Koto by Naoko Kikuchi

The Japanese koto is a simple instrument made by hollowing out a large piece of paulownia wood. 13 strings extend the length of the slim box shaped instrument. When played, then entire piece of wood acts as a resonance body.
The koto is about 180cm long, 40cm wide and 5cm deep. The body is slightly bowed, with the seventh (most central string) rising highest.
The shape of the instrument is likened to a Chinese legendary animal, a dragon. For example, parts of the instrument have names such as "head of a the dragon", "tongue of the dragon", "eyes of the dragon" and "horn of the dragon".
In the past silk thread was most often used for string, but today a type of nylon material called Tetron is most popular. This material is much stronger and durable than silk, and the tone is quite similar.

The strings of the koto are all stretched tightly across the top of the instrument. The tension on the strings is relatively uniform, and the instrument has no real "tuning" until you place bridges under the strings. The placement of the bridges - towards one end of the koto or the other - determines the pitch of the string. The player sits behind the instrument, at the far right end (where the permanent, "ryukaku" bridge is located). Generally, strings are tuned to the right of the movable bridges ('ji" in Japanese), with the string to the left remaining untuned. If a bridge is placed towards the far (left) end of the koto, the length of the playing area on the string is long, resulting in a pitch low, and if it is placed near the player, the length of the playing area on the string is short, making the pitch high.
The koto is tuned by moving the bridges under the strings until the desired note is acheived when the string is plucked.

When playing, picks are worn on the thumb, forefinger and middle finger of the right hand. Koto picks are called "Tsune" in japanese. Tsune are made by fastening the pick inside a band called a "Wa." The bands are made from thickly lacquered paper, or sometimes leather. And the picks are usually ivory or plastic.

The range of the koto depends on the tension of the strings, but generally three octaves can be obtained, with the lowest note being the C below middle C on the piano. The most common tunings start with the the bridge under the first string (string farthest from the player) placed far to the left, and the remaining strings (moving closer to the player) tuned consecutively higher (in ascending order). The bridges at the high end (to the right, closest to the player) are placed relatively closely together, and it is generally possible to obtain a difference of a half tone. Considerable adjustment of tension is necessary, should it be necessary to tune a string to both the right and left (usually untuned) side the bridge.
As the strings of the koto are traditionally tuned only on the right side of the movable bridges, a permanent bridge exists only at the far right end of the instrument. There is no true bridge at the left end, and as such, sound quality when playing to the left is totally different.
Bridges can be placed out of order (in both ascending and descending order), but this results in uneven heights for the strings, sometimes making it difficult to play.

techniques
The koto is generally played by plucking the strings with the picks attached to the first three fingers of the right hand. A variety of tone qualities are possible, from the very soft and warm to something quite hard and strong. Tone quality and volume can be varied by changing the playing area (distance from bridge), and the speed and strength with which a string is struck.
Picked chords, using the thumb and middle finger, are possible to a width of up to eight strings. When the index finger is also used (for a three note chord), a width of up to six strings is possible. Chords of a greater width (more than eight strings) can be made possible by playing as an arpeggio. Also, fingers of the left hand (unpicked - pizzicato) can be used to increase the number of notes in a chord.

The pitch of a string can be temporarily raised by pushing down on the string to the left side of the ji. Generally it is possible to raise the pitch up to one whole step. If the tension of a string is very low however, the pitch may be raised up to one and a half steps. When a press is released, and the string is left to ring, the pitch returns to the original tone (For example, a string tuned to D can be pressed to raise the pitch to E, and then released, resulting in a ringing tone of D.) Timing for presses and releases can be varied, resulting in great differences in nuance.

When a string is played with the thumb, the string directly below that string is struck with the thumb pick and is dampened. When this lower string is a pressed string, the tone is cut off (by the playing of the higher string) and the left hand press can be immediately released, freeing the left hand for further use. When this is not the case we must either wait for the tone to naturally fade, or else dampen the string before releasing the press.

It is possible to press on two strings at the same time, the width between the strings being up to about five strings.

Continuous use of presses, in rapid concession requires an extremely high degree of skill.

The pitch of a string can be raised or lowered by moving the ji (movable bridge) to the right or left. Such changes can be made during the course of a piece, when the left hand is free. It is very difficult (and sometimes not possible), to change many strings in a short period of time. Also, it is much easier to change pitches of strings (with the left hand) in the higher (or lower) range when playing with the right hand in the same (high or low) range.

The most common performance method involves striking the the string squarely with the pick (using the whole pick). A variety of other playing techniques, such as a tremolo using just the corner of the pick, using the side of the pick for a scraping effect, and sweeping down across the strings with the backs of the picks (a common classical technique) are also possible.

A variety of modern techniques are also used. These include, bartok, pizzicato, harmonics and muted techniques. Recently a number of artists have come to use various prepared techniques, inserting materials such as piano wire, sticks, paper and metal objects between the strings. Other interesting effects can be created by using the instrument in more percussive ways, striking or rubbing not only the strings, but the wood and various parts of the instrument with the hands or other objects.

**a brief history**

What we know of today as the Koto first came to Japan from China in the 7th century. It is thought that there was also a koto-like zither which already existed in Japan, evidenced in a small, clay figurine dating from some time between the 3rd century BC and 3rd century AD.

Like all of the other cultural influences originating in China and brought to Japan at this time, the Koto was given a very high status, and was immediately incorporated into the Imperial Court Ensemble.

The Imperial Court Ensemble music, called Gagaku was a highly stylized, ritualistic music which was performed solely for the enjoyment of the emperor and his court. Because of its sacred status, only a select few were allowed to study the instrument, and today the music has been carefully but loosely reconstructed without the aid of written scores. The Koto played a significant role for many centuries.
within the confines of this small ensemble, which consisted of various wind, string, and percussion instruments.

The 13-string paulownia wood koto played today remains essentially the same in size and shape today. The beginnings of Koto music in Japan are cloaked in a very elite, elegant atmosphere, and associated with the luxurious, unhurried lifestyles of the ruling class. Kenjun (1547-1636), a Buddhist priest, is acknowledged as being the first person to take Koto - against all rules- outside of the Gagaku tradition. He developed a repertoire for koto and voice called Kumiuta, and a style of Koto playing called Tsukushi-style. Yatsuhashi Kenyo, who learned Tsukushi-style Koto music, changed the Kumiuta repertoire, and is credited with writing the koto classic, "Rokudan no shirabe" (study in Six steps) and other important koto works, several of which are still commonly played. Yatsuhashi wrote new tunings for the Koto which made the music lighter and more pleasing to the untrained ear, including the most common tuning used today, Hira-joshi (pentatonic tuning). He also developed the "17 Koto Techniques," a series of right hand koto playing methods which are today considered to be basic to Koto playing. In all, Yatsuhashi is said to have made 100 important contributions to the Koto.

Yatsuhashi's "Dan-mono" (section) works are extremely systematic and mathematically symmetric; each section has the same number of measures, for example, and certain strings are played the same number of times in those sections. Today he is called the "Father of Modern Koto" because of his contributions to both Koto music and koto playing techniques, without which the instrument might never have successfully survived the transformation from the restricted confines of the court ensemble.

Two Schools Develop Perhaps because there were so few opportunities open to them, many blind people took up the study of Koto, so much so that the name " Kengyo" began to be awarded exclusively to blind kotoists who had achieved mastery of the instrument. One of Yatsuhachi's disciples, Ikuta Kenyo, was the first to write music which combined koto and the three stringed shamisen. The "jita" singing style was thus further developed with these two instruments. Ikuta began his own shool of Koto, which uses square picks. Yamada Kenyo, who was from the southern Osaka region of Japan's main island, developed a style of Koto playing which emphasized the voice. Today the Yamada school is mainly distinguished from the Ikuta school by the shape of its picks, which are rounded at the ends, and its emphasis on singing jita pieces. For several hundred years, both Yamada and Ikuta schools performed primarily solo and "sankyoku" works for koto and voice combined with shamisen and shakuhachi(usually shamisen plyer sing) with subtle differences in the performance styles.

In 1867 Japan underwent one of the most dramatic changes any country has ever gone through. After over 200 years of self-imposed isolation, it was forcibly opened by Commodore Perry, who insisted that ports be opened for trade with the outside world. The system of irreconcilable shofunates collapsed and the emperor was reinstated to unite the country, while at the same time Japan began to modernize- i.e. westernize- at an incredible pace. Everything from clothing to schooling to lifestyles were transformed to be more like the west, in an effort to "catch up" with the outside world. Many of Japan's traditional arts were abandoned along with everything else "old-fashioned" in the national rush to westernize. The study of koto was no exception, and was relegated to a back burner, to be carried out mainly by young upperclass women who wanted to give their marriage resume an elegant touch. The sound of the koto could barely be heard amongst the growing din of machinery, trains and bargaining traders.
koto today
There are numerous schools of both Ikuta-style and Yamada-style koto in Japan today, with over 2 million players officially registered. All of the major schools have now been joined by players of various nationalities. It became required to take in a traditional Japanese music caliber by Ministry of Education, Culture, Sports, Science and Technology all over the compulsory education period for four years and increased at the opportunity when a primary and secondary student mentioned koto. In addition, departments of traditional Japanese music specialty continue increasing in College of Music for these past several years, and it can call that interest to traditional Japanese music.
Koto technique

How to sound like

Kakite (Shan)

Oshi awase zune

Kakezume (Kara Kara ten)

Ren (Sahranin)

Awase zume (shan)

Hangake (ton Kara ten)

Namigaeshi

Chirashi (Shu)

Hayake (Kara Kara tehn)
Koto techniques

are often found in both traditional and contemporary music. These techniques and the written symbols in the notation can vary slightly between different performance traditions, as do the diverse onomatopoeic names describing them.

The Sōkyoku taishō (1779-1903), regarded as a major treatise on zokusō (fig. 91), describes twenty-five techniques of ornamentation (see listing below): seventeen for the right hand and eight for the left hand. While this historical work gives a concise explanation on how to play the techniques, the inclusive explanation given below of each of them is intended to cover the possible performance practices of several present-day performance traditions in order to present various ways in which the techniques are played nowadays. These descriptions, shown below, closely follow Andō's (1986, 1995) own outline of the techniques, together with his clarification of performance practice and onomatopoeic names that are based on the Ikuta-ryū.

While not all performance traditions can be covered fully, the examples given are meant as a general outline of some possible types of ornamentation. The techniques of the other main everyday tradition of koto performance, the Yamada-ryū, are displayed in figure 97; they are based on the scores of the former iemoto Nakanoshima Kin'iichi. These techniques and their symbols are either the same or very similar to those delineated for the Ikuta tradition.

The techniques shown in figure 91 use a notation of the Ikuta-ryū, and those in figure 97 that of the Yamada-ryū. Both utilize the hirajôshi tuning. In the notations right-hand fingering is expressed with "2" (index finger), "3" (middle finger). Most notes without a number are played by the thumb, which except for the first string, usually rests on the string below the one just plucked. When the thumb does not rest on the next string the technique is called kozume. As well as the diverse alternative terminology used for the techniques, well-known onomatopoeic words and phrases are indicated in parenthesis. These are usually found in everyday speech, with slight variations occurring between different performance traditions.

(a) Kakezume (dispersed plectra) (tonren tonren ten or kara kara ten). A melodic pattern that uses the thumb, index and middle fingers. Usually, the index finger plays one string followed by the next string above it; the middle finger then plays the string below the first one played, followed by the next one above it; the thumb then plays the note an octave above the first string played by the middle finger.

(b) Hankake/hangake (half kake; i.e., half kakezume). A variation of kakezume that has fewer notes. In any of the variants, grace notes might be played by the middle finger before the thumb plays (to ten or ko ko ten). Three types are found:

(i) Mukôhan (ton ren ton ren). The index finger plays two strings followed by the middle finger playing one.

(ii) Tanhan (ton ren ren or ton ko ra ren). The index finger plays one string and the middle finger two, as in the illustration.

(iii) Kainan. Both the index and the middle finger play one string each.

(c) Hayakake/hayagake (fast kake; i.e., fast kakezume) (kara kara ten). This is a variation of kakezume that plays the sequence at twice the normal speed.

(d) Kakite (scratch hand); kakizume (scratch plectra) (sha, shon). The middle finger plucks two adjacent strings (usually the first and second strings) in one fast stroke. The plucking motion is toward the player so that the string furthest away is played first. One sound is heard when played quickly, although two separate notes can sometimes be heard when played slowly. The plectra might come to rest on the next string above the two that were struck. Adriàansz (1973, 51) comments that in the Yamada-ryū the player “may (not ‘must’) continue the movement of...[the] finger in the same direction until it stops against the next string.” Ikuta-ryū players today usually play kakite in the same way as the Yamada-ryū.
92. **Awasezume koto technique.**

(e) **Awasezume (meeting plectra) (shan)** (fig. 92). The thumb and (usually) middle finger play simultaneously (usually in octaves), although the middle finger might occasionally play momentarily before the thumb.

(f) **Chirashi (scatter); chirashizume (scatter plectra) (shu’).** This technique, which varies considerably between different traditions, is played by scraping the right side (as viewed from the top of the hand) of the middle plectrum along one, two or more strings (depending on the tradition) in a sweeping motion from right to left (cf. weren). It is often indicated by a horizontal arrow above the string, or strings.

The term **chirashi** might also be used to describe a technique that is played by scraping the strings with the end of the index and middle plectra along two adjacent strings, the lower of which is often pressed in order to raise it to the pitch of the upper string (fig. 93). In this instance, the technique is sometimes called **namigaeshi** (wave return). In such cases, the technique is noted with either a curved or a straight arrow pointing to the left (either horizontally or to the upper left). In some modern music the technique might be played with the plectra scraping to the player’s right, in which case the arrow points to the right.

(g) **Oshiawasezume (push, meeting plectra); oshiawase (ryan; shan).** Two adjacent strings are plucked simultaneously by the thumb, the lower of the two being raised by pressing it down to match the pitch of the upper string (shown in the example with a **katakana wo** for a half tone and an “o” for a whole tone).

(h) **Ren (progression); weren (back progression) (sōarin).** The plectrum on the index finger plays a tremolo on the thirteenth string (unless indicated otherwise) and then this finger and the middle finger alternate rapidly to play a glissando from high to low. This technique usually ends with a grace note on the string immediately before the final note in the progression. In the Yamada-ryū the tremolo is not usually played. Instead, the player hooks the index and middle finger plectra around the string to produce a scraping sound and then plays the glissando from high to low (Read 1975, 380-81).

(i) **Namigaeshi (wave return) (shan shu’ shū).** This technique is interpreted in several ways. Sometimes it is played with a pattern of three techniques, as shown in the example, which begins with kakite, then chirashi (scraping with the tips of the index and middle plectra along two adjacent strings), and finally weren. Another method is to play the technique in the same way as one of the versions of chirashi (scraping with the extremity of the index and middle plectra along two adjacent strings).
(p) Hanhikiren (half pulling progression) (shōn rin). A version of hikiren that begins on a higher string than hikiren.

(q) Hikisute (pulling, give up) (shōn taton). A version of hikiren that ends on a string lower than the thirteenth string.

(r) En (cover, or shade); atooshi (after push). After a string has been plucked, it is pressed behind its movable bridge by left-hand fingers (thumb, index and middle fingers) to raise the pitch (portamento). The string is usually pressed on the part of the beat indicated, although the exact point is usually learned through one’s tradition, as is the point of release unless it is shown specifically in the score.

(s) Kō (push); oshide (push hand); oshiore (push, color). A string is pressed behind its movable bridge by the left hand to raise the pitch either by a half tone, a whole tone or one and a half tones. A related technique called kakeoshi holds down two strings at the same time.

(t) Tsuki (thrust); tsukiire (thrust, color). A string is pressed immediately after a note is played (usually raised about one tone), and then released straight away. The technique is indicated with a katakana “tsu” in the score.

(u) Jā; hikiiro (pull, color) (fig. 93). A string is pulled toward the player’s right (usually about a half tone) and then released. It is usually pulled on the beat following the one played and released on or before the half beat before the next. The technique is indicated with a katakana “hi” in the score.

(v) Jūkō (layered pushing); kasaneoshi (layered pressing). Repeated pushing and releasing of a string, or raising an already pushed string further.

(w) Yōgin (shake, song); yunire (shake, color). Usually releasing a pushed string and pushing it again immediately (the opposite of tsuki). The technique is indicated by a katakana “yu.”

(x) Kōkyō (push reverberation); oshihibiki (push reverberation). After an open string is played it is pressed on the next beat to raise its pitch before the open string is played again. The motion is slower than en (atooshi).

(y) Kōhō (push release); oshihanasu (push release). Releasing a pushed string. Indicated in the notation by a katakana “ha”.


(i) Warzen (ring movement) (shū). The side of the middle finger plectrum sweeps across the first string with a quick movement from the player's right to left, sometimes just touching the second and even the third strings as well, in order to produce a scraping sound (cf. chirashi). In the Ikuta-ryū the technique is notated by either a horizontal arrow pointing left (either above the notation of the first and second strings, or on its own without any indication of strings, but signifying the first two), or by a katakana “wa.”

(k) Nagashizume (flowing plectra) (kāranin). This technique consists of a glissando played by the thumb plectrum from high (usually from the thirteenth string, unless indicated otherwise, and emphasizing it and the string below it – the lower string is not indicated) to low, very often leaving out or playing very quietly the strings between start and finish. The technique usually ends with one or two grace notes before the final note. It is sometimes called hanryū (half flowing), if it begins on a lower string.

(l) Wairizume (dividing plectra) (sha sha). The index finger plays two adjacent strings very quickly beginning with the lower, followed by an identical pattern on the same strings by the middle finger (in the example a repeat sign occupies the second half of the beat). The thumb usually continues by playing a string an octave higher than the lower of the two adjacent strings, in which case the technique is labeled onomatopoetically as sha sha ten.

(m) Surizume (scraping plectra); urazuri (backward scraping) (zū zū) (fig. 94). The index and middle plectra scrape with their right side first from right to left along two adjacent strings, pause, and then scrape from left to right along the same strings. The technique is usually notated with arrows indicating the direction of the plectra.

(n) Sukuzizume (backward plectra) (mō ro-sō). A backward stroke by the thumb that produces a slight scraping sound (indicated by a katakana “su”). When played slowly the ring on the index plectrum may hold onto the thumb ring in order for the technique to be played louder and preventing the thumb ring from falling off. The same technique is used on the shamisen, which is played with a backward stroke of the plectrum.

(o) Hikiren (pulling progression) (shān rin). The middle finger plays a glissando from low to high. The first part usually begins with kakite on the first and second strings, followed by very quiet notes before the final string (sometimes with a grace note, kasanezume, in front of it).
向上  
押し
Semi-forte pressing

下降  
開放
Release

後押
Press after playing

F
turn (slurred)
glisando to any note

N.X.
動作の近く
near the "nyahaku"

音色の接近
near the "nyahaku"

glisando to one loud note

左法で
using "touma" in normal manner

スライド
slide

クリック
Click the string roughly

打ま
Snap the string with the surface of "touma"

音階
Scale of any pitch

アラビア
Arabesque on the string

変化拉
Change the position of the bridge

譜面分段
any dynamic level between up and f, unless indicated

あお
the rest of the music.
3号の説明

主として手の関係するもの

「押し手」の指の言葉（音なしまたは全音節）が記される。

手を押し

前手押しと

押さない状態はOをつけることもあめ。

つまり、「押す」とは音で表すことができず、「押さない」も音で表すことができない。

この指の言葉は「押さない」ということわざが存在する。

押さない状態はOをつけることもあめ。


 kaleidoscope


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