

City Talk



The pipa features strongly in Chinese orchestras while Joni Mitchell is one of the greatest players of the guitar.

STRINGING ALONG WITH ANCIENT AND MODERN

Continuing my theme on musical instruments, let me now compare the technical characteristics of the western guitar with the Chinese pipa.

While the guitar is much more widely played than the pipa, the pipa has a far longer history.

Chinese history records the use of the pipa from about two millennia ago. Dunhuang murals show angels dancing and playing the pipa, which firmly puts it as the pioneer of this type of pluck-string musical instrument.

The classical guitar became popular in Spain in the 16th century, and evolved into modern versions with at least three derivatives: the flamenco, the acoustic, and in the last century the electric guitar.

All these pluck-string musical instruments work on the same principles.

A wooden sound box is used to amplify the sound that is produced by plucking strings stretched over a long wooden neck to a bridge fixed on the sound box.

Frets fixed on the neck at harmonic scale positions allow the strings to vibrate at different preset lengths to generate musical notes. A hole in the sound box allows the amplified notes to project to the listeners.

Without using a bow, the notes generated cannot be continuous like a violin, but the guitar is more suitable for music with strong beats and rhythm, and is best for certain types of dance.

The flamenco was invented in the 19th century to supplement the classical guitar, which produces a soft and mellow sound.

With the use of different wood materials and a lighter box structure, it produces notes that are bright and loud, suitable for flamenco dancing.

The lighter instrument also enables it to be carried to dances with ease.

A plastic covering around the sound hole enables the musician to tap for rhythm without scratching the delicate wood surface of the front face board.



Nuts and bolts

Edmund Leung

Another derivative, developed in the 20th century, is the acoustic guitar, which uses steel strings instead of the classical gut or nylon strings.

A stronger neck is used to cater for the higher tensile forces of steel strings, and a plastic pick is used for plucking as it requires stronger plucking forces that might make the fingers uncomfortable.

But the resulting melodious and smooth notes make it perfect for folk music of the modern times.

The electric guitar is an even more modern derivative.

With electric power, the box does not need to work as a sound box, so a solid piece of layered wood board can be used.

Musical notes are produced directly from the strings' vibrations and are amplified by electronic means.

It can produce sound effects such as echos or continuous reverberations for modern jazz bands.

The pipa, however, has undergone far less evolution over the last 2,000 years.

The classical pear-shaped wooden box has not changed substantially since, and most of the refinements were confined to the wood materials rather than shape and construction methods.

Craftsmanship, rather than technology, drives the quality of the pipa, and the musical notes produced have been similar over the centuries with emphasis on authenticity rather than range.

Therefore, the classical instrument allows a player a lot more room to display their skills in producing crisp notes – best for solo performance, especially with battle themes.

This also shows the difference in attention to technology of the west compared with preserving history in the east.

Veteran engineer Edmund Leung Kwong-ho casts an expert eye and ear over features and forces in modern life