

Ouachita Baptist University

Scholarly Commons @ Ouachita

Honors Theses

Carl Goodson Honors Program

1970

Mallet Instruments

Lois Kirkpatrick

Ouachita Baptist University

Follow this and additional works at: https://scholarlycommons.obu.edu/honors_theses



Part of the [Music Commons](#)

Recommended Citation

Kirkpatrick, Lois, "Mallet Instruments" (1970). *Honors Theses*. 497.

https://scholarlycommons.obu.edu/honors_theses/497

This Thesis is brought to you for free and open access by the Carl Goodson Honors Program at Scholarly Commons @ Ouachita. It has been accepted for inclusion in Honors Theses by an authorized administrator of Scholarly Commons @ Ouachita. For more information, please contact mortensona@obu.edu.

H-789
KIR

MALLET INSTRUMENTS

LOIS KIRKPATRICK
HONORS SPECIAL STUDIES

DECEMBER 8, 1970

Following the probable order of their appearance in history, all instruments may be placed under three general heads: Percussion instruments, wind instruments, and stringed instruments.

The percussion instruments are further divided into two distinct groups: Instruments with indefinite pitch and instruments with definite pitch.

The mallet instruments are actually a group of definite pitch instruments with vibrating wood or metal plates. They are further divided according to tonal features.

One of the latest immigrants from the East was the xylophone. It consisted of tuned wooden rods or bars, at first cylindrical but later became prismatic. These rods rested on rolls of straw and were struck with hammers. It was first called the strohfiedel (German for "strawfiddle"). The instrument was hardly developed at all since no place was found for it in serious music.

As an improvement over the bed of straw, the bars were later mounted on a wood frame and this frame laid on a table. The next development was a floor stand to accommodate the frame and bars. Its tone quality derives from the thick rosewood bars and the hardness of the mallets used to strike these bars.

The xylophone was at one time chiefly a solo instrument. In band and orchestra scores the xylophone is used sparingly, typically to play short melodic lines of a dry, brittle nature.

In 1876 Saint Saens employed it to describe the clatter of skeletons in his "Danse Macabre".

The xylophone consists of a series of chromatically tuned wooden bars mounted on a frame. A two and one-half to four octave range is usual, the majority having a range of three octaves. The bars are arranged similar to the piano keyboard's white and black keys. Most xylophones do not have resonators, although the concert model is an exception.

The marimba's tone quality is more mellow than the xylophone due to the wider and flatter wooden bars, and the use of softer mallets. The resonating tube mounted beneath each bar aids in amplifying and sustaining the sound.

The marimba was originally a kind of xylophone common among the native Africans in which the sound was reinforced by gourds placed under the bars to act as resonators. It was brought to America by slaves, developed, and became extremely popular, especially in Central America.

The marimba is widely used as a solo instrument. It does not have the penetrating tone quality of the xylophone so is seldom used in band and orchestra. The keyboard layout is the same for both the marimba and xylophone, although the marimba has an extra octave.

The vibraphone, or vibraharp, is the most recent development in the mallet instrument group. It is one of the few valuable achievements of the jazz orchestra. In concert music the vibraphone is employed mainly to play bell tones.

The vibraphone has the same keyboard layout as the wooden instruments. It consists of tuned metal bars which are fitted over resonators. Its two most prominent distinguishing characteristics are the electrically driven fans mounted at the top of each resonator which impart alternating loud and soft pulsations of the tones, and its damper pedal mechanism. With its rotating fan-like blades it gives the illusion of a vibrato which is of intensity only, not pitch. The "vibra" mechanism is not always used, as many of the modern jazz players prefer the straight tone.

The vibraphone has a greater dynamic range than the other mallet instruments. It may be a solo instrument and also blends well with other instruments. Yarn-covered mallets are used on the vibraharp. The relative hardness of the rubber core is what determines the tone quality.

There has not been sufficient time to develop a traditional study for the instrument so teaching and playing methods have remained somewhat individualistic.

The xylorimba is a hybrid instrument which was designed to combine the mellow tone quality of the marimba with the penetrating sound of the xylophone. In the three and one-half octave instrument, no longer manufactured, only the lowest octave and a half sounds like a marimba. The remainder of the bars have a xylophone quality. Boulez's masterpiece "Le Marteau Sans Maître" calls for a xylorimba.

In the modern orchestra tubular bells, hung in a frame and struck with a hammer, serve as a substitute for real

bells, which are heavy and costly. Unlike the real bells, they are tuned to a definite pitch and have a full, though not very powerful tone.

The set of bells consists of steel bars mounted in the keyboard fashion, usually attached to wooden frames mounted directly within the carrying case. Their frequencies increase in proportion to the diameter of the bell, the thickness of the soundbow (where the clapper strikes from the inside), and the mass of metal used. Metal hammers or rubber tipped mallets of various degrees of hardness are used. The tones sustain and tend to produce a clang when bell tones are sounded in quick succession.

The bell lyra is a marching band version of the orchestra bells. It consists of twenty five steel bell bars mounted in a lyre-shaped steel frame with the keyboard running from low to high as the instrument is extended in front of the player. The bell lyra is carried in a holster which is attached to the player by means of a harness. The instrument is played with one mallet, doubling the melody in marching music.

BIBLIOGRAPHY

- Bartlett, Harry R. Percussion Instruments. Iowa:
E. P. Dutton Company, Inc., 1964.
- Bartlett, Harry R. Teaching Percussion. Iowa: Brown
Company, 1964.
- Brand, Erick D. Percussion Instruments. Indiana: Elkhart
Company, 1942.
- Burton, Gary. Four Mallet Studies. Chicago, Illinois:
Ludwig Company, 1968.
- Burton, Gary. Introduction to Jazz Vibes. Illinois:
Creative Music Company, 1965.
- Collins, Myron D. Percussion Instruments. New Jersey:
Prentice-Hall, 1962.
- Colwell, Richard J. The Teaching of Instrumental Music.
New York: Meredith Company, 1969.