Burns/Malin book, the Ed Shaughnessy article which appeared in a previous PAS bulletin, and articles and clinics by the exponents of the art: (e.g. Joe Morello). The application of this technic is far-reaching in total percussion playing most notable snare drum, timpani, and drum set and it is on this point that my discussion is intended.

What is finger control?

Finger control is based on a simple principle of a fulcrum-leverage-and proper finger placement coupled with proper technic in the fingers. By utilizing a finger which activates the motion, it is possible to play (with control and finesse), rapid rhythms with ease and articulation, with or without a very minimum of wrist action.

Because of the correlation with already known timpani grips, I shall refer to the grips and illustrations as the German and French grips. It will be assumed that the reader already knows what the

traditional and matched grip are all about. The basic physical difference between these two finger control grips (Fr. & Ger.) is the point at which the middle finger makes contact with the stick. In the French grip the stick is in the *middle* of the middle finger (between the 2 knuckles), and with the German grip the middle finger tip touches the stick. Naturally, with the French grip the hand is sideways with the thumb right on top of the stick while the German has the hand turned in (more matched grip) and the thumb and index finger share equally in holding the stick while the middle finger tip does its work. I often refer to these grips and positions as ride cymbal grips (as applied to the drum set ride cymbal) since they are the most popular theories on playing the ride cymbal.

How does it work?

French Grip:

For the *right* hand (and left hand if matched grip is used): the hand is held perpendicular (as if shaking hands), the stick is placed on top of the curved index finger, while the thumb pressure on top of the stick is like a spring which "springs" the stick back after the middle finger "triggers" the stick in striking the drum. Due to the natural rebound of the stick and the grip, the stick can be controlled while executing fast patterns. Usually the elbow is often raised to allow plenty of freedom and to get an improved angle. Often the hands are also higher from the drum than in normal playing. The pictures of the right hand grip show the different grips and variations:

RIGHT
HAND

normal grip

"French"
finger control

"German"
finger control

German Grip:

You may notice in the picture of the German grip (3) that the hand is arched and the wrist is bent which is allowing the freedom and improving the angle again. The stick also might ride higher than the normal grip on the index finger and thumb. The stick becomes wedged between the thumb knuckle and the index finger knuckle.

It is interesting to note that the French and German grip used in finger control really dates this technic, since these grips have been used by timpani players for an unknown number of years.

For the traditional *left hand* grip: for finger control: There are variations to this grip but basically it involves a raised thumb (fig. 5), protruding 4th and little fingers (fig. 6), and the curled index finger as the "trigger" finger. The middle finger is not needed necessarily, but the index finger as the activator, and the 4th and little fingers as the "back-lift", (especially in bounces) are vital. The hand is sometimes turned over inwardly, more than the traditional normal grip, and the elbow is raised higher than with normal wrist playing. There are varying opinions on how much the hand is turned over.

LEFT
HAND

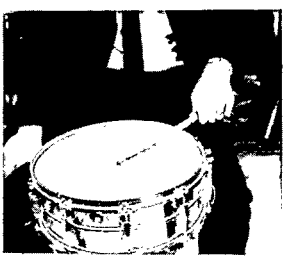
normal traditional

"finger control" variation 1

"thumb control" variation 2

normal matched

"finger control" French



"finger control" German

These other figures are also possible finger control versions, depending on which grip you use.

DRUM SET: the type of grip varies among drummers depending on the dynamics, the rhythmic technic, and upon which instrument (cymbals, tom-toms, etc.) you are playing, and according to whether sticks, mallets or brushes are used.

applications:

Fermatas-single strokes on cymbals or tom-toms or snare. Any sticking pattern as will be discussed under snare drum-military drumming.

The greatest application is in the ease of playing right hand ride cymbal or sock cymbal patterns such as:

SNARE DRUM-MILITARY DRUM:

applications:

1) open roll - many drummers use finger control (traditional grip) in the left hand with the index finger and lift fingers being important in getting the bounce, while the right hand uses wrist.

2) drags - any grace notes which are double sticked work well with the finger control bounce in keeping the articulation "open".

3) double-sticked triplets - finger control is necessary in fast tempos.

4) 3 stroke ruffs - 4 stroke ruffs - It is important to use finger control in placing the grace notes close to the strong note.

5) paraddidles - in the doubling, the bounce is perfected at rapid tempos with finger control.

6) single stroke roll - for speed, fingers take over where wrists leave off.

In general, whether in a series or as a rhythmic pattern, many bounces and fast single stroke rhythms are more effectivly played with finger control.

TIMPANI

The French and German grip were derived from timpani playing and the application is so obvious that it needs no explanation. The details are the same as outlined under the previously explained definitions of how to hold the stick. Finger control is used basically for a quick "snap" or "pulling-out-the-tone" along with the proper wrist snap and forearm lift. The main advantage of finger control in timpani playing would be in executing the relaxed single stroke roll. This would depend on the proper dynamics because extreme soft or loud dynamics might be too hard to control with the finger action.

Conclusion

I would recommend that every student or teacher seriously consider introducing this technique as soon as he has mastered the wrist and arm actions. I would consider this one of the basic concepts involved in percussion playing and the sooner acquired, the better.

0

TYMPANI OR TIMPANI?

By Charles L. White

THE KETTLEDRUMS! What *is* the correct spelling of the name by which these most fascinating instruments of the orchestra are known? Is it "Tympani?" or "Timpani?" There are those who favor having the *y* spelling discontinued and *timpani* adopted into general use. The *i* advocates claim that since timpani is an Italian word and being that the Italian alphabet has no *y* in it, "Timpani" is the logical and correct spelling. But such is not absolutely the case. Tympani is a Greek word. The Italians must have taken it from Greek and substituted the *i* which they had in their alphabet for the *y* which they did not. Neither the *Tympany* nor the *timpany* spelling is good, for the logical plural, *ies*, would be a confusing double one.

Tympanum or *tympanon* was the original name for drums consisting mainly of a vibrating skin or membrane. At times it appeared as a skin stretched on a hoop. The shell of the drum in those pristine days was not important. Several different drums were called "tympanum." The tympanic membranes, our ear drums, bear the same ancient name. They are sensitive areas which vibrate - tympanons. A

typical tympanon (or tympanum) of the aboriginal Americans may be seen illustrated on page 95 of "Drums Through the Ages."* It is a skin stretched between upright poles to be played upon with clubs, or by the wind or other unseen causes of vibration. Antoine Sax, the inventor, built and patented a similar instrument: a kettleless "kettledrum" which consisted merely of a head (tympanum) mounted on a tunable hoop. Sax believed the bowl of the drum was detrimental to its tone.

Curt Sachs mentions: "The Drum (tympanon) of the ancient Greeks and Romans . . ." and that "Suidas, the Byzantine lexicographer of the 9th Century, A.D., clearly stated that the ancient Greek tympanon was made of skin, ... and, according to the Italian Paulus Jovius (1483-1555) that the Swiss lansquenets kept pace with the beating of the drum (justis passibus ad tympanum pulsum)." Sachs makes no use of the *timpani* spelling in his very comprehensive book on the History of Musical Instruments. (Published by Norton, 1940).

About 1500 kettledrums were introduced into Germany. Verdung writes in his Musica Getutsch (1511) that "now with us the name *tympana* is given to the big army kettledrums of copper, which the princes have at court."

Filippo Bonanni's great "Gabinetto Armonico," published in 1723, tells of a Frame Drum, a large jingleless tambourine similar to the hoopdrum of the Eskimos. This instrument was used by women dancers. It appears in the Bible as *Tympanum.* St. Isadore and Papias tell of a kettledrum attributed to Her. It is a wooden hoop covered with a hide on one side only. The Encyclopaedia Brittanica tells us that the term *tympanon* or *tympanum* is the name applied by the Romans to both the kettledrum and tambourine.

Percival Kirby mentions numerous references which occur in the works of classical and Latin writers to an instrument called "tympanum," and that it is usual for musicians to assume this was the ancestor of the modern kettledrum. Tympanum has been variously translated as drum, kettledrum, tabor, tambourine, timbrel and tom-tom. Perhaps the Italian and French spellings, Timpani and Timbales, are derived from the older Timbrel.

Bach indicated the kettledrums under various names: Tamburi, Tympelles, Tympali and the abbreviation Tymp. Eventually he used the German term "Pauken" so it would be better understood by his players.

Handel referred to his kettledrums as "Tympano," but he invariably used the contraction "tymp." In his **Overture to the Music for the Royal Fireworks** he prescribes "Tymp 3 per parte."

On the American scene: The **Premier Method for Drums, Fife, Tympani, Orchestra Bells and Xylophone,** published by J. W. Pepper (Philadelphia) in 1907, uses the *y* spelling of tympani. Tympani is traded for Tympanies on one unfortunate occasion, but with a *y*.

*(footnote) Published by The Sterling Press, Los Angeles. 1960.

The Sietz **Modern School of Tympani Playing** spells the word for kettledrums "Tympani." Mr. Sietz was a noted tympanist, in both America and Europe. In his very fine book he mentions that the Latin *tympanum* is derived from Greek, and that both Sponius and Pignorius make a distinction between light and heavy kettledrums: "Tympanum leve," (light) and "Tympanum grave," (heavy). Pignorius also mentions a war kettledrum, "Tympanabellica." Mr. Sietz used the *y* spelling interchangeably with kettledrums throughout the instruction section of his book, which was published by Leedy in 1912.

The **Harry A. Bower System for the Drums, Bells, Xylophone and Tympani** was published by its author circa 1913 in Boston. Mr. Bower was a member of the Boston Symphony Orchestra. The heading to a paragraph in the Introduction to the studies reads: "TYMPANUM - Tympani heads." Another bears the caption "TYMPANI, TYMPANO AND TYMPANUM: Tympani is plural for Kettle Drum (and means more than one). Tympano is singular and means one Kettle Drum. Tympanum is the skin or head used on the Tympani (or Kettle Drums). There is no such word as 'Tympanies' (so spelled) but this last word is employed by many writers and musicians."

The Gardner **Modern Method for the Instruments of Percussion** (published by Carl Fischer in 1919) states in its Introduction to the Tympani section that "The Latin word, *tympani* (singular tympanum) is used more often in America than the English word, kettledrums . . . . Frequently we a hear a colloquially Anglicized plural 'tympanies'." Throughout the Introduction and text of this meritorius book Mr. Gardner uses the *y* spelling. He is a former member of the Boston Symphony. Later he became Supervisor of Bands and Orchestras for the Boston Public Schools. His spelling of the word for kettledrums must certainly be correct, for Boston would not tolerate it otherwise.

The practical Ludwig & Ludwig **Tympani Instructor,** by Otto Kristufek, printed in 1930 and revised in 1945, uses the *Tympani* spelling, excepting a very few occasions where the *i* version has escaped a careless proof-reader. The glaring abbreviation "Timp" (without a period) may be noticed in the Introduction. One might expect to see "Timps" or "Timpanies" where such intimate, but perhaps disrespectful acquaintance is implied.

Benjamin Podemski, a renowned percussion artist formerly of the Philadelphia Orchestra and more recently of the Los Angeles Philharmonic, used the "Tympani" spelling in his books, published by Mills Music in 1940.

Haskell W. Harr's **Method for Tympani** (published by Cole in 1950) uses the y spelling all through this unusual book.

Saul Goodman's excellent "Modern Method for Tympani," (Mills Music 1948), uses the classical and correct *y* spelling.

The Art of the Tympanist and Drummer, by Andrew A. Shivas, M.D., D.PH.H., (Dolan Books, Ltd., London, 1957) uses the *y* spelling throughout this interesting and informative little volume.

The Langley-Carl Fischer **Tutor** (1958) spells the word for kettledrums "Tympani" in the text, although one cue in the Orchestra Studies has it printed Timpani. A footnote reads: "The passage for four tympanies. . . . ."

It was not until Harry R. Bartlett's superb "Guide to Teaching Percussion" was published (by Brown, in 1964) that the Italian spelling "Timpani" appeared to any extent in American literature pertaining to the kettledrums. Mr. Bartlett mentioned the Hebrew and Greek antecedents of the drums, but he failed to consider the derivation and correct spelling of the word Tympani.

In his magnificent book, "Percussion Instruments and Their History," (published in 1970 by Praeger) James Blades uses the term "kettledrums" and only occasionally refers to them as "timpani." Loyally British, Blades follows the custom adopted in his country in 1600, when the drums became established as kettledrums and their players were forever labelled "timpanists."

It has not been this contributor's good fortune to study all possible American sources for material relative to the kettledrums, but that which has come to his attention has almost invariably used the classical *tympani* spelling. Musicians who play symphonic music by foreign composers are acquainted with the different names given to their instruments in other musically important languages. The tympanist will know the instrument intended whether his part calls for Tympani, Timpani, Timbales, Pauken or Kettledrums.

It is hopefully suggested that percussionists, teachers, writers, bands and orchestras and their leaders adopt and use the Anglicized form. Why not let the "i"s and the "y's" squabble about which spelling is correct? It makes no great difference which is used. Cake spelled with a k tastes just as good. But while we live and work in America and speak English, why not call these glorious instruments by their proper name in our own language: KETTLEDRUMS, and let the artists who play them be either Tympanists or Timpanists as they choose.

THE PERCUSSION ENSEMBLE: 1930-1945
by Larry Vanlandingham

About the Author:

Larry Dean Vanlandingham was born in Mexico, Missouri, on August 18, 1937. He received a B.A. degree in music education from Arizona State University, Tempe, Arizona, in 1960 and an M.M. in theory and literature from Baylor University, Waco, Texas, in 1963. Mr. Vanlandingham has served as percussionist in the Phoenix Symphony Orchestra and principal percussionist in the Phoenix Opera Orchestra. He is presently Assistant Professor of Theory and Percussion at Baylor University, Waco, Texas and principal percussionist and timpanist in the Waco Symphony Orchestra. He is also the chairman of the Texas chapter of P.A.S.

Several events and influences occurred collectively and simultaneously to bring about the percussion ensemble. In the early decades of this century, a number of musicians were preoccupied with the development of new and unusual instruments and musical concepts. On March 11, 1913, Luigi Russolo, an Italian musician and self-trained artist, issued a manifesto containing the fundamental laws which he believed should govern the musical segment of the futurist movement. Russolo believed that all art was being impaired by tradition. He maintained that musical sound was too limited in qualitative variety of timbre, and that the future of music lay in the subjugation and organization of noise. In the futurist orchestra, instead of the customary string, woodwind, brass, and percussion sections, Russolo suggested that there be six families of noises (Table 1).

The futurist movement was primarily an abstract idea, but it did produce a few immediate results. On April 21, 1914, Russolo conducted a concert in Milan in which he employed both conventional and especially constructed noise-instruments.[1] Very little is known about his *intonarumori* (noise organs), their internal mechanism, or the sound they produced. A photograph of Russolo and his instruments shows them to be very large boxes with protruding funnels and levers.[2]

Concerts comprised of futurist music received wide-spread publicity. Critics argued for and against its musical validity and audiences in the United States and abroad received futurism with mixed reactions. When Russolo conducted *Four Networks of Noises* in the Milan concert, the audience rioted and threatened the conductor. As a result of the incident, "eleven members of the audience had to be hospitalized, but the futurist only suffered minor bruises."[3]

By suppressing melodic instruments and granting a monopoly to percussion, futurism stressed the significance of rhythm and revealed the possibilities of timbre inherent in percussive devices. It brought the concept of the use of percussion to the attention of composers and the general public.

TABLE 1

RUSSOLO'S FUTURIST ORCHESTRA

1	2	3	4	5	6
Booms Thunder-claps Explosions Crashes Splashes Roars	Whistles Hisses Snorts	Whispers Murmurs Mutter-ings Bustling noises Gurgles	Screams Screeches Rustlings Buzzes Crack-lings Sounds obtained by friction	Noises obtained by percussion on metals, wood, stone, terra-cotta, etc.	Voices of animals and men: Shouts Schrieks Groans Howls Laughs Wheezes Sobs

Source: Nicolas Slonimsky, Music Since 1900 (New York: W. W. Norton, 1938), p. 646.

The years following World War I are conveninet for marking new thought concerning percussion instruments. Futurism did not survive the war intact. It was renewed in a different form in the "machine music" of a few composers in the 1920's. Arthur Honegger's *Pacific 231* (1924), George Antheil's *Ballet Mecanique* (1924), Carlos Chavez's *HP* (1927), Serge Prokofiev's *Dance of Steel* (1927), John Alden Carpenter's *Skyscrapers* (1927) and Alexander Mossolov's *Symphony of Machines: Steel Foundry* (1928) glorify the machine age and contradict "the birds, waterfalls, and twilights of the romantics."[4] From these compositions comes a musical thought quite different from Russolo's concept of the contemporary orchestra of noises. Prior to the futurist movement, efforts at originality of expression had consisted ultimately of rearrangements of the existing tonal materials. Russolo and other futurists had deliberately avoided the use of tonality, concord, melody, rhythmic balance and conventional instrumentation. In the 1920's, however, nearly all of the composers of machine music employed the orchestral and tonal idiom. They did not rely exclusively on percussion instruments, but incorporated them prominently into their compositions.

George Antheil's *Ballet Mecanique* is perhaps the most radical composition exemplifying machine music, primarily due to the startling effect of its use of percussion.[5] The ballet was originally scored for eight pianos, one player piano, four xylophones, glockenspiel, horns, bells, gongs, anvils, and drums. In addition, the *sound* of two airplane propellers was to be produced by the use of either a prerecorded sound track or two electric fans with leather straps attached to the blades.[6] However, just prior to its first United States performance on April 10, 1927, Antheil's manager instructed that actual motors and propellers be placed in the wings.[7] The turmoil resulting

from the sounds of the motors and the wind produced by the propellers caused a violent reaction by the audience and the performers. Subsequent publicity earned Antheil a reputation as the "bad boy" of American music; it also brought the percussion section into public prominence.

While machine music was bringing notoriety to percussion, chiefly by the use of sensationalism and noise, work was being done by a few composers who were interested in percussion for its intrinsic value to their music. Igor Stravinsky incorporated percussion instruments and effects into *Petrushka* (1911), *Sacre du Printemps* (1913), and *Les Noces* (1915-23), the latter work for chorus, soloists, four pianos, and an assemblage of seventeen percussion instruments. In *Histoire du Soldat* (1918), Stravinsky exhibited a vast range of percussion effects by obtaining different timbres through the use of a snare drum, field drum, bass drum, tambourine, triangle, two tom-toms, and cymbals. Well-defined melodic implications were produced by the use of different sizes of drums. That the implications are significant is illustrated by the composer's statement that "the *pitch* of the drums is extremely important, and the intervals between high, medium, and low should be as nearly even as possible; the performer must also be careful that no drum exerts its own 'tonality' over the whole ensemble."[8]

There were other attempts to use percussion instruments and effects in Chamber works, Paul Hindemith's *Kammermusik No. 3* (1925) for cello and ten instruments employed one percussionist playing a battery of istruments. In America, Ernest Schelling, in his *Divertimenti for Pianoforte and String Quartet* (1925), introduced a percussion effect by having the second violinist, violist, and cellist tap their fingers on the body of their instruments to simulate a primitive drum beat; Antheil composed a violin sonata (1923) which used a bass drum as accompaniment in the last movement; and Henry Cowell composed his *Ensemble* (1925) for two violins, viola, two celli, and two thundersticks.[9] The use of percussion in chamber music was considered radical and was not readily accepted. Tuthill directed the following words of advice to composers thus inclined:

> But, after all, chamber music is an ideal form, the sonnet of musical language. Why must its purity be degraded with sounding brass and tinkling cymbal? Let these rhythmic accentuators stay where they belong--in the orchestra of opera, ballet, or even of symphony.[10]

At least one other influence aided in creating an atmosphere conducive to the advent of the percussion ensemble. External circumstances not solely related to percussion were especially present in the Americas, where the creation and assimilation of new ideas was a widespread aim. In addition to an interest in instruments and unusual ways of treating them, American composers recognized and used elements alien to the common practice of Western music.[11] Ex-

ploration in the use of Eastern materials, newly created scales, and experiments with microtones was common. The rhythmic formations and instruments characteristic of Latin American music and the phenomenon of jazz were present in the minds of many composers.[12]

Lastly, the reaction against romanticism and impressionism created an atmosphere conducive to experimentation. When the percussion ensemble began to emerge between 1930 and 1945, it was due chiefly to efforts made by composers in the Western Hemisphere.

EARLY EXPERIMENTS

Amadeo Roldan is regarded as one of the founders of the modern school of Cuban music. Most of his music was inspired by Afro-Cuban folklore.[13] The Cuban composer was extremely interested in the use of indigenous instruments, both melodic and percussive. Roldan was among the first to use Cuban percussion instruments extensively in orchestral works. However, he believed that they should not be used in order to obtain local color, but for the purpose of widening their significance beyond the national boundaries.[14]

Roldan's *Ritmica No. 5* and *Ritmica No. 6* (1930) are possibly the earliest extant works written for an ensemble of percussion instruments.[15] A suite from Roldan's ballet *La Rembambaramba* requiring six separate groups of percussion instruments was performed in Havana in 1928. Two years later, six *Ritmicas* based on the rhythms of Cuban folk dances were completed. The first four are scored for flute, oboe, clarinet, bassoon, horn, and piano; the last two are for percussion.

Ritmica No. 5 requires eleven performers (indicated below by numbers) playing thirteen instruments.

(1) *Clave* (Claves) - two short round sticks of hard resonant wood; one stick held between fingers and palm and struck by other stick; this set pitched very high.

(2) *Clave* - this set pitched very low

(3) *Cencerros* (Cowbells) - cowbells without clappers; struck with small hardwood stick; this part requires a high and a low pitch

Clave - this set pitched low

(4) *Maracas* (Maracas) - gourds filled with seed or lead shot and attached to handles; played by shaking; this part requires a high and a low pitch

(5) *Quijada* (Jawbone) - Jawbone of an ass with teeth in place; held in one hand and struck with other hand so that loose teeth in jawbone rattle

Clave - this set pitched high

(6) *Guiro* (Guiro) - long gourd with serrated side; scraped or struck with small wooden stick

(7) *Bongo* (Bongos) - a pair of small single-headed drums; struck with fingers or wooded sticks; this part requires a high and a low pitch

(8) *Timbales cubanos* (Timbales) - a pair of single-headed drums usually 13 and 14 inches in diameter; played with wooden sticks; this part requires a high and a low pitch

(9) *Timbales de orquesta* (Timpani) - hemispherical copper shell with a head over the opening; tuned to definite pitches by hand screws or foot pedal; played with mallets; this part requires three

(10) *Bombo* (Bass Drum) - large cylindrical shell with heads covering both open ends; played with mallets

(11) *Marimbula* (or Contrabass played pizzicato) - pitched wooden bars mounted above wooden-boxed resonating chamber; played with mallets; part requires three pitches (A, d, g)

While the writing of a percussion ensemble was an innovation, there was little revolutionary about the instrumentation of *Ritmica No. 5.* Only two of the instruments employed, the timpani and bass drum, were commonly used in the orchestra, but all of the others were indigenous to Latin American music.

In most instances, the choices of sticks and beaters is left to the discretion of the performer. Roldan's only instructions are that "the Bomba should be struck with a bulky wooden baton; the Cencerros with a small hardwood log, more or less the thickness of a Clave."[16]

Performance directions state that the maracas and jawbone are to be beaten rhythmically in accordance with the rhythm marked and shaken violently when thirty-second notes are present.[17] Directions also explain the notational system Roldan devised for those instruments which he desired to produce more than one type of sound. When the note head is omitted, the guiro is to be struck with the large end of the stick; it is to be scraped with the small end of the stick when the entire note is written (Example 1).

Three distinct sounds are to be obtained from the timbales, timpani, and bass drum. They are to be struck between the center and the edge of the head , on the center of the head , or on the edge of the head (Example 2).

Example 1. Ritmica No. 5, p. 8, meas. 11-14.

Example 2. Ritmica No. 5, p. 12, meas. 9-12.

The same notation is used for the bongos, and a fourth sound is produced by rubbing the index and middle fingers from the edge toward the center of the head ( ).

Roldan requires distinctive qualities of sound from certain instruments while being apparently indifferent to the sounds of others. The performance directions enumerated above clearly define the timbres the composer is seeking from the maracas and jawbone and the

several sounds required from the guiro and each of the membraned instruments. The absence of instructions for the claves, cowbells, and *marimbula* indicates that Roldan was either unconcerned about their sound or, more probably, that he desired those sounds most naturally obtained from the instruments.

In *Ritmica No. 5* both the pitched and non-pitched instruments produce relatively short sounds; there are no truly ringing instruments employed in the work. Though rarely used, the illusion of sostenuto is produced by shaking the maracas and jawbone, scraping the guiro, and employing tremolo on the bongos and timbales (Example 3).

Example 3. Ritmica No. 5, p. 12, meas. 9-12.

Nowhere in the work does Roldan show a concern for harmony, or for dissonance. The *marimbula* and timpani, though pitched instruments, seem to play their roles for rhythm, timbre, and range only. Among the non-pitched instruments, Roldan specifies four degrees of pitch for the claves and notates each of the two maracas, cowbells, bongos, and timbales on different lines (Example 3). However, these non-pitched instruments are also used for rhythm, timbre, and range rather than for pitch.

Roldan divides the instruments into two groups: (1) membranic instruments and (2) wood, bone, and metallic instruments. Each group

displays a low to high range of timbres. When tutti style is present, as it is in the entire final third of the work, Roldan combines the two ranges. In the above Example 3, wooden, bone, and metallic sounds, represented by the "tick" of claves, the "sst" and "swish" of maracas, the "klang" of cowbells, the "burrrr" of jawbone, the "shh" of guiro, and the "plonk" of *marimbula*, merge with the more mellow tom-tom "whacks" and "bomps" of bongos, timbales, timpani, and bass drum.

When employing solo and concertino style, the composer rarely combines the two groups. One of two alternatives is most often employed. Roldan uses a single group in full or in part (usually the one consisting of combined wood, bone, and metallic timbres) or he contrasts timbres by alternating the two groups (Example 4).

In summary, all except two of the eleven performers play only a single instrument, and none of the players use more than one instrument at a time. While the number of instruments employed in *Ritmica No. 5* is somewhat limited, Roldan succeeds in obtaining a substantial variety of timbres by requiring multiple sounds from several of the instruments. The sounds are usually, though not invariably, of short duration.

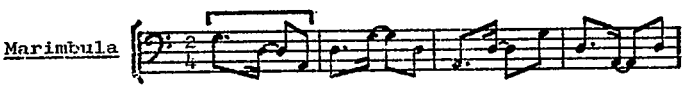
Example 4. Ritmica No. 5, p. 8, meas. 1-4.

All of the instruments are exploited for their contribution to rhythm, timbre, and range rather than for their ability to produce pitch. Various combinations and contrasts of a range of membraned sounds and of wooden, bone, and metallic sounds having short duration underlie the entire work.

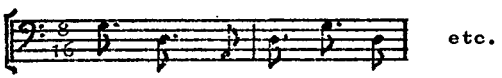
Ritmica No. 5 is a study in the rhythm of the *son*, a Cuban folk dance. This *son*, meaning "sound," is typical of many Latin American dances in that a basic rhythm is employed throughout. The basic rhythm used in *Ritmica No. 5*, while notated in 2/4 (Example 5a), is actually a three-note pattern in a mixed meter capable of being notated in 8/16 (b).

Example 5. Ritmica No. 5, p. 8, meas. 10-13.

(a) Roldán's notation



(b) "Actual" notation 18



In addition to its being treated in ostinato (Example 5a), the *son* rhythm is distributed among various instruments (Example 6).

The rhythm undergoes a number of variations; it is augmented (Example 7a), fragmented (b), varied (c-d), and supplemented (e).

Example 6. Ritmica No. 5, p. 5, meas. 1-5.

Example 7. Variants of the son rhythm in Ritmica No. 5.

(a) p. 6, meas. 4-6

Marimbula

(b) p. 10, meas. 4-7

Bass Drum

(c) p. 10, meas. 4-6

Jawbone

(d) p. 11, meas. 10-11

Marimbula

(e) p. 7, meas. 6-9

Claves

The *son* rhythm and its variants, featuring a basically mixed meter, are combined with four ostinato rhythms in a regular 2/4 meter, usually played by maracas (Example 8a-d), and one ostinato rhythm notated in 2/4 (e) but actually in a mixed meter (f), always played by the guiro or maracas.

Example 8. Ostinato rhythms in Ritmica No. 5.

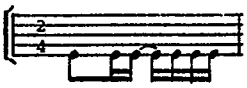
(a) p. 7, meas. 4

(b) p. 8, meas. 10

(c) p. 9, meas. 6

(d) p. 11, meas. 2

(e) p. 7, meas. 3
(Roldán's notation)



(f) p. 7, meas. 3
(Actual notation)

The following Example 9 illustrates a tutti passage which combines the *son* rhythm (part 11) and three of its variants (parts 1, 2, 3, 5, 10) with two ostinato rhythms (parts 4, 6) and bits of random rhythm (parts 7, 8, 9).

The *son* rhythm and its variants in mixed meter combined with various rhythms in regular and mixed meter constitute the entire rhythmic process of the work. Constant metrical movement, persistent use of ostinato, combinations of regular and mixed meter, and various contrasts of solo, concertino, and tutti are basic to the style of *Ritmica No. 5.*

For several decades after its completion, Roldan's percussion *Ritmicas* went unnoticed except by the few musicians who were interested in percussion music. This was typical of many of the early percussion works. Ensembles were composed, occasionally performed, and subsequently forgotten by all but a few.

Example 9. Ritmica No. 5, p. 10, meas. 1-4.

[1]Nicolas Slonimsky, *Music Since 1900* (New York: W. W. Norton, 1938), pp. 147-48, contains a list of the works performed and of the instruments employed.

[2]Joshua Taylor, *Futurism* (New York: Doubleday and Company, 1961), p. 80.

[3]Nicolas Slonimsky, *Lexicon of Musical Invective* (2nd ed.; New York: Coleman-Ross Co., 1965), p. 19.

[4]Joseph Machlis, *The Enjoyment of Music* (Rev. ed.; New York: W. W. Norton, 1963), p. 517.

[5]Antheil has since stated that the ballet was not meant to glorify the precision of machines, but "represented his personal effort to escape 'the iron grip of the tonal principle' and the straightjacket of the old forms." Ann M. Lingg, *Ballet Mecanique*, Record jacket notes (New York: Urania Recording Co., n.d.).

[6]George Antheil, *Ballet Mecanique* (Rev. ed.; Delaware Water Gap, Pennsylvania: Shawnee Press, 1953), p. ii.

[7]Hope Stoddard, "Stop Looking--and Listen," *International Musician*, XLIX (November, 1950), p. 33.

[8]Igor Stravinsky and Robert Craft, *Expositions and Developments* (New York: Garden City, 1962), p. 103.

[9]Burnet C. Tuthill, "Percussion Instruments in Chamber Music," *Cobbett's Cyclopedic Survey of Chamber Music*, Walter W. Cobbett, ed. (2 vols., 2nd ed.; London: Oxford University Press, 1930), II, 213.

[10]*Ibid.*

[11]Elliott Schwartz and Barney Childs, *Contemporary Composers on Contemporary Music* (New York: Holt, Rinehart, and Winston, Inc., 1966), p. xiv.

[12]Stravinsky's choice of instruments in *Histoire du Soldat* was influenced by the discovery of American jazz, and the percussion part was a manifestation of his enthusiasm for it. Stravinsky and Craft, *Expositions and Developments*, p. 103.

[13]Otto Mayer-Serra, *Musica Y Musicos de Latinoamerica* (2 vols.; Mexico, D.F.: Editorial Atlante, 1947), II, 851.

[14]Amadeo Roldan, "The Artistic Position of the American Composer," in *American Composers on American Music: A Symposium*, ed. Henry Cowell (Stanford University, California: Stanford University Press, 1933), p. 177.

[15]It is believed by many historians that Edgar Varese's *Ionisation* (1931) was the first ensemble.

[16]Amadeo Roldan, *Ritmica No. 5* (New York: Southern Music Publishing Company, 1967), p. 3.

[17]*Ibid.*

[18]Designations "actual notation" are simply alternate methods of notating the composers' rhythms.

To Be Continued in Summer Issue of Percussionist.

EFFECT OF OTHER MUSICAL ELEMENTS UPON RHYTHMIC STRESS PERCEPTION

by Grant Fletcher
Professor of Music
Arizona State University

The three previous chapters have dealt with the basic aspects of rhythmic feeling, and touched upon the notation of these separate phases. A series of relative symbols, the conventions of metricity (meter bar and meter signature), and a group of dynamic signs respectively notate duration, pulsation patterns, and dynamic stresses in their most obvious occurrences. But there are yet other aspects of musical notation and production which effect these types of rhythmic feeling. These tend to corroborate or contradict the *simple notation* of the three basic phases. This does not mean that the basic rhythmic feelings are destroyed, but merely that some of the notational meanings contradict others. Pulsation stresses are often embedded in the manner of handling other elements of musical architecture and problems of sonority. They would therefore either corroborate or contradict the common pulsation patterns notated by meter.

The other notational aspects, because of their very nature, are often more apparent to the listener than they are to the player. Because of such aspects of *sound* of stress, regardless of the player's attempts to create such stress physically, the listener receives the proper pulse feeling from the music itself and the player need only produce the tone and figuratively "keep out of the way." It is, of course, important to remember that the goal of all notation is to produce the intended effect upon the listener, so we should view and criticize all music written or performed from the listeners' standpoint. Furthermore, these rhythmic means are so subtle in their occurrence and use that the awareness of their existence has only partially permeated our musical thought. The creating musician has always found it useful to refer to his listening ear to confirm the excellence of his production of a sound idea. There is no reason why his knowledge should not allow the organization of what he hears into a clearly perceived concept. In too many instances the listening ear (actually the brain) cannot perceive subtle values because the musician is not aware of their existence.

The reader will note that I have, for the most part, so far avoided using actual musical ideas for illustrations. This was intentional. I did not want to confuse the issue by admitting the problems brought about by other notational elements of pitch, pattern, etc. . . . Most of the illustrations may be listed under the previously explained term of cross rhythms, when they do not corroborate the metricity. It might simply be deduced that these are manifestations of changing metric lengths which, for some reason or other, the composer has not chosen to fully notate with a change of meter. To attempt to enumerate and relatively evaluate the aspects which further determine rhythmic feeling, we must go farther into the fields of rhythmic sensation than the boundaries to which we limited ourselves in Chapters I to IV. Stress of pitch tension, tonal bulk of timbre, and harmonic textures, as well as pulses (stress points) of formal design, must be considered.

Here are a number of means of creating subtle stress values which exist in our musical notation:[1]

1. Changes of duration - agogic stress.
2. Changes of harmonic elements - harmonic pulse.
3. Changes of pattern - pattern pulse.
4. Linear motion of voices - linear flow (intensity of line).
5. Tension of acute pitches - pitch tension.
6. Resonance of bass timbre - sonority of resonance.
7. Comparative dissonance tension - dissonance tension.
8. Bulk changes of any type.

AGOGIC STRESS

Number 1 above, agogic stress, is a term familiar to most musicians and has been previously mentioned in Chapter II. Grove's Dictionary of Music and Musicians defines it as the tendency of the longer of two successive notes to attract the pulse feeling.[2] Webster's New International Dictionary (Edition I-1919) refers to it as:"...the kind of accent that consists, not of an actual stress or intensification of tone on the note, but of a slight lengthening out of its time value, at the beginning of the bar and at points where a secondary accent may be required. (The Nation)." In Edition III (1961) we find "Agogic accent: stress secured through relative prolongation of the tones to be emphasized." **The Oxford Companion To Music** (Percy A. Scholes, Oxford University Press, London, 1938) presents an interesting discussion of agogic accent as well as an exposition (and confusion) of a number of the other musical rhythmic means discussed in this chapter. I quote: "Agogic. This term (first introduced by Riemann in his book **Musikalische Dynamik und Agogik,** 1884) is applied to that kind of accent which belongs to the nature of the phrase, as distinct from the regular pulsation of the so-many-beats-in-a-measure, and which is produced rather by dwelling on a note than by giving it additional force. The first note of a phrase always suggests the desirability of a

slight lingering, which constitutes an agogic accent. So does a note longer than, or lower than, those that have preceded it. So does a pungent discord about to proceed to its resolution . . . the agogic accent forms a notable element in rubato."

Observe the distinction between the two possible forms of accent implied by the title of Riemann's book above mentioned, 'dynamic' (i.e., of force) and 'agogic' (i.e., of movement). In a wider sense, 'agogic' covers everything connected with expression by means of modification or rate of movement (rall., etc.). This latter is certainly an expression of rhythmic experience limited to a very narrow area of musical style languages. If such an attempt to limit all stress means to durational lengthening is a true expression of the musical Englishman's attitude, it is a very enlightening explanation for the English orchestras' and conductors' drab performance of the musical styles which do not predominantly depend on such means. Schole's attempt to limit every rhythmic means mentioned (they are all discussed herein) to clarification by durational means only, and his exclusion of physical stress means is pure intellectual snobbery. From many other sources it becomes quite apparent that the term agogic has been used to cover many concepts of the implied relationship of duration to stress. The concepts stated sometimes observe that stress points tend to gain durational length and elsewhere state that longer tones tend to gain increased stress. These two concepts raise questions which are of great concern to the player, but to the listeners' ears the note of longest duration is the relatively more important one (all other values remaining constant) and therefore creates the most obvious impression upon his aural (mental perceptive) faculties. It is in this sense (the tendency of the tone of longest duration to imply subtle stress) that I shall continue to refer to agogic stress. The performer's problem lies in determining where (in what styles or uses) agogic stress needs to be physically emphasized or subdued. Examples of the importance of agogic notational elements may be found anywhere. In Example 55a, the melody of the first horn in D distinctly corroborates the 3/4 pulse pattern of Example 55b by the agogic feeling of measures 1, 2, and 4, even to the extent of lip (not tongue) articulation of the secondary stress. In measure 3, duration lengths are equal-which will neither confirm nor destroy this pulse, since it is already established, (but notice that the return to the E reaffirms the metric pattern even at this point).

HARMONIC PULSE

Number 2 above (harmonic pulse) is familiar to all as the harmonic tendency to underline and produce rhythmic stress. One of the simplest examples of such notational means may be found in any of the Bach Preludes which are written in the toccata style. In Book I of the Well-Tempered Clavichord (Bach), Preludes I and II are distinctly based upon a figuration outlining harmonic colors of distinct rhythmic

lengths. The fugues following these two preludes are magnificent examples of inherent rhythmic strength of clarified patterns and rhythmic pulses so necessary to define a subject in the fugal formal problem. Notice in Fugue II how the harmonic implications determine the bar placement of the thematic patterns. The bar line at any other point would change its harmonic implications. In more or less obvious uses we may find it everywhere (chordal function directs it in tonal music and intervallic tensions can equally well determine it in atonal styles). To return to the Brahms Symphony No. II, in the last discussed example 55a, I pointed out the third measure as not necessarily corroborating the 3/4 metric pulse by agogic means. Yet on

examining the score, one finds that in this bar the first harmonic change of the phrase occurs on count one which distinctly gives such pulse. It is no coincidence that this placid phrase never receives treatment accorded the other material in this movement. Its agogic and harmonic pulse too definitely consign it to the exact use for which Brahms saved it. In the formal design it always recurs as a relaxation of the formal tension. The one measure possibly capable of a rhythmically restless expansion is measure three which is so expanded throughout the entire movement. I have chosen an example from Brahms because he went to such lengths rhythmically, with a usually wise balance of corroboration or destruction of the regular pulse. Notice the uses to which the violin theme at bar 44 may be fitted. Its harmonic pulse is static, so its duration lengths are easily changed and the pattern derived therefrom may be shifted from beat to beat so that pattern pulse soon predominates. All of the transition material in this movement is capable of such rhythmic variation. The particularly lovely pattern growth in the strings after bar 20 carries rhythmic pulse of the harmonic variety which definitely contains an important formal and expressive meaning. Notice how Brahms, after destroying the metric pulse pattern by one means or another, will return to it (sometimes by merely adding duration - see bar 58) and corroborate the metric feeling, many times by purely harmonic means.

[1]It is interesting to note that Grove's Dictionary (fourth edition of 1940 - under the title "Accent") mentions many of these stress types, but proceeds to completely confuse their organization as to means and result. In the fifth edition (1954) this material has been listed under "Expression (2) (3) (4)" and "Time (accent)." The later edition does not seem to actually improve the discussion. It does give a fairly complete exposition of the English attitude toward the use of these terms.

[2]Ibid (fourth edition): "Agogic Accent - The longer of two successive notes is said to bear the agogic (or attracting) accent . . ." Also under "Agogic" (fifth edition, p. 70) "A word . . . used by German and hence by American and some English musical scholars to denote quantitative as distinct from stress accent in musical phrasing."

PAS, Inc. Board of Director's Meeting
December, 1971
Sherman House, Chicago, Illinois

The minutes of the last meeting were accepted as printed in Vol. VIII, No. 4 of PERCUSSIONIST.

Jim Coffin moved to accept the Executive Secretary's report. The motion was seconded by Art Dedrick and passed.

The new logo for PAS, Inc. will consist of the present logo minus six lugs.

Regarding the Material Compilation Committee, Mike Combs reported that he has distributed all copies of the Listing. Neal Fluegel moved and George Frock seconded that a revision be printed with the cost not to exceed $1.50. The motion was passed and the new list will be ready by June 1, 1972. In future revisions, descriptions of the compositions will include the following: composer, duration, instrumentation, etc. This motion was proposed by Lenny DiMuzzio and seconded by Micky Toperzer. Motion passed.

Mike Combs moved, seconded by Art Dedrick, that Gary Olmstead appoint a Publications Committee. This committee would be responsible for all publications of the Percussive Arts Society, Inc., excluding PERCUSSIONIST and PERCUSSIVE NOTES.

Regarding state PAS chapters, each State Chairman is to submit to Ron Fink a semi-annual (minimum) report of their state chapter activities. If not, Ron will re-appoint a new State Chairman.

Lloyd McCausland, California Chairman requested $500.00 from PAS to help defray costs of a Percussion Festival Competition. Mike Combs moved and Art Dedrick seconded the motion to grant their request. After completion of this project, California is to submit to the Executive Secretary and Board of Directors a complete financial report regarding Festival activities, results, etc. This is to be a PAS pilot project. Motion passed.

Gary Olmstead made a motion, seconded by Neal Fluegel, that the position of Historian be listed in the publications. Motion passed.

Gary Olmstead moved and Lloyd McCausland seconded the motion that a newly formed Museum Committee investigate the possibility of the establishment of a Percussion Museum. Motion passed.

New members for the Board of Directors were nominated. Jim Moore moved, seconded by Gary Olmstead, that the nominations be closed. New Board Members are as follows: Gary Burton, Roy Burns, Ron Keezer, Dick Richardson, Wm. "Ziggy" Coyle, and Larry McCormick. Lloyd McCausland moved, seconded by Ron Fink, the new Board be accepted. Members retained on the Board: Saul Feldstein, Jim Coffin, Frank Toperzer, Ron Fink, and Lenny DiMuzzio. The officers Ron Fink-2nd Vice President and Sandy Feldstein-President, are to be retained.

Jim Coffin moved, seconded by Lenny DiMuzzio, that the categories of student and marching percussion be added to the next years slate for Board nominees. Motion passed.

Mike Combs seconded a motion by Lloyd McCausland that PAS accept responsibility of providing direction and personnel for the percussion clinic of the CBDNA convention in 1973. Motion passed.

Art Dedrick seconded a motion by Maurie Lishon that PAS become involved in the next Ludwig Symposium. Motion passed.

Mike Combs seconded a motion by George Frock that the President shall be eligible for two full terms of office and the first Vice President shall be the President-elect. Motion passed.

Lenny DiMuzzio seconded a motion by Ron Fink that all past President's become members of a "past president's" Advisory Board. Motion passed.

Jim Moore seconded a motion by Mervin Britton that a percussion "Hall of Fame" presentation be investigated. Motion passed.

Meeting adjourned.

Respectfully Submitted,
Jaqueline Meyer

—————————0—————————

The Challenge and President's Corner

In the last issue of PERCUSSIVE NOTES - Volume 10, Number 2 - an article was published entitled "The 42 Standard Rudiments? or To Revise or Not to Revise' ". We would like to quote the editor's note preceeding this article;

> Today a serious need is present to reassess the content and purpose of any set of 'standard rudiments' of drumming. It is with this concern that PERCUSSIVE NOTES and the Percussive Arts Society initiates a series of discussions on this important topic. Your comments, constructive suggestions, and rebuttals to the material presented here are not only welcome, but are essential if this discussion is to accurately reflect the thinking and direction for today's percussionist.

We wish to emphasize this preface by encouraging all who are interested in the question of rudiments to respond to this article, express your thoughts, and give the Society your ideas. We want to accomplish what the membership desires. It is only by accepting the Challenge, and expressing opinions, that your Society can function to serve its membership.

Practical Mallet Studies

by Bob Tilles
Professor of Percussion
DePaul University

THE FOUR MALLET GRIP

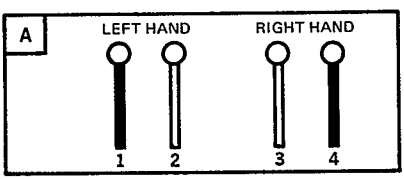
There are three basic grips for four mallet playing.

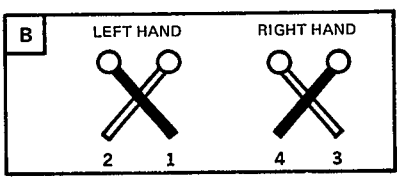
I. Musser, marimba grip. Each mallet is held independently.
II. Outside mallet crossed over inside mallet.
III. Inside mallet crossed over outside mallet.

It is my feeling that the musical result is the criterion for all playing and any method or grip that produces good music is acceptable.

This article will discuss the crossed over mallet technique, but the merits of the three grips must be weighed by the individual player and teacher.

The method of gripping four mallets that works best for me and my students is the outside mallet crossed over the inside mallet.





The index finger of each hand is inserted between the mallets and the thumbs grip mallets No. 2 and No. 3.

Two mallet playing can be executed by No. 2 and No. 3 mallets since they are held securely by the index fingers and thumbs, while 4 mallets are being held.

I find it important to switch from 4 mallets to 2 mallets, and vice versa, during the composition without awkwardly disposing of two mallets. This is important in recording work where silence is imperative and in fast changes from 4 mallet chording to two mallet runs.

The four mallets are easily closed or spread by moving the index fingers and thumbs.

This technique was shown me by Roy Knapp, my esteemed percussion teacher and again by my marimba teacher, Jose Bethancourt.

It is interesting to note that Bethancourt, one of the world's finest marimba players, does not use the independent grip but employs crossed over technique.

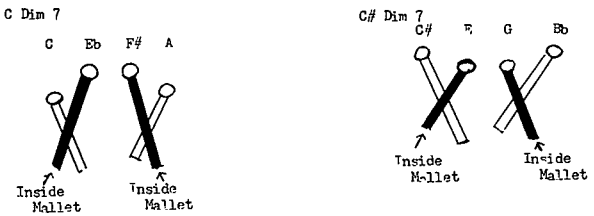
Some comments by professional players from Chicago, New York, and Hollywood bring out the following points:

Al Payson: Percussionist Chicago Symphony Orchestra, Percussion Instructor, DePaul University, Author and Clinician.

"I originally used the Musser, Marimba grip but switched to the crossed over grip in college. I cross the outside mallet over the inside mallet. I find this grip more suitable for orchestral playing as opposed to recital work, also I don't have to sustain the callouses used for the Marimba grip."

Phil Kraus: outstanding percussionist and mallet player, New York, Recording, T.V., Jingles, Movie Sound Tracks, Author & Clinician.

"I cross the *inside* Mallet over the *outside* mallet. I also shift the two inside Mallets, forward or backward, in order to play chords of white and black notes."



"The inside mallets are shifted by the thumb and forefinger in each hand. There are illustrations in book III of my "Modern Mallet Methods" Belwin, Adler."

Lou Singer: one of America's outstanding percussionists and veteran of 30 years of Hollywood Studio work. T.V., Recordings, and Movie Staff Player at Universal, Columbia, Paramount, and Warner's.

"I use the outside mallet crossed over the inside mallet. It gives me the freedom to play either four or two mallets for runs, etc. when I play 2 mallet runs while holding four mallets, I use the two inside mallets. Everybody plays differently, but this technique works efficiently for me."

The PERCUSSIONIST welcomes comments about mallet technique from the players and instructors. Experiences and opinions are varied and educationally beneficial to the Percussive Arts Society, Inc.

Diddly Diddles?

by Thomas P. Brown

About the Author:

He is a PAS member, and is completing work on an M.M. degree at Southern Illinois University. He is Percussionist with the Jacksonville Symphony Orchestra.

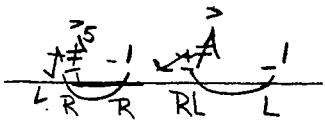
There are some rudiments that escape the full attention of many fine rudimental drummers, especially students; these are called Swiss rudiments and, given the proper attention, would add tremendously to the drummer's facility whether he considers himself to be concert or rudimental drummer. Swiss rudiments are used by many drum and bugle corps, and comprise the bulk of their snare drum music. I received most of my knowledge of these fine multi-purpose rudiments from Mr. John Davidson of the Buccaneers drum and bugle corps in Reading, Pennsylvania. Mr. Davidson is one of the finest drummers ever, and has traded information with me for years.

Swiss rudiments may be used for numerous special effects, unique cadences, and drum accompaniments as well as for solo and ensemble works. These rudiments should be practiced repeatedly to improve stick control, and all around effectiveness. They shouldn't be

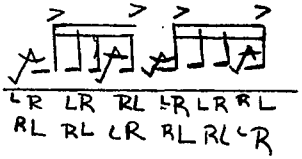
tackled, however by anyone not having mastered the six standard rudiments.

The following is a chart of Swiss Rudiments, including numbers eight and nine which were devised by John Davidson:

Swiss Roll

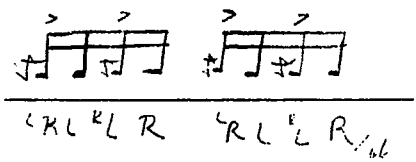


Para-fla-fla

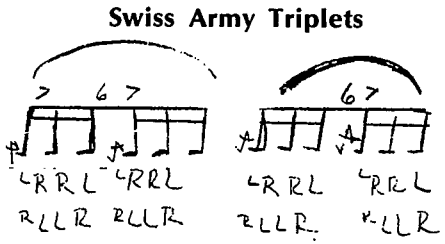


Burger Lesson No. 25

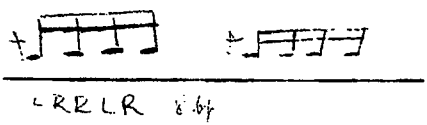
Swiss Flam Tap



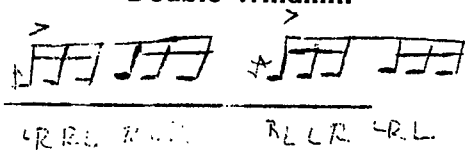
Swiss Army Triplets



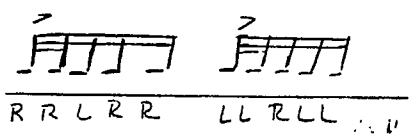
Windmill



Double Windmill



Diddlydiddle



Parafiddle

In addition to the many merits to these exericses, I would like to bring special attention to the following:

1. Para-fla-flas are excellent for building flams.
2. Diddly diddles are especially effective when played in a series, with accents on various notes.
3. Any roll may be converted into a Swiss roll simply by placing a flam in front of it.
4. The flams on Swiss rolls should be very closed, except when the open effect is desired.

Swiss rudiments should be learned at an extremely slow tempo until the movement of each hand is mastered through mental and muscular coordination. Only then should the tempo be increased, ever so slightly. This process should be continued until a desirable tempo is mastered. Depending on individual aptitude, amount of practice and perserverence, anywhere from one day upwards may be required to master each degree of speed.

o

Letters to the Editor

To the Editor:

It was with considerable interest that I read the Letter to the Editor by my celebrated fellow tympanist regarding The Rite Tympani Player article that appeared in the PAS Magazine a short time ago. I was rather surprised at his remark about fear mongering. Surely such a name cannot be given o one who warns a friend about possible impending trouble.

Ten years have lapsed since I last played *Le Sacre du Printemps*, and perhaps the "Non" generation has changed during that time. But when I played it then with Maestro Solti, he asked me to play the whole piece alone for him, and the most difficult part (from No. 186 to the end) he had me play three times, for he thought surely that I must have played it right merely by accident. He remarked that he had seldom heard it played correctly. The mention in my article of others having had trouble with the piece were actual experiences of well-known established tympanists. Proving, I hope, that this difficult tympani part is not always as easy as Mr. Goodman claims.

It is possible, though, as he says, that the most talented of our young tympanists, selected through scholarships and sent to Juilliard or one of the other excellent schools of music, can learn to play the piece after adequate study, even from the bewildering original part. They cannot, however, I am sure, read the piece either from the original or from my translation of it without thorough preparation.

Many talented youngsters and even professional players are not so fortunate as to attend Juilliard, and yet they may be confronted with *The Rite of Spring* on very short notice. I recall my own memorable sudden first encounter with it.

The Honorable Mr. Churchill's famous remarks about there being nothing to fear but Fear itself, while being a bit irrelevant, does not prove that Sir Winston was not apprehensive. He did not ignore the situation and hide his head in the soothing sands of false security. He prepared for the blitz, and, thank God, was able to turn the tide of destruction. While it is but a feeble comparison, I feel that every conscientious aspiring tympanist should study the controversial part of *"Sacre,"* and be prepared to play it. That is the reason I took a great deal of time and trouble to write an instruction book which translates the confusing Stravinsky part into one more easily understood. If the student prefers studying from the original part it can be obtained from Edwin F. Kalmus, P.O. Box 1107, Commack. New York 11725. But no matter which part he wishes to study, he should by all means get a copy and study it diligently.

It was a false sense of security that made possible our disaster at Pearl Harbor. It was a lack of preparation that caused the two otherwise fine tympanists mentioned in my recent article to immediately take their sick leaves when they saw the puzzling, unorthodox part they were expected to play. My sympathy is with them.

Charles L. White

Dear Mr. Fluegel:

Would you include the following note in the next *PERCUSSIONIST?*

The Oregon chapter of PAS, collecting source documents and opinions concerning the so-called "Eastern" and "Western" methods of snare drum sticking, asks that persons with special knowledge regarding this historical difference communicate with Dr. Louis Wildman, 6325 N. Delaware Ave., Portland, Oregon 97217. The compilation process will include interviews with certain leading older percussionists and a summary article submitted to the *"PERCUSSIONIST"* for publication. Contributions, of course, will be credited.

As all of us recognize, so many of the older percussionists are passing on, it is imperative that this work commence.

Thank you, Dr. Louis Wildman

Dear Mr. Fluegel:

I just wanted to write so that your young readers will learn to appreciate girl percussionists. I've been playing for seven years and have been teased, sworn at, and bullied around too many times out of those seven years! I know guys don't like to be showed-up by a girl, but I can't help it if I love it in the percussion section!

So, please print this letter so teachers can teach some courtesy to their students for the sake of girl percussionists. Thank you.

Always, DRUMMER GIRL

We would like to express our appreciation to these outstanding organizations in the music industry for their support of Percussive Arts Society, Inc. and hope they will continue to consider PAS as a worthwhile and stimulating force in the percussion world.

MANUFACTURERS

J. C. Deagan, Inc.
Fred Gretsch Mfg. Co.
Ludwig Drum Co.
C. F. Martin, Inc.
Musser-Kitching Div. of Ludwig
M. M. Paiste & Sohn K. G.
Premier Percussion
Remo Inc.
Rogers Drums
Slingerland Drum Co.
Avedis Zildjian Co.

DISTRIBUTOR/ WHOLESALER

C. Bruno & Son, Inc.
Magnamusic Baton, Inc.
M. Hohner, Inc.

INSTRUMENT SPECIALISTS

Carroll Musical Instrument Service, Inc., New York
Chicago Drum Center, Chicago
Coyle Music Centers, Inc., Columbus, Ohio
William DeLelles Music Studio, Steubenville, Ohio
Drum Specialist, Glenview
Drums Unlimited, Inc., Bethesda
Drums Unlimited, Inc., Chicago
Fabrizi Drum Shop & Studio, Pittsburgh
Franks Drum Shop, Inc., Chicago
Joe Voda's Drum City, Omaha
Luchetti Percussion Specialities, Albuquerque
Professional Drum Shop, Hollywood
Pro-Mark Drum Sticks, Houston
May & Duncan Music Co. Midland
Allen Sheppert Drum Center, Sierra Madre, California
The Drum Shop, Las Vegas
University Music Center, Los Angeles
Don Worth Drum Shop, Portland

PUBLISHERS

Alfred Music Co., Inc.
Belwin-Mills, Corp.
Boosey & Hawkes, Inc.
C. F. Peters Corp.
Charles E. Merrill Pub. Co.
Creative Music
Frank Music Corp./Boston Music Co.
HaMaR Percussion Pubs., Inc.
The Instrumentalist Co.
Kendor Music, Inc.
Learning Unlimited
Ludwig Publishing Co.
Marks Music Corp.
M. M. Cole Publishing Co.
Music for Percussion
Theodore Presser Co.
Seesaw/Okra Music Corporations
Silver Burdette Co.
Southern Music Co.
Uni Dyne
Warner Bros.—Seven Arts Music

JOIN
the
Percussive Arts Society, Inc.

PURPOSES OF THE PERCUSSIVE ARTS SOCIETY, INC. — To raise the level of musical 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.

OFFICER REPRESENTATION CATEGORIES — Professional, College Education, High School, Elementary School, Private Teacher, Composer, Drum Corps, Dealer, Publisher, Manufacturer, Distributor, and Members at Large.

PUBLICATIONS — All members receive the journal PERCUSSIONIST (four issues per academic year) and the magazine PERCUSSIVE NOTES (three issues per academic year). Part of the membership dues collected from each member is allocated for a subscription to each of the publications. These publications contain articles and research studies of importance to all in the percussion field, and serve to keep all members informed of current news, trends, programs, and happenings of interest.

MEMBERSHIPS — Professional $8.00 (Percussionist)
Individual $5.00 (Music Educator: non-Percussionist)
Student $5.00 (Any full-time student at any educational level)
Library $5.00
Instrument Dealer and Publisher $25.00
Distributor/Wholesaler $150.00
Manufacturer $250.00

Note: All memberships are based on a fiscal year, September 1st through August 31st, and are automatically continued with annual billing unless cancelled by member. Please report changes of address promptly.

SPECIFIC PROJECTS UNDER STUDY — Acoustics of Percussion Instruments; Avant-garde Percussion Music; College and University Percussion Curriculum and Materials; Elementary Percussion Education; Improvement of Percussion Solo and Ensemble Contest Adjudication Standards, Procedures, and Materials; Musicology and Ethnomusicology as Relates to Percussion; Percussion Literature Improvement: Methods, Solos, Ensembles, Percussion Parts to Band, Orchestra, and Stage Band Music; Stage Band Drumming; Standardization of Terminology and Notation of Percussion Instruments.

SPECIAL NOTE TO STUDENTS — All students with an interest in percussion should take advantage of this excellent opportunity to join P.A.S., INC. Student membership in this organization along with private lessons from a fine teacher should be the goal of every aspiring percussionist.

Resolved: That a copy of each issue of "Percussionist" shall be sent to each member of the Percussive Arts Society, Inc., and that of each member's dues or enrollment fees of $5.00 or $8.00, $2.00 shall be paid for a year's subscription to the publication.

---

detach and mail

Resolved: That a copy of each issue of "Percussionist" shall be sent to each member of the Percussive Arts Society, Inc., and that of each member's dues or enrollment fees of $5.00 or $8.00, $2.00 shall be paid for a year's subscription to the publication.

APPLICATION FOR MEMBERSHIP

NAME_____ HOME ADDRESS_____

CITY_____ STATE_____ ZIP_____

BUSINESS ADDRESS_____

CITY_____ STATE_____ ZIP_____

OCCUPATION_____ REMITTANCE ENCLOSED_____

Send application form and remittance to:

PERCUSSIVE ARTS SOCIETY, INC.
130 Carol Drive
Terre Haute, Indiana 47805