A History of Non-Western Bowed Instruments: A look into the Eastern History of the Modern-Day Violin

Sarah A. Bogen

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A History of Non-Western Bowed Instruments

A look into the Eastern History of the Modern-Day Violin

An Honors Program Thesis

by

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Spring 2019

LIU Post Music Department

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ABSTRACT

No one can say for sure when and where the story of the violin began. By the end of the 1800s, the consensus was that it came into being between two important dates in history, the first voyage of Columbus in 1492 and the birth of Shakespeare in 1564. Many believe its creation was in Europe but that is not the case. In fact, its birth was in the East, and it migrated into Europe by way of the Silk Road. By exploring the Eastern World of Bowed Instruments, I aim to shine light on a topic not often discussed among modern violinists. By discussing the birth of the earliest Eastern violin, each instrument’s development and impact on society will be examined. The countries in which these bowed instruments will be further discussed throughout this thesis include; China, Japan, Korea, Thailand, Cambodia, Java, India, and Iran. Additionally, the instrument’s crucial part in society will be discussed. Accordingly, the research done to support the development of Eastern bowed instruments has been supported and collected from numerous historical books, journals, paintings and diagrams, as well as first-hand accounts.

For an instrument of such beauty as the violin, it is incredible that something so exquisite could have risen from strands of horsehair, pieces of wood and woven gut. In fact, primitive forms of string instruments are widespread, developing more slowly compared to other types of instruments such as the flute, which requires less materials. The earliest theory was that the bow originated from the hunter’s bow. One could see the pitch of the bowstring change with the tension, creating pathways to experiments. Actually, the modern-day violin came into being around 1577, created by Andrea Amati in Italy. Amati’s shape formed the foundation of the violin as we know it today.

String instruments can be classified into the group chordophones and broken into three categories: plucked, struck and bowed. Each sorting uses strings to produce sound but differs in
the way in which it is produced. In this thesis, bowed instruments will be examined, as this is more relevant to the modern-day violin.

The search for the birth of the violin led to a new world of disarranged lineage, research and alternative models set forth over thousands of years. Taking a closer look as these unconventional and sometimes strange instruments can unlock the secrets of our violin past.

To the next generation of string players,

Sarah Ann Bogen
CHAPTER 1: TYPES OF BOWED INSTRUMENTS IN EAST ASIA

The connection between China and the Ottoman Empire was created by the opening of the Silk Road. By way of Central Asia, this pathway gave rise to the acceptance of various religious and cultural traditions beyond their native boundaries. There was an increase of commerce, as well as sharing of foreign skills, ideas, and the arts, including music. Assorted plucked and bowed instruments including the *rebab*, Persian spike fiddle and the *Morin Khur* were exchanged and are still used all over the world today.

From the very beginning, music has always been a crucial part of the Eastern cultures. In fact, we can even find entire orchestras in Chinese murals from the first millennium A.D.¹ Music was regarded as a source of pleasure and was an essential ingredient in religious activities of all kinds. In classical China, for instance, “it was seen as playing a part in the balancing of the empire and of the universe and was combined with dance and song in ceremonies that honored heaven and earth as well as important ancestors.”(Mitchell, 8)

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In exploring the wide range of Eastern instruments, we find many that are still well known. Some of the instrument types are specific to certain areas and include a number of unexpected materials. Animal skins form the resonating membranes such as python skin for the Chinese sanxian or cat skin for the Japanese kokyu. Precious materials like ivory are also used, for example, in the Thai so duang fiddle. There are many instruments that have common characteristics which exist across Asia thanks to the Silk Road.

**China:**

The musical tradition of East Asia- China, Korea and Japan are closely related. Indeed, Korea and Japan are known as being in the Chinese, “spheres of influence,” as many aspects of their culture and art originated from China. Many instruments, indigenous to both China and the West are found in both Korean and Japanese versions.

Music and instruments play a crucial role in Chinese culture at every level of society. In fact, most of the biographies of the early legendary culture heroes and kings show that music was crucial to the development of Chinese civilization. China is vast geographically and culturally, boasting a great many ethnic groups with distinctive musical traditions and instruments. The family of bowed instruments in China is extremely large and diverse, ranging from one to twelve stringed instruments. The most common type of bowed instrument in China is the erhu from the huqin family.

**The Erhu:**

The erhu is the most famous and well-known bowed instruments of China. Studied by beggars and professionals alike, this form of the two stringed spike fiddle has been learned by amateurs, street beggars and even conservatory trained musicians for concerts, solos, ensembles and orchestra music. The erhu, as previously stated, is a form of spike fiddle from the Huqin
family. The spike fiddle is indigenous to many cultures, from Japan to Turkey. It is thought to have been imported by Islamic traders from the Near East. As there are many forms of the spike fiddle in China, the *erhu* is the most well known throughout the world.

**Historical Development:**

One of the biggest debates regarding the *erhu* is whether it was invented or assimilated into the Chinese culture, especially with respect to the bow. There are two schools of thought: 1) that the spike fiddle was imported to China as a distinct apparatus and 2) it was assembled in the country from pre-existing discrete materials.² According to Chinese etymology, the *erhu* is an instrument introduced by the, “Hu,” Barbarians of the North and West. The name *erhu* comes from the older term *huqin* which is translated as “barbarian (*hu*) string instrument (*qin*).” (Stock, 88) *Er* means two, so the term *erhu* refers to a two stringed instrument adopted from the northwestern barbarians of old. (See Figure 1-2)

This is in no direct contrast to the folk stories passed down by some Chinese ethnic groups. The Mongols of the northwest as well as the Zhuang of the southwest had their own form of the two-string fiddle. According to historian Jonathan Stock, the Mongolian horse-head *morin khur* and the Zhuang horse-bone *maguHU* claim to be the remains of a slain celestial or earthly horse reanimated into the fiddle form by the bereaved master, who followed instructions in a dream. The

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Miao’s ox-leg niutuiqin is more mundane: a poor villager loses his ox in a wrestling match and carries around its broken leg to illustrate his sorry plight. When the leg putrefies, he constructs a wooden replica which is eventually strung and bowed to become a musical instrument.

The notion behind these stories in regards to the origins of the erhu is that each group considered their version to be their own creation and not an imported one. As mentioned before the term erhu comes from the older name huqin which has been traced back to the Tang Dynasty (618-907 A.D.) There have been numerous poems in which these instruments have been mentioned. The earliest is that of Cen Shen, which dates from 754-757 and that of Bai Juyi from 825. (Stock, 90) These sources describe a plucked or strummed instrument, which now is referred to as a bowed form of the instrument.

The earliest Chinese string instrument that was not plucked or strummed was the zhu which was hit with a bamboo rod. It was used as early as 168 B.C. and is still found thousands of years later during the Tang Period. This string instrument hailed from northern China which led to the development of other instrument such as the yazheng, a form of zither. Unlike a zither, the yazheng was sounded by friction rather than striking or plucking. Another form of bowed instrument that is closely related to the bowed fiddle of China is the xiqin. From the Xi tribe, the xiqin was originally a barbarian instrument, coming from the xiantao which it resembles. It is made of two strings, between which a bamboo slip is pressed, and is used among the people today. (Stock, 92)

The xiqin has been noted as both a plucked instrument as well as a bowed one. Poet Ouyang Xiu (1007-1072) described it as, “The xiqin was a Xi domestic instrument; when they pluck it tears fall from both eyes.”(Stock, 93) On the other hand, Liu Chang (1990) remarks that sound created by the xiqin was continuous. The first account describes a plucked instrument while the second
suggests a bowed one. Therefore, there may have been two different instruments both named \textit{xiqin}, a plucked version and one sounded by the bow.

There are numerous theories that have been offered suggesting stringed instruments existed as far back as 3000 B.C. in Arabia. Their arrival to China was delayed due to the mounted lifestyle of the Chinese tribes. Only when people started to settle down could the diffusion take place. This theory offered by Zhou (1997) may seem doubtful as there were other routes to China. Another theory put forth is that those who added the second string were the Mongols. Regardless, the proto-\textit{erhu} reached China by way of the Persian \textit{kemanche} and the Uigher \textit{aijieke} (form of spike fiddles) in the fourteenth century. (Stock, 95)

To summarize, we have moved from the plucked \textit{huqin} to the struck \textit{zhu} and \textit{xiqin}. We now go back to the original term \textit{huqin} which has now created a whole new category of instruments, those played with a horsehair bow. The poet Shen Kuo (Hu, 1956) describes the \textit{mawei huqin} or “horsehair bow” in his Song of Triumph:

\begin{verbatim}
The mawei huqin followed the Han chariot,  
Its music sounding of complaint to the Khan.  
Do not bend the bow to shoot the goose within the clouds,  
The returning goose bears no letter.
\end{verbatim}

Here it can be concluded that the \textit{mawei huqin} required a bow to be used in order to sound. The instrument must have been well established in China before the late eleventh century since it is included in poems from that period. So it seems clear that the people of the Middle East played a dramatic role in the development and transmission of bowed instruments. In fact, Persian theorist al-Farabi (872-950) described the bowed instrument category as, “the strings of which are made to sound by rubbing them together with other strings or some material resembling strings.” (Bachman, 1969)
It is important to remember that China had numerous land and sea routes with the Middle East and Central Asia. During the Sui and Tang Dynasties, there was an import of foreign and minority race orchestras. Presumably the acquisitions of new musicians and instrumental forms would have stimulated the transmission of new performance techniques as well. (Stock, 96) Additionally, the splitting of the Xi people and the migrations of other peoples would have sped up the process of transmission of instruments, techniques and ideas. This is one way in which the notion of the bow reached China from Persia. It seems most likely the bowed huqin was delivered intact to China and was not created out of various materials. Once it was accepted, it was crafted and changed to fit the needs of the Chinese musicians. The period of 1279-1644 was the time during which the spike fiddle was widely accepted by musicians in China. By the end of the era, the term huqin came to mean what it does today; one of the numerous spike fiddles with two strings tuned a fifth apart and is played with a horsehair bow.

During 1644-1992 the spike fiddle was a part of almost every musical form in China. With the rise of bangziqiang opera forms during the Qing era, the huqin earned its place among the Chinese elite dramas. In northern China, the spike fiddle known as the banhu was implemented. In Beijing opera, the jinghu was used. It was a combination of the capital Beijing (jing) and huqin (hu). Regardless, of the style of opera, some form of the spike fiddle was used. Many variations on the erhu were adopted by musicians to fulfill the sounds required in operas and orchestras or in folk music. In the north, the four stringed shihu became popular. It is remarkable how each era took the erhu and transformed it to fit with their needs and cultural styles. This allowed for a contrast of sound and a certain era identity, while still maintaining the core of the original instrument.
Appearance and Construction

The erhu consists of a wooden soundbox body with a long, round wooden neck. Two steel strings are fastened to the protruding lower end of this pole and then, by means of a small bamboo bridge, are passed over the snakeskin face of the hexagonal soundbox. (Stock, 85) After being held by a loop of chord, the strings are wound around the tuning pegs which are inserted into the neck. Bow hair made of horsetail is fed between the strings before being reattached to the stick, which completes the musical style of this famous instrument.

Of course there are additional features such as a rest below the soundbox. This rest consists of a small fabric of material that is strategically placed below the bridge to deaden unwanted vibrations as well as fine tuning the shorter of the two strings. Many erhus are ornately decorated with a creatures head on top such as a dragon. Nowadays, a violin style frog is incorporated on the bows of good instruments. (See figure 1-3)

A standard erhu usually stands around 79 cm high, and the hexagonally-faced body measures 10 cm in diameter and 13 cm from snakeskin front to latticed rear. (Stock, 85) Many makers have experimented with size, shapes, materials, such as a tubular soundbox. Most erhus are made in factories in cities such as Beijing, Shanghai and Suzhou. To construct such an erhu, the maker must cut strips of imported padouk wood into planks for the body, neck and tuning pegs. These pieces are smoothed by hand with special attention in regards to the edges.

The tuning pegs and their holes are carved into the upper part of the neck. After all the pieces are assembled they are glued

(Figure 1-3) Anatomy of the Erhu
Jiebing Chen. Jiebingchen.com. 2018
together and stretched over the body is a piece of python skin. The bow is quite simply made - a bamboo rod is shaped over heat and the horsehair is attached at both ends of the stick. Finally, the completed instrument is tested. This process usually takes about a month to complete. If a worker devotes all his free time to his craft he can produce around thirty instruments in six weeks.(Stock,86) Makers generally specialize in the construction of one particular instrument. It is quite common for a high quality erhu to be built completely by one man and signed after its completion.

The two strings differ in both pitch and length. The longer of the two strings which is tuned lower is nearer to the player’s body. This is termed the inner string. The higher pitched string is labeled the outer string. Most of the time the strings are tuned a fifth apart, such as d and a. This allows for a range of two and a half octaves. (See Figure 1-4)

![Tuning of open strings. Effective compass.](Figure 1-4) Erhu’s Tuning


### Playing Techniques

In the past, most erhus were played standing with the soundbox being tied or hooked to the performer’s clothing. In modern China, most players sit down, placing the instrument on top of the
left thigh. The left hand is crucial for support in standing positions, so it is most likely that left-hand changing positions were inhibited.

There are two main seated posture positions. The old way involved the players crossing the left leg over the right and placing the fiddle on the right thigh. In recent times, the player places both feet on the floor in front of their chair and opens the knees to open in a comfortable, relaxed angle, placing the fiddle on the lap or left thigh. The seated postures allowed for freedom in the left and right hands. Additionally, the position of the instrument has to do with the size of the instrument. For example, while the erhu sits on the player’s lap, the smaller jinghu sits near the knee. All in all, the posture helps to develop the sound of the instrument. The way in which it is held can determine the performance technique and the technical side of the instrument.

In regards to articulation, Chinese fiddles employ the bow. As previously stated, the bowhair in Chinese fiddles is fed between the strings before being reattached to the bowstick. It is held the same way as the Renaissance viol grip, with the right hand fingers directing the hair on the string, especially the middle finger. The bowing techniques are similar to the Western violin. A difference between the western violin and Chinese fiddle is the operation of the bow use. The bow on Chinese fiddles is performed horizontally so instead of having “up” and “down” bows, there are “push” and “pulling” bows. Unlike the violin, the “push” is the strong bow (violin up bow).

The patterns of fingerings used by fiddle players are a consequence of understanding the musical tuning of the instrument. Most Chinese fiddles are tuned a fifth apart. For examples, the

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erhu is tuned to \( d \) to and \( a \) in contemporary recital music, but tunings \( g-d \) and \( a-e \) are found in traditional pieces such as those of the folk musicians. (Stock, 283) Fingerings play a crucial part in Chinese fiddle playing, as it decides the pattern of ornamentation which includes slides, trills, mordents, grace notes and vibrato. Many ornaments occur with changing hand and finger positions. The glissando, unlike shifts, are an integral decorative feature of certain Chinese music. This technique has become a part of the recognized musical style and Chinese fiddlers and audiences do not simply tolerate stylish glissando, they expect and enjoy it. (Stock, 289) Since hand positions change, so do the places where ornamentations are inserted. In certain genres, fingering patterns are rooted in the musical structure. Another common ornamentation is the escape note. This is a melodic decoration in Chinese music which expands stepwise motion between two notes by attaching a third adjacent pitch to the pair. Ornamentations are used to aid with the technical side of the Chinese fiddle, bridging large jumps with passing or escape notes. As each new layer of decoration is added, the music becomes technically repetitive, creating a flowing, rippling contour which is aesthetically pleasing. This supports the theory that metrically expanded melodies were originally formed unconsciously in the Chinese aural tradition of musical transmission by the gradual slowing down and ornamentation of faster, simpler themes. (Stock, 292)

To summarize, ornamentation had two roles in Chinese fiddle music. First, the growth of commonly performed themes led to the implanting of decorative patterns within certain melodic structures of traditional genres. Secondly, the hand positions and fingerings play an important part in the decision of what ornamentation should be implemented.
Early Erhu vs. Modern Erhu

Instruments of the erhu family came into existance around eight to nine hundred years ago in China after being assimilated into the culture. Initially, they were meant to be used as primarily folk instruments used in operas. Since the 1920s and 1930s, the erhu has become more of a solo instrument which is taught in conservatories.

Since it was a folk instrument, the erhu was not preserved as a collectible item, so after a few decades once the snake skin became worn and soft, it would be discarded. Because of this, few survived before the Communist Revolution in 1949. Dr. Colin Huehns of the Royal Academy of Music studied erhu with the virtuoso Jin Wei at the Xi’an Music Conservatory. After a trip to China, he was able to purchase a pre-1949 erhu and compared it to the modern one he used for teaching and performing. The modern erhu is crafted from the finest wood- red sandalwood. It cannot be determined what wood was used for the early instrument. Additionally, the modern erhu is crafted with more precision, with the vertical spike being straight and the pegs perpendicular. On the other hand, the early erhu’s spike is slightly curved and the pegs fit at titled angles.

As compared to the revolution of the violin, the erhu’s changes were intended to increase the volume of the instrument as it is a much quieter instrument. The biggest change to increase the resonance and projection was to increase the size and construction of the resonating chamber at the end of the erhu. Where there once was a simple cylinder with a circular face at either end, now in the modern erhu it is now an octagonal cylinder.(Huehns,57) The chart below illustrates the differences between the two instruments.

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The main reason why changes have occurred in the construction of the modern erhu is to increase its sound production. Still, a modern instrument must be amplified during a performance, even with the new additions. As stated by Huehns, “Even so, the innovations carried out on my early music erhu to produce my modern erhu have still resulted in an approximately four-fold increase in its volume.” (Huehns, 57) The wood is more solid and heavier than before. The volume has been increased by placing a toilet roll sized wooden piece in the chamber of the instrument.

Early erhu specialists in China decided that the instrument should contain no metal, feeling that it adds a metallic edge to the sound. (Huehns, 58) The modern erhu is crafted with numerous metal parts. The pegs have been switched to brass ones, which allows for easy, effortless tuning. According to Huehns, “whether the peg is metal or wood seems to have little effect on the overall colour of the sound, but with metal pegs, the string passes over a metal roller on its way of the peg.” In order to remove the harshness and take the edge off the sound, all one has to do is place a
small piece of paper under the peg, which avoids the metal string touching. This notion of no metal crafted on an *erhu* is the “purist” notion. Almost all modern *erhus* are sold with a metal *qianjin* which adds some roughness to the sound. As mentioned in the chart, the string is attached to the instrument on a wooden spike in the early *erhu* while on the modern one is attached by two metal screws. The purist would remove all the metal parts and replace them with wooden ones, but this would have no real effect on the sound.

Another big difference between the two instruments is the bow and strings. Before, the strings were made of silk, but now they are almost all made entirely of metal. The reason for this change is twofold, silk strings break easily and they lose their pitch quite quickly like gut strings. The difference in the sound is remarkable. The sound produced by silk strings is soft and gentle, on the other hand, the metal is robust and smooth. Silk strings have a softer attack and require a lot of rosin and are weaker in the higher register. The bow length is extremely different since silk strings cannot take the pressure of too many bow hair and would cause them to snap. The sound of the bow on the modern *erhu* is louder, thicker and richer and is more quiet and delicate on the silk strings. The tension on the modern bow is looser which allows for easier manipulation of sound. It can also be changed by the screw mechanism that is also found at the end of the violin bow. On the early bow, the the hair would need to be untied, re-wound and re-strunck, a very complex and time consuming process. (Huehns, 61)

In the end, one can see the huge difference in the construction of the two instruments. They created two totally different sounds in two totally different eras. The early *erhu* is limited, but produces a beautiful elegant sound. In contrast, the modern *erhu* is more versatile and can project better and can play a variety of music. Both have greatly impacted the *erhu* world and will continue to do so for years to come.
The similarities between the modern day violin and erhu are mainly found in the construction of the instruments. Both have strings, made of wood and use a bow to produce sound. The 20th century of the Chinese fiddle was greatly impacted by influences of the West, especially regarding technique, aesthetics, composition and even the construction of the instruments. Performance technique of the modern erhu owes much to the violin. For example, players began using the tips of their fingers to press the strings, aimed for equal tempered intonation and developed a vibrato like that used on the violin. (Stock, 102) Many composers began to copy the style used in Western music, and performers began to learn the heavy violin repertoire on the erhu. In a way, the violin influenced the erhu. In fact, after the Cultural Revolution, for a time the erhu seemed to be totally replaced by the Western violin. But there are some Chinese erhu influences on the violin as well. In fact, Cong Qianna stated in his Treatise on the Violin Performance Techniques Borrowed and Absorbed from Traditional Chinese Instruments, that traditional Chinese Instruments influenced modern dary violin techniques.\(^5\) In the Butterfly Lovers’ Concerto, the violin part consists of many “slides,” a characteristic of Chinese erhu music. This example demonstrates that the violin is able to merge with different cultural and musical styles. As stated by Peter Cooke in his, The Violin- instrument of four continents, “No other musical instrument has until recent years been so widely used among all classes throughout the world as the violin.”

**Japan**

Due to the conservational nature of Japanese culture, many aspects of traditional music still exist today. In likeness, there are numerous instruments that have survived and maintained their form. Credited to their self-isolationistic notions, many valuable ancient musical traditions are still present today. The first millennium of Japanese culture consisted of native music, since the country

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was ruled by clans. This was the period of indigenous instruments which included the *yamatogoto* or *wagon* zither, *yamatogoto* flute and a few percussion instruments. During the mid-first millennium, music from foreign countries began to be assimilated into Japanese society. Musicians from China and Korea brought over musical instruments along with new repertoire and techniques, which began the era of foreign-court music. The music of foreign courts became established in Japan as *gagaku*, with its origins from China and Korea. *Gagaku* is the “refined music” allied to Chinese *yayue*. (Clark, 47) In regards to court music, it was reserved mostly for the aristocracy. The *gagaku* ensemble consisted mostly of winds, plucked strings and percussion. Usually, the wind and strings were doubled, which resulted in a group of about twelve players. (See Figure 1-6)

Other genres from the early period of Japan have survived today. these include narrative recitations accompanied by the *biwa* lute and theatre called *no*. In the latter, theatre, dance and music are synthesized in a creative form that has been regarded all over the world. (Clark, 49) In more recent years, there have been a greater emphasis on solo performances. The most common solo instrument is the thirteen string zither known as the *koto*. This instrument has several schools devoted to its learning and is the main focus of many well known composers today. Surprisingly, Japan has only one bowed string instrument, the *kokyu*. Just like the Chinese *erhu*, this instrument was influenced by forms of the lute from China.

**Shamisen**
One Japanese version of the lute is the *shamisen*. It is a three-string spike lute with a cat-skin or dog belly covering. It is said to have been derived from the Chinese *sanxian*, a three string fretless lute. In fact, a different name for the *shamisen* is *sangen*—which stands for, “three strings.” Unlike the Chinese name, the Japanese is quite poetic, rendered as, “strings of three flavors.” (Clark, 54) It came to Japan by way of the Ryukyu Islands to the south, around the mid sixteenth century. When it arrived, it was played with the same pick used for the *biwa* lute. It became clear that the snakeskin belly was not able to withstand the percusive beats of the pick, so other kinds of animal skins were used. The two preferred ones included cat and dog.

The *shamisen* came into the spotlight during the Edo Period (1615-1868). This era was the time of a growing merchant class as well as the *samurai* class that didn’t have much to do since the war was over, so they needed means to entertain themselves. At first, it was not a popular instrument with the people, but the opinion altered with the removal of the snakeskin. *Biwa* players plucked it with the plick(or pectrum) and this all together changed the tone and quality of the sound. It became extremely popular in the new developed social life of Japan.

The *shamisen* has no frets and is played sitting on the floor. (See Figure 1-7) The tone of the instrument is quite resonant and is similar to the Western banjo. There are numerous effects that the *shamisen* can produce. One is the *sawari* which is a sort of buzzing created. At the top of the neck, where the strings pass over the nut, the lower string vibrates against the neck, while the

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other two strings pass over the metal fret. This buzzing is a unique and beloved feature of the instrument.

The first shamisen was played by biwa players, so the first repertoire of the instrument was narrative music. But with the growing popularity, several styles of playing were created. There are two major styles: katarimono, which is narrative singing and utaimono which is songs and melodies. The shamisen is used in may genres such as a solo instrument or accompaniment in theatre or bunraku puppet shows. With regard to ensemble music, the shamisen joins other instruments such as the kokyū and shakuhachi. This creates the sankyoku ensemble, meaning, “three melodies.” It is an intimate chamber group with repertoire based on pieces originally intended for solo instrument, but later arranged for the trio ensemble. (Clark, 54)

**Kokyū**

The kokyū fiddle is the only bowed string instrument of Japan. It is quite similar to the shamisen with regards to its shape, but is smaller and the spike that passes through the instrument is longer at the base which rests while playing. The player is seated on the floor and the kokyū is held vertically. The bowing technique is quite different; rather than the bow being passes through the strings, the player holds the bow in one position and rotates the instrument itself.

The origin of the kokyū is unclear. In the 17th century it was written about in literature and there were some images of it proving it existed. It has been discussed whether the instrument was

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influenced by the shamisen or the rabec. According to Mari Kano, the first description of the kokyu was in 1609. The instrument can be seen with the shamisen in the diary of the poet Saijoin Tokiyoshi. In the writing, a blind musician carries the kokyu, visits Tokiyoshi and sings a phrase of the Heike story. (Kano,1) During the 17th century, the kyoku appeared with the shamisen, illustrating that there are similarities between the two. Till then, there were no musical instruments played with a bow in Japan. It has been stated that people saw and copied models used throughout Europe and Asia, such as the Chinese erhu, the saw sam sai in Thailand and the rhubarb in Indonesia.

Paintings of the kokyu have told us quite a lot about the instrument. For example, there is a painting on a folded screen in 1624-47 where the instrument is first seen. This kokyu has a round body and a short bow. Another illustration from 1660 depicts two players sitting on a bench (kyoku and shamisen) and two players standing. All paintings portray the kokyu being played stood on the floor and the bow positioned at a right angle. This is completely different compared to the present kokyu. Today it is played between the knees, like the cello or gamba. Additionally, the kokyu was always played in an ensemble, with the shamisen or biwa, and never solo. (See Figure 1-8)

Form & Construction

The kokyu has the same shape as the shamisen but is a little smaller. It has a long wooden pole that pierces the instrument through the base. Cat or dog skin is placed on both sides of the wooden frames. The pin of the kokyu is as long as a cello, since the player puts the instrument between the knees. The bow is wooden and the bridge is made of either wood or bamboo. Compared
to the *shamisen*, the bridge is thinner and higher. The horsehair bow is called *su* and is loosened to play. The strings are silk like most string instruments in Japan. Since there are many silk threads that are twisted, if the strings are rubbed by the bow, a specific sound will be produced. (Kano, 4) The strings are thinner than the *shamisen*, therefore it produces small sounds. What is very interesting is that the bow is much longer than the instrument. The instrument is about 65 cm and the bow is 80-100 cm. It seems to have been improved around the middle of the 17th century by composer Yatsuhashi Kengyo, since in early description it was characterized as a, “small bow.” (Kano, 4)

**Performing Style & Music**

In performing the *kokyu*, the angle is changed to play different strings, unlike the violin. It is played by underhand and the bow is pulled using the right third finger like the *gamba*. There are specific types of present day *kokyu* music. The following ones are listed and described below.

*Kokyu Honkyoku*

This was the music written and performed by blind musicians during the mid 18th century. Typical works are those by Masajima Kengyo and Fujie Kengyo, which included solo and vocal music accompaniment.

*Sankyo*ko

Ensemble music which the blind musicians composed and performed for the *kokyu*, *koto* and *shamisen* is the Sankyo Ensemble which means, “three instruments.”

*Bunraku*
Additionally, the kokyu and shamisen were used to accompany puppet plays. In fact, in the play “Akoya”(1732), the doll imitates the three instruments including the kokyu.

**Kabuki Music**

In Kabuki, many instruments are performed on the stage and in the Kuromisu, which is the left hand of the stage. During the play, the kokyu is used to show off the dramatic contents.

**Folk Songs**

In certain festivals such as, “Kaze no Bon,” which is the end of summer, people dance in the streets all night. Here, the kokyu and shamisen players hang a musical instrument from a head with a string like a guitar and walk and perform.

**Contemporary Music**

After the Meiji Era, the kokyu was not revered. It was after the second half of the 20th century that some composers made new works for the instrument. These included Shibata Minao, Makino Yutaka and Azechi Keiji.

In her book, *Not by Love Alone, The Violin in Japan, 1850-2010,* author Margaret Mehl describes the kokyu as the violin’s distant cousin. She traces the history of the violin in Japan from its beginning to the present day. Unfortunately, the kokyu is not often learned or performed today. It is a dying instrument, possibly due to the extreme popularity in Asian cultures. It is indeed the “Forgotten violin of Japan,” and is not revered or beloved by the Japanese culture.

**Korea**

According to the Chinese, the Koreans, “delighted in singing and dancing.” In fact, they would commemorate the completion of sowing in the fifth month and the farming of the year in the tenth month with song and dance.(Clark,63) Korean music is unique, described as vividly rhythmic with a certain earthiness in tone. This is attributed to the silk strings used by players of
string instruments. Compared to China and Japan, rhythm is more manipulated. Repeated rhythms, even in complex music, is quite often the basis. This is why drums are frequently present in traditional music.

Just like Japan, Korea’s music contains influences of Chinese music. Besides instruments, other musical gifts were given to Korea in the twelfth century. More than six hundred instruments were sent to Korea in 1114 and 1116 for use in ritual and court music. During the fifteenth century, under the reign of King Sejong, a new emphasis was placed on native music and many indigenous instruments were brought to the front of orthodox ritual tradition, along with Chinese instruments. (Clark, 63)

The Koreans classify their national or, “kukak” music into two categories: chongak or orthodox music and sogak or popular music. These are the equivalent to the Western notion of classical and folk music. Chongak refers to ritual music derived from the Chinese Confucian music and Korean Royal Ancestral Shrine music. Sogak was developed in the fifteenth century, created to pay homage to King Sejong’s ancestors. Additionally, art song- which is setting of poetry in traditional Korean poets- also falls in this category. Sogak includes folk songs, songs in connection with Buddhism and improvised music of the sinawi ensemble. Another form of sogak music is nongak, or farmer’s music. This is an outdoor percussion dominated ensemble performed in agricultural settings. Farmer’s music gave rise to the popular samulnori percussion ensemble, where musicians play and dance in a festive choreography.(Clark, 64)

In Korea, traditional instruments, either string, wind or percussion, are categorized by the Chinese bayin, “eight-sound system,” which is called p’arum in Korean. Their most popular instruments are the zithers with silk strings. Drums and winds are also plentiful. Surprisingly, there are only a few string instruments in Korean music.
Haegum

The *haegum* has been in Korean culture since the 13th century (*Koryo* period) and is actually thought to be of Mongolian origin, arriving in China by the 10th century and then assimilated into Korea. Although it is a string instrument, it has also been classified as a wind instrument, or at least included in ensembles where the melodies are assigned to wind instruments. This is due to the ability of a bowed string instrument to sustain and vary pitches in ways related to reeds flutes. Many genres and ensembles both large and small has incorporated the *haegum*, in court music ensembles, large string and wind orchestras, medium sized wind and string groups, ancestral shrine ritual music and the ensemble that accompanies the vocal form *kagok*. It has also been used to accompany other vocal ensembles, such as *kasa* and *sijo*. As a solo instrument, the *haegum* has been used for the virtuosic improvisatory music *sanjo*, wandering entertainers (*kwangdae*) and even beggars up through the 1930s.

**Haegum’s Tone Color**

Many writers on the subject of the *haegum’s* timbre have illustrated its, “nasal” and “piercing” sound. In fact, So Inhwa in her *Theoretical Perspectives on Korean Traditional Music: An Introduction*, uses the words “nasal,” “piercing,” and “scratchy.” (Inhwa, 44) In the beginning of her extensive discussion of the instrument, Song Hyejin describes the slow playing of the *haegum* as a, “long sigh,” but when performed at a quick tempo, sounds naïve and quite funny, like the movements of an innocent child fooling around, making everyone laugh. (Sutton, 4) Some of the descriptions are in depth and very specific. For example, Song also mentions Cho Susam

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(1762-1849) who in his *Haegumsu* wrote that the *haegum* could imitate the shrill shriek of someone with a stomach ache caused by overeating or mimicking a thief in the south of Seoul who runs all over trying to escape. Korean tradition does not authorize certain instruments or vocal music to be specific to one gender. In the late 20th and early 21st century South Korea, the *haegum* was a predominantly female instrument.

**Materials for the Haegum**

When constructing the *heagum*, the soundbox is made of hard wood such as mulberry or bamboo. Traditionally, five year old bamboo root is used, because the grains of the root are densely entangled which prevents cracks and sound loss and creates a string soundbox. The soundbox plays the role of magnifying sounds. Depending on the shape and size, it creates various sounds. The rod-like neck consists of dark colored bamboo with many joints and is attached to the sound box with a cast iron stick through it. The surrounding holes are covered with silver and the inside string is thicker than the outside. The *bokpan* or middle plate is placed on one side of the soundbox and strings are laid on it. The thickness of the plate determines the tone color. Resin is applied to the bowhair to produce friction for better quality sound. The left hand grips the *heagum* string while the right hand fiddles the bow. The string used for the instrument is made of a thick silk twisted from several thinner silk threads. Depending on the number of threads, the elasticirt and tone color of the strings can be adjusted. In older times the threads were processed by hands. The connecting part between the soundbox and neck is made of jade, and sometimes silver.
Shape and Changes

In regards to shape, the haegum resembles the Chinese hogung and can be compared to the medieval fugin, which was in the Korean culture since before the Christian era, and became an indispensable instrument in both court and popular music of the time. It is made up of two strings and played with a bow on the musician’s knee. The bow is horse hair and held by the right hand. The haegum has gone through numerous improvements to allow for a richness in timbre and to remove its nasal sound. Thus, the strings have been increased to four with fixed strings placed on the outside. The soundbox is made of paulownia wood and is open at the back. The silk strings are tuned a fifth apart, attached to the bottom of the soundbox, passed over the bridge and up the bamboo neck to the pegs. The left hand controls the pitch and vibrato by pulling the strings towards the neck, since there is no fingerboard. The right hand controls the bow pressure and speed which is played between the strings.

In the past, the haegum played a prominent role in Korean royal court and ceremonial music. Today it is regarded as the most adaptable and versatile among the traditional Korean instruments and is even found in Western classical, jazz and world music. (See Figure 1-9)

(Figure 1-9) Haegum Player
Haegum Performance. Seoul Korea. 2010
Situated between China and India, Southeast Asia is an important crossroads in the continent. The region is composed of two major portions: the mainland peninsula (Vietnam, Laos, Thailand, Burma and mainland Malaysia) and island Southeast Asia (predominated by Indonesia, the Phillipines, and island portions of Malaysia.)(Clark, 71) Influences in both music and culture flowed in from its enormous neighbors- China to the north and India to the west. As a result, much of the music of Southeast Asia shares general characteristics despite the cultural diversity of the region.

In all the countries mentioned, music plays a key role. Rural areas include other islands and remote places, where small ensembles and solo instruments play simple music for festivals, village feasts, curing ceremonies and daily activities. Urban centers have bigger ensembles that consist of gongs, which play for court and state ceremonies. Many musical instruments are made of products from the tropical environment.

Thailand

When he arrived in Bangkok to complete his dissertation field research in 1972, author Terry Miller was instructed by a Thai music professor, “Don’t say that the Thai got this and that from India, China or anywhere else. The Thai people are quite capable of creating things themselves.”9 With this nativist view in mind, it is still important to understand that the Thai culture was very much influenced by foreign cultures, especially India and China.

Centrally located in mainland Southeast Asia, Thailand is, like its neighbors, musically diverse. The original homeland for the Thai people was said to be southern China. (Clark, 75) Due

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to the rise of population, by the mid thirteenth century, the Thai migrated to Southeast Asia. The country is predominantly Buddhist, which plays an important role in the musical society.

Most Thai music dates back to the later eighteenth century. Thailand has borrowed numerous musical instruments from neighboring countries. This is most prominent in the incorporation of both music and instruments of the Mon people of western Thailand and Burma, an ethnic group that has also contributed quite a lot to Burmese music. Thai classical music is played in a variety of circumstances, both for court and personal entertainment. The *pi phat*, the most important ensemble of classical music, is called to perform the musical introduction to all court ceremonies. Also, music accompanies theatre and more recently, is heard in concert performances. There is a unique and astounding logic to the names, evolution and grouping of the Thai instruments. The simple forms of instruments are called by straightforward names, such as the cymbals, called *chap* and *ching*. Various Thai fiddles are called *so* (pronounced saw), suggesting the sound of a string being rubbed by a bow.

**So Duang**

The *so duang* is one of three elegant forms of fiddles used in Thai classical music. It shares quite distinctive features with some Chinese fiddles, such as the bow passes through the strings and cannot be separated from the instrument. The player, who holds the instrument upright, needs to only exert a slight pressure to one side or the other to decide the string to be played. A majority of *so duang* is made of ivory and stunning mother-of-pearl inlay decorates the body and a portion of the neck. The belly, is made of python skin and is named because its shape resembles a type of trap called *duang* used to snare a particular edible lizard prized in northern Thailand. (Clark, 81) There is no doubt that two-string fiddles were late additions to the Thai instrumentation. In his early studies, Miller discovered that two string bowed instruments didn’t occur until 1885,
following a visit by a Thai troupe of musicians and
dancers to England. (Miller, 127) Out of the three
fiddles of Thailand, at least two are most likely of
Chinese origin, the saw duang and the saw u. The saw
duang mimics the shape and sound of the Chinese
zixian. Both have slight conical wooden bodies
covered in snakeskin, two strings and produce a very
nasal sound. The differences lie in the modifications
made by Thai makers, such as the contour of the neck, tuning pegs, and manor of performance.
Chinese fiddles are played while seated on chairs whereas Thai fiddle players sit on the floor. (See
Figure 2-1)

Structure of So Duang

The so duang has seven main components:

1. The neck( Kan Saw) can be made by various kinds of wood such as rosewood, blackwood,
ebony or ivory. The upper part( Tuan Bon) is made in the quadrangle shape similar to the
prow of a boat. The lower part is tapered and inserted through the cylindrical sound box.

2. The tuning pegs( Luk-Bid) are usually made of ivory or wood and carved into a cylindrical
shape with an ornamental knob (Hua-med). The strings are attached to the 2 tuning pegs.
The upper peg is designated for the lower pitch and the lower is for the high pitch string.
The pitches are tuned by twisting the peg to adjust the tension of the strings.
3. The body of the instrument is made of hard wood or ivory. It is hollowed out to a cylindrical shape and is covered with snake skin to spread the vibration from the strings over the bridge.

4. Rad-ok is a cord fastened around the strings and upper part of the neck to tighten the strings. This position is where the player presses his fingers on the string.

5. The wooden bridge(Yong) is made of a small piece of wood attached to the face of the sound box. This functions to allow for the vibrations to ring throughout the instrument.

6. The bow( Kan Chak) is made of the same wood used to construct the neck. It consists of around 250 horse hairs inserted between the strings of the instrument and fastened with the right tension.

7. The strings are made of silk of different sizes. The inner string is the bigger one and tuned to the so pitch. The outer smaller string is tuned to the re pitch. Nowadays, nylon string are used in place of silk strings.

**Saw Sam Sai**

This Thai instrument is somewhat similar to the Japanese shamisen and the Chinese san hsien in that all three instruments have no frets. It has a somewhat triangular body and one spiked leg that much more resembles its Eastern predecessor the rebec. The body of the saw sam sai is made from half a coconut sheel. The half used must have three bulges in the formation of points of a triangle. This forms the back of the resonator. What is quite different is that the open part of the shell is covered with goat or calf skin. It has three strings which are passed over a bridge on the skin soundboard. They pass through a hole in the spike and are secured. Overall the length of the instrument is around 1.15 meters. The three gut strings are tuned in fourths and are fastened
inside the shaft at the lower end and are stretched over a bridge on the soundbox and pass over the fretless neck. (See Figure 2-1) A very important part of the instrument is an object called a “head weight,” which is fastened to the skin covering the soundbox. The weight is proportionate to the size and thickness of the head, which has a dampening affect resulting in a purer quality. In the old days, the weights became more and more ornate as each player tried to outdo the other, until finally some were crafted out of diamonds set in gold. (Morton, 1976, p. 96) Today they are silver with a piece of colored glass or some type of Thai enamel. The bow used is large in relation to the instrument. The wooden part is in the form of an elongated “S” curve. Around 250 horsetail hairs are tied between one end of the bow and the flat side of the curve, which is a handle for the right hand.

*Saw sam sai* was one of the instruments invented in the Sukhothai Period (14th century). During this era, farmers who grew special three lobe coconuts that closely resembled an elephant’s head were actually given a relief from taxation to keep the coconut from becoming extinct. It is said to be the hardest Thai fiddle to learn and play, but esteemed for its beautiful tone and blending with the human voice. This is due to the fact that the bow is not attached, but must “break” their wrists back and forth to change strings. Due to this, it has been used in pictures to show knowledge or high status. The model for the *saw sam sai* most likely came from the Near East to India and was then traded. It is also thought to have come from Cambodia, as an almost identical instrument

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11 [History of the Saw sam sai](https://sites.google.com). Retrieved 12 October 2018
is found in the culture, tro khmer. If the Khmer were using the instrument at the time the Thai conquered the nation, it is quite possible that the Thai adopted the saw sam sai from the tro khmer.

Unfortunately, the use of the instrument has decreased over the years and is practically extinct. It is not a member of any ensemble, being used as a solo instrument or accompany to voice. Therefore, this beautiful bowed instrument is a thing of the past, lost among the shuffle of new and changing times.

**Saw u**

The saw u is the lowest sounding member of the Thai bowed string family. Quite similar to the Cambodian tro u, it has the body of coconut shell and like the Chinese spike fiddle. The back of the coconut is often carved in a pattern that pierces the shell, making holes which allow for better projection, just like the Western stringed instruments. The hardwood or ivory neck has no frets and is inserted through the sound box and there is no spike foot. It is usually between 30-32 in. long. Two strings of gut, silk or nylon are attached to the end of the neck they are tuned in fifths and the higher pitch is the same as the lower of the two pitches of the so duang. The bow is around 27 in long and in the shape of a “C.” 150 horsehairs comprise the bow, after being attached to one end, passed between the strings and reattached to the other end, it is inseperably fastened. A piece of resin is placed at the top of the body on the left side of the neck, so the bow can be rubbed while the instrument is being player. (Morton, 97)

The saw u is one of the principal instruments of string ensembles. The musical line is often a variation of the main melody as it plays one pitch at a time and not in octaves. The instrument can also play in a melodic style- with glissandos and tremolos. Additionally, it can be added to percussion ensembles used in theater, to soften the sound of the drums for indoor performance. The saw u is the Thai version of the Chinese hu hu and other similar instruments. One difference
is that in some Chinese models, the pegs are inserted from side to side rather than back and front. (Morton, 99) Since the early Thai civilization was in close contact with the Chinese, the Thai probably used their instruments for quite some time.

It is quite amazing how all three instruments were developed from the Chinese prototype erhu. Yes it is true that the Thai people put their own spin on the bowed instrument but one cannot help but see the tremendous impact China had on Thailand. In the next section, we can see the influence of Thailand on Cambodia and how it shaped the creation of the bowed family of string instruments.

**Cambodia**

As a country rich in art and culture, music plays a very important role in Cambodia. It is deeply integral to traditional culture and has a firm place in Cambodian history. Pinpeat is a form of classical Cambodian music around for roughly a thousand years. It is characterized by a rich and resonant tone with strong rhythm. Pinpeat was used in daily rituals and has become a part of the cultures of neighboring countries. This form of music was used in religious ceremonies, but also for puppet shows and theatre. A pinpeat ensemble consists of roughly nine to twelve musicians. In the lowland of Cambodia, the music and ensembles are much smaller and are closely related to rural life and agriculture.

Cambodian musical instruments are comprised of a wide range of wind, string and percussion used by the Khmer people as well as other ethnic groups. The bowed family of instruments is more extensive compared to the other Eastern countries.

**Tro Family**

The bowed instruments of Cambodia are classified in the Tro Khmer category. It consists of four main fiddles- tro chhe, tro so tauch, and tro so thom and tro khmer. The word tro refers to
“bowed” and is therefore placed before words to indicate the technique used. They are cylindrical in shape and with cylindrical bores, giving it a warmer tone. The khmer tro ou (coconut body) has two versions: the normal tro ou consists of a full sized coconut body and a calf skin resonator while the tro ou chamhieng is built with a half coconut body and wooden resonator. The former is found in monhori ensembles and the latter in bassac and yikes theater.

What is quite interesting are the contrasts and comparisons made between Thai and Khmer bowed instruments. For example, in both countries, two string instruments did not appear in musical culture till around the 19th century. Of course they existed before this but they were not documented until this time. It appears that the Khmer fiddles are closer in relation to those of China than Thailand. They came into play during the 19th century thu a type of Chinese theater which originated in Vietnam. (Miller, 232) Additionally, the Khmer invented two lower pitched fiddles tuned G-D and D-A called tro thom.

Tro Khmer

In regards to its origin it is impossible to date the tro khmer’s appearance in Cambodia but it is possible that it was introduced when the rebab made it appearance in Malaysia and Sumatra towards the end of the 15th century. There is a tremendous influence of Arab culture due to the traders of the Far East and the colonization of Malay, Sumatra and Java. Therefore, it can be assumed that the tro khmer is a relative of the Iranian rebab. The Cambodians consider the instrument as one of their oldest instruments and one that can “best help them express their musical

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sensitivity.” What is interesting is that the *tro khmer* is the only bowed string instrument that has three strings. This may explain that the instrument was of foreign origin.

The *tro khmer* consists of three parts that fit into each other. The *khbal tro* (head of the tro) is around 20 cm long which includes a hollow top and modeled after the rung used to hold a violin. (Kersale) Three holes are borred for the pegs. At the lower part, a vertical hole allows the strings to pass to the pegs which stretch the strings inside the *khbal tro*. What is interesting is that the *tro khmer* has no nut. It has a peg on the left and two on the right. The handle or “middle pipe” is a hollow bamboo of 15 cm long. The two ends are surrounded in metal rings with prevents deformation and serves to adjust all three parts together. The handle is made of special *kranhung* wood or even ivory. The last section of wood comes from the sound box *rolie tro*. This is made of ripe coconut which is hollowed and cut in the direction of its length about one third of its thickness. The nut is carelly chosen since it must have a triangular shape and present two bulging parts called “breast-shaped women.” (Kersale) Finally, the outer surface is smoothed and coated in varnish.

The soundbox is created with a snakeskin from the *pramaoy damrey*, a kind of python called the “elephant trunk snake.” The skin is excellent for instrument making as it does not relax at temperature variations. It was once bonded with *anhchey* rosin but is now done with cyanoacrylate glue. A small bridge *yang* in a semicircle is carved from soft wood and streaked with three stripes for the strings. When played, the *tro khmer’s* bridge is kept on only by the tension of the strings as it is not glued. This allows the player to remove the bridge after use in order to avoid that the permanent support is not warped over time.

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A seashell is glued to the skin of the instrument to create resonance as well as a mute. Some musicians also use a leather washer or a ball of mixed resin and rice paste. A 15 cm spike extends from the instrument and adheres to the group when played. The strings are fixed to the spike with a small nail. The three strings, sharp, middle, low are tuned in fourth to each other or fifth for the low and medium strings and for the middle and sharp strings. The basic tuning of the instrument is taken from the *pey ar* oboe because its pitch is fixed. The bow varies in length made of horse hair. The wood is the same as the one used to construct the handle. Its length is roughly 35-40 cm. The handle is carved to represent the shape of the tail of *naga* and finished in “naga’s head” where the hairs are attached. The tension is actually produced by the fingers on the hand holding the bow, which allows for variance in tension of the strings. (See Figure 2-2)

The technique used in playing the *tro khmer* is quite difficult. The player must rotate the instrument on its spike while the bow remains in the same plane. This way the bow rubs the string brought on its hair by rotation. According to Jacques Brunet, “The good *tro khmer* players are rare today because few of them are able to obtain from the instrument the soft and warm sounds without which it is unbearable to listen.” (Kersale)
The *tro khmer* has many differences in sound and features, compared to other Eastern instruments. It has its own extraordinary beautiful sound used in performances based on its own principles. Unfortunately, the future of the instrument looks bleak, as it has fallen out with many musicians due to its extreme difficulties. The *tro khmer* helps to express the cultural identity and social structure of Cambodia and its influence on the West.

**Java**

One of the largest islands of the Indonesian archipelago, Java is home to a majority of the population. In fact, it is one of the most densely populated places on earth. Originally Hindu in religion, the Javanese converted to Islam a few centuries ago. Although now a republic, many court rituals associated with the royal past are still in practice. Some of the most renowned gong-ensembles of Southeast Asia have come from the island cultures of Indonesia. These are classified as the *gamelan* orchestras, found on the islands of Java, Bali, and Madura, as well as elsewhere in Indonesia, where the Javanese have settled. *Gamelan* refers to ensembles of a plethora of instruments, usually bronze gongs and metallophones. Besides bronze, other elements such as iron, wood or bamboo can be substituted.

The *gamelan* ensembles have their roots in simple bronze drums which emerged during the first millennium B.C. in Southeast Asia. The large idiophones were made completely of bronze and suspended like gongs. In some areas, drums were decorated with images of frogs, thus called “frog drums.” The association of frogs with water imparted a power thought for evoking rain.(Clark, 91) Additionally, these drums may have been used as signaling instruments and later collected into a set or chime of around sixteen drums. As the principal musical tradition in Java, *gamelan* fulfills a broad range of functions, from praying for rain for crops, accompanying dance and puppet theatre and providing the main activity of *klenengan*, nightlong gathering of *gamelan* musicians.
Rebab

One of the most important instruments of the *gamelan*, most often played by a main member of the ensemble, is the *rebab* spike fiddle. The history of the origin of this popular bowed instrument is semi unclear. It is thought to have come from the lute family. The terra cotta picture of a musician discovered in Egypt during excavations (1905-6) was found assigned to the XXth century (1000 B.C.) (See Figure 2-3) This example establishes the origin of the instrument named by some lute, with the common characteristic of no neck. There has also been a matter of supposition on the word *rubab*, which is the Persian origin, and creates the theory that the Arabs themselves declared they obtained the instrument from the Persians. But scholars and archeaologists have found evidence of two distinct types of *rebabs* in antiquity. There is no definitive answer on the source of the name, but it is clear that the lute of the Arabs and the pear shaped *rebab* were one and the same instrument, until the arrival of the bow. As the *rebab* had a very considerable influence on the history of string instruments and was undisputably the means by which the bow was introduced to the West, it is important to examine its construction, performance and connection to the modern violin.

The two main forms of *rebab* are 1) the long and narrow boat shaped and 2) lute shaped with the narrowing of the body much like a pear. The most specific trait of the *rebab*, and all instruments related to it, is the body composed of a back scooped out of a solid piece of wood, glued without ribs and a flat sound board or parchment or thin wood. According to philosopher
Al-Farabi, the rebab has either one string, two or four strings, obtained by doubling the two, often tuned in minor thirds or major thirds.\textsuperscript{14} It is an elegant instrument, measuring around three to five feet in length. It is comprised of several pieces of wood. The triangular shaped resonator (menthak) is carved from wood and the open face is covered in parchment (babat) made of buffalo intestine. The back is dressed with decorative cloth (dodot) and inside the resonator is a vertical metal post. This extends through holes in the top and bottom of the menthak and held firmly in place by mounts made of wood above and below the resonator. Above the smooth neck (watangan) is a hollow and ornately decorated peg box where the tuning pegs are inserted. The instrument is completed with a final piece of ornamental wood. A single piece of copper wire is placed in such as to create two playing strings (kawat). One end of the wire is wrapped around one of pegs in the pegbox. It emerges through a hole at the top of the neck and is tightly wound a few times and run down the instrument to the other side. A high bridge (srenten) is inserted between the resonator’s soundboard and strings. (See Figure 2-4) The back of the body consists of a part of a cocoa-nut shell and is perforated with nine small soundholes placed in the figure of a cross.

The rebab is the earliest instrument played with a bow. When the Saracens settled in Spain in the beginning of the eigth century, we see the bowed instrument introduced around 720.\textsuperscript{15} It was not a popular instrument when it first was discovered and it has only gradually obtained popular favor. String instruments were used

\textsuperscript{14} \textit{Rebab according to Encyclopedia Britannica 1911. Musiques arabes.} 2011
\textsuperscript{15} Engel, Carl. \textit{Researchers into the Early History of the Violin Family.} Novello, Ewer and Co. London. Print
to mainly accompany vocal music, so the harp or lyre were more suitable than an instrument played with the bow. The latter’s job would be no more than keeping the singer in tune and providing a drone accompaniment. From Java, the rebab traveled all over the world, and each nation had their own version of the spike fiddle. It was the most popular in the Arab cultures in Afghanistan and Persia. There is an interesting theory as to how the rebab and its family came into Europe. Musical historians have asserted that the Crusaders introduced certain oriental instruments into Europe. At the time, from about the end of the 11th century to the end of the 12th the Arabic instruments, including the rebab were no longer new in Europe and the Crusaders saw only Arabic instruments with the Mohammedans. (Engel,79) The rebab had a tremendous influence on European culture and this can be seen with the rebec.

Rebec

The form of the rebab that became popular in Europe is known as the rebec. This is close relative of the violin. It is a late medieval and renaissance gut string bowed instrument with three strings, carved from a solid piece of wood. It has a very nasal quality, unlike the violin. It consists of a fretless neck, curved bridge and a soundboard carved to have a gentle upward curve. It most likely derived from two different instruments, the lira and rebab. The bow became popular when the rebab and lira didn’t meet the tonal expectations of the Europeans. In order to change the sound quality, musicians experimented with the bow, resulting in the rebec.

A favorite among the lower class, the rebec was widely used in village dances and outdoor gatherings. When the early violin came into play, the rebec lost its popularity, but there are many characteristics of the violin that can be seen in its predecessor. For example, many structural characteristics are almost identical to the violin, such as the connected neck, four strings, tailpiece and two small round sound holes. (See Figure 2-5) While there are many methods of attaching the
strings to the rebec, a tailpiece similar to the violin became standard and the scroll was used exclusively. The rebec was abandoned because certain traits of the structure created a shrill sound and poor tone. In its place rose the violin with its sweet and melodic sound. Still there is no denying the rebec influenced the development of the violin.

Through the rebab we see the European influence of the rebec and through the latter we see the modern day violin in all its glory. Each instrument contributed a part to the history of a magnificent instrument, creating a masterpiece to live on for years to come.

(Figure 2-5) Rebec
http://awesomemiddleageshastings.weebly.com/medieval-music
CHAPTER 3: BOWED INSTRUMENTS OF SOUTH, CENTRAL AND
WEST ASIA

The regions of South, Central and West Asia are interconnected by a tremendous number of musical traditions. With the exception of Tibet, they are all regions where Islam is quite prominent. One of the primary features of the music across this expansion from North India to Turkey is the tendency towards combination and synthesis of styles. For instance, this can be seen as early as the tenth century with the story of singer Ibn Bajja. Based in Mecca, it was said through his travels he had acquired am astonishing fluency in a variety of vocal and instrumental repertoires. These included tunes of Byzantium, eight mode system of Syria, provincial songs from Persia, and the music of the Persian barbat lute. (Clark,103)

It is not always easy to sort out the routes of the many mutual influences that took place in this broad area. This is especially true when it comes into play among the Iranian, Turkish and Arab art-music of West Asia. For centuries, the musicians of West Asia haven proven to be exceedingly flexible, drawing on resources of their neighboring cultures to help with the demand for musical change. This is also true in regards to instruments. There are Turkish and Arabian versions of Iranian instruments as well as Iranian and Arabian versions of Turkish instruments. Each seem to take bits and pieces from each culture, mesh them together and call it their own.

As it known, West Asia is the birthplace of three major religions, Christianity, Judaism and Islam. Henceforth, music plays a crucial role in religion. Musical instruments sometimes have a relationship to sacred music with its main focus on the voice as its means of communication. This is quite true for Islam. The chanting of the Koran is viewed as “reading” of the sacred text and not as music. The same goes for prayer; five times every day from the minaret, which can be very
elaborate, but is still not considered musical. Before the 20th century, some Islamic devotional practices were accompanied by instruments such as drums and winds.

Regardless of Islam, music has traditionally been an important part of festivals such as weddings, and for own entertainment. Folk music traditions tend to have strong regional identities, especially in West Asia and the classical music traditions are highly valued, since they represent refinement and nobility. Improvisation is a major part of music, especially in India and Turkey and even beyond North Africa. Just as musicians have adapted new styles and instruments from their neighboring cultures, so must they be flued in the process of making such music.

India

The Indian subcontinent-bordered by moutains ranges on the norhteeast and northwest and the Indian ocean on the southwest and southeast- is by far one of the most densely populated regions on earth. Its cultural and muscular traditions date back thousands of years. Indian society itself is complex and diverse, being home to several languages, and is home to a caste system. This allows for different cultural groups to retain their identity and still exist together. Several muscular traditions are caste specific, such as the use of the pungi double clarinet performed by the snake charming class. Also, musicians are mainly men.

The dominant religions of India are Hinduism and Islam. Hinduism is now specific to South Asia and Islam was first introduced to the area by West and Central Asian invaders during the second millenium A.D. Ritual and ceremonial music are abundant in India, although some ritual music is not actually considered music but an aspect of ritual practice. Many regional styles also exist: devotional songs are in many Indian languages and found in Hindu cults.

In general, the music of South Asia is more similar to West Asia than to areas to the east. The prevalence of plucked string instruments is an extremely important connection. Indian art-
music is also highly developed and has a strong basis in indigenous music theory and transmitted by oral tradition. (Clark, 107) Since there is a strong emphasis on the art of the soloist, ensembles are small, with only a few players. This makes the performances more intimate, intended for only a few listeners.

There are two categories of Indian classical music. In North India, there is the Hindustani tradition and in the South, the Karnatic. Hindustani music reflects many influences of traditions of West Asia like Arabic and Persian music. On the other hand, Karnatic music is largely unaffected. The division was brought about by the assimilation of Islam into India, which was an influence in the north that brought many instruments from West Asia. The art music of the two classical musics for the most part are improvised according to the traditional modal structures called *raga* and rhythmic structures called *tala*. *Raga* is a form of musical scale with a series of intervals unique to the given *raga*. The ascending and descending forms of the scale vary and it is not defined only by selection of musical pitches but also by the associations with certain emotion and with a time of day or seasons of the year. (Clark, 108) *Tala* is a cyclical temporal structure with a certain number of beats, similar the Western notion of meter.

For many Western listeners, the music of India is most familiar among Asian music. Quite a lot of influences of Indian music have found their way into popular Western music of the 1960s-such as the Beatles. Some principles that are in Indian music are shared by Western music, such as melodic development, rhythmic tension, and the underlying arch form. As stated, melodic development is largely improvised. The Indian tradition is extremely rich in string instruments, both bowed and plucked. From a visual perspective, Indian instruments are among the most sumptuously decorated in all of Asia. String instruments take pride in their ornamental beauty, with intricate inlay reminiscent of the pattern of Indian architecture design. (Clark, 109)
Sarangi Family

The bowing instruments of India have a very rich and old tradition. In folk and tribal music, various versions are found in different regions. Some of them come very close to the classical sarangi in regards to shape, construction and playing techniques, providing evidence that the classical sarangi was developed from these folk instruments. In both Hindustani and folk music, the sanagi is the only instrument that comes close to imitating the human voice. What is remarkable is that although there are many styles, the time and place of origin for the sarangi have not been established.

The sarangi is the only instrument capable of producing almost all the nuances of vocal music of any style, with exact embellishments and intonations. This is one reason why the instrument has remained in close association with vocal music. It is very rich in tonal texture and techniques, but was not able to find a prominent place in classical music. One reason was due to its association with dancing and singing girls of the lower castes. For these performances, the main attraction was the dancer or singer, so no matter how accomplished a musician was, the sarangi player always remained in the background. While his expectations remained high, his compensation and and social statues remained low. In the later half of the 19th century and 20th century, the harmonium and violin emerged as alternatives to the sarangi, as they were easier to handle, causing the instruments and its players to become endangered species.

Often the length of the sarangi varies between 2 ft to 2.25 ft, 6 in wide an 4.2 in high. It is hollowed out and carved from a single piece of tun, teak or mango wood. It is well seasons for at least a year before being constructed. The belly pasli is hollowed in front while the neck chhali and head magaz are hollowed from the back. Therefore it consists of three main parts: the body, neck and peg box. The shape is irregular, the waist being deeper on the left side than the right. The sound box is covered with young goat skin glued around the rim. The bridge ghurach is placed in the middle of the parchment and supported by a leather belt tasma which is nailed to the sides of the belly. Inserted in the chhali on the right side are three rows of small pegs khuni made of shisham wood for the sympathetic strings. The two back rows of fifteen pegs are for tuning the main set of sympathetic strings tied diagonally on the neck under the three main strings. The front row of nine pegs is connected to the right set of strings which runs vertically down the right side of the neck. The resonance strings attached to the eleven front row pegs mounted on the upper peg box in the targahan upper nut and stretched over two small bridges called aankh. (See Figure 3-1)

The playing strings are usually made of gut, such as goat intestine. Several guts are wound together to make one thick string. Each string has a specific name: the first is sur, the middle pancham and the third lowest kharaj. The sarangi has three bridges and two nuts, one for the upper strings the other for the main playing strings. Either are made of ivory or
stag horn. The main bridge can be designed in the shape of an elephant. The three main strings pass over the bridge whereas the sympathetic strings pass through small holes drilled into the bridge. The bow \textit{gaj} is curved and is a considerable from the hair compared to the violin bow. In the past, the stick has been composed of ebony which is very hard and heavy. Now, \textit{shissham} is used since players want a lighter bow. The horse hair is around 22 in long. Rosin must be applied and a piece is always close at hand, even beign stored in the hollow top of the instrument. A tuning handle is placed at the end of the bow to tighten or loosen the bow hair.

Tuning is complex. For the upper eleven tarab strings, they are tuned to the main raga to be played, the fifteen left side tarabs are tuned to chromatic scales and the last nine are tuned to important notes being played. The pitch of the instrument is C sharp, but in performance, musicians prefer to tune it to an F or F sharp. In performance, the player sits legs crossed and keeps the instrument in front of his chest. Bowing is crucial as is synchronization of bowing with left hand technique. Unlike other bowed instruments, mostly three fingers are used and the sound is produced by the contact of the string and the fingernail instead of the fingertips.

\textbf{Sindhī sāraṅgī}

The \textit{sarangi} is incredible as the only indigenous bowed string instrument of Indian art music and the only classical instrument that remains in the hands of hereditary professional musicians.\textsuperscript{17} It is the most celebrated instrument of Hindustani tradition and is usually carved from a single block of wood. It is found in both classical and folk music in northwestern India Rajasthan. While there are several varieties of the \textit{sarangi}, the \textit{sindhi sarangi} fuddle is the main instrument of the Langa people of the area.

Historically, it is not until the 19th century that the *sindhi sarangi* as it exists now gets its prominence. It is the favorite for accompanying of both Khayal and Thumri concerts of India. While there are three bowed strings made of usually goat gut on the classical instrument, the *sindhi sarangi* has two gut and two wire strings. Additionally, sympathetic wire strings are used in great quantity on all *sarangi*, which contributes to ethereal shimmer in the instrument’s tone. (Clark, 114) Most often there are thirty six strings on the classical *sarangi* and twenty four on the *sindi sarangi*. The instrument has four main strings, three of gut and one wire. 13 *jharas* or sympathetic strings run parallel to the bridge and are placed below the main ones. A horsehair bow presses on the bowed strings with the left hand of the player to actually shorten the vibrating length of the strings on the fretless fingerboard.

The instrument is a piece of artwork. It is attractively inlaid with ivory and incredible intricate design (See Figure 3-2) The tuning pegs are placed in two rows along the side of the instrument. the strings pass through the holes in the small ivory fish designs engraved in the wooden body. The underside of the neck is open to allow for easy restringing. The head of the instrument is usually used to store wax or resin for the bow.

Originally a folk musical instrument, there are references that indicate that the *sindi sarangi* has been used in classical music from the 17th century onwards. In the 19th century it was also used to accompany dance performances and for vocal performances. It is usually accompanied by a drone instrument called a *tambura* and a drum. As the *sindi sarangi* has

(Figure 3-2) Sindhi Sarangi
a higher pitch than the classical *sarangi*, the player may accompany himself, singing at the top of his vocal range. He could also be joined by another musician playing the *gujratan sarangi*, which has a drone like function.

**Mayuri fiddle**

The national bird of India is the Peacock. According to the Bible, the peacock was one of the commodities India exported to the Holy Land in ancient times. There is no question that the peacock has scored a place in Indian society, as it is the perfect specimen of the culture. Most of the music, dance and art of India are associated with the peacock. In music sometimes it is the essential part of melody, while other times it is just a, “simple domesticated bird perched on the terrace or portico.” (Nair, 144) The *taush* or *mayuri fiddle*, is a sitar like bowed instrument named for its peacock-like resonator. More recently developed than the *sarangi*, the *mayuri* enjoyed popularity in 19th century, but is now obsolete. The instrument can be designed with feet, which lets it rest horizontally in a position almost exact of an actual peacock with its feathers folded. (See Figure 3-3) It is decorated with real peacock feathers and painted with its features.

Associated with North and Central India, the *mayuri* has specific connections with the Punjab, especially the Sikhs, from where it is said to have been constructed. It is very similar to the

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*dilruba*- a long neck fiddle used to accompany singing and named, “one who captures the heart.” The sound of the *mayuri* is deeply resonant and mellow, very much so in the lower octaves, owed to its large sound chamber. It can have between 28 to 30 strings on the neck with heavy metal frets. The playing technique is similar to instruments of the same family, allowing the musicians to switch between others. Many prefer a technique that is a cross between the *sitar* and the *sarangi*, where the strings are plucked using the index and middle fingers of the left hand while the right handles the bow. It has five wire strings and fifteen sympathetic strings of graduated length. The latter pass through holes in the fingerboard to tuning pegs placed in a piece of wood fastened to the left side of the neck. It is played with an ordinary violin bow.

**Iran**

Alternately known by its traditional name of Persia, Iran is one of the largest countries of West Asia as well as being the center of numerous empires throughout its history. After being conquered by the Muslims in seventh century, it became a part of a series of empires. Iran’s art music tradition has its origins in the imperial court music of ancient Persia. As there is little information regarding the early musical culture, the historical impression is that it was a highly developed art and that musicians were held in high regard. (Clark, 135) After the Arab conquest of Persia and the introduction of Islam in the 600s, Persian music and musicians had a profound influence on music throughout the Islamic world. This can be seen in the large quantity of Arabic musical terms used in the Persian culture.

When Shi’ite Islam became the state religion in 1502, music was seen as frivolous. It became a more private than a public activity, and ensembles were discouraged. But an emphasis on the art of the soloist remained, since Iranian art music is very improvisatory. String instruments such as the *setar* lute and *kamanche* fiddle are the pride of Iran and used in the performance of
music of great subtlety. Metal strings predominate in art music and the effect has been described as one of “shimmering waves of sound.” The compositions of Iranian art music—known as *radif*—are organized into twelve groups and follow a modal system called *maqam* which is defined by a set of pitches that have a certain contour similar to *raga*. When compositions of the same mode are performed, they are arranged in suites, or sequences according to the decision of the performer. Through these suites the performer is able to demonstrate their virtuosity especially in their skill in modulating from one mode to another. The suite form lets for drawing together musical materials from sources, allowing performers to combine music from several cultures on the spot. 

**Music and Islam**

In Islam, music is actually prohibited by the legalists. However, the Qur’an does not forbid music, in fact it often regarded with high honor, for example in religious ceremonies. Many religious leaders patronized the classical musical traditions at court and many Islamic philosophers wrote on musical theory.¹⁹ Islamic music in both North Africa and the Middle East emphasize vocal music in both secular and sacred contexts and the main focus of the instruments to accompany. While there is variety in the music of Islam, religion is the core. Ornamentation and improvisation is key in all four classical areas (Arab, Persian, Turkish and Indian) and are based on series of modes. In practice, most Islamic music does not have notation, but there have been some modern attempts for teaching and preserving aspects of the classical traditions that otherwise might be lost. Instruments in the Islamic world are as diverse as the people and cultures from which they are derived, in both appearance and name. The bowed string instruments, fiddles and spike fiddles, stem from short and long lutes, with bowing having originated in Islamic and Byzantine

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empires 1000 years ago. These are found in a widespread manner, and are used for folk, classical and even to accompany poetry.

**Kamanche**

The *kamanche* is the only traditional bowed instrument of Iranian art music. It is a spike fiddle first documented in Persia around the tenth century. Related spike fiddles are prevalent in Central and West Asia and as far northwest as Georgia. These spike fiddles are characterized by a simple round body pierced by a stick bearing strings that attach to the spike protruding below the body and to the pegs at the upper end of the neck.\(^{20}\) (See Figure 3-4) The strings made of silk, gut or metal are sounded by a horsehair bow and are supported by a bridge which is aligned at a slight angle near the end of the main belly. The highly decorated instrument is embellished by mosaic work classified as *khatam-kari*, which employs minute pieces of bone, metal and stained wood to form beautiful patterns.

The *kamanche* has been established for many centuries in Iran, and is performed both solo and in ensembles. In the latter, it allows for its subtle tone color to blend well with other instruments. When accompanying singers, the *kamanche* follows the melody closely, but not too closely, creating the effect of shadowing the singer, supporting the vocal line while not exactly imitating and adding depth to overall musical end.\(^{20}\) (Clark, 139) In performance, the instrument is played seated on the floor and is rotated side to side which allows for contact with the bow rather than moving the bow along the strings. The

Professor of Music at the University of Guilan in Iran, Mehdi Oloumi has characterized the *kamanche* as, “stable and yet flexible.” It has traveled from one place to another, and has been adapted to suit the geographical, ethnic and cultural conditions of each new location.\(^{21}\) Additionally, it also maintained the special features that distinguish it from other Eastern instruments. The name of the instrument actually comes from its bow. The word consists of two parts “kaman” and “che.” The former means curve and latter a diminutive suffix.\(^{(Oloumi,93)}\) Therefore, it means “small curve” which is the name of the bow.

The first written reference to the *kamanche* dates from 1200 years ago. In the Safavid Dynasty (1501-1736) the instrument was regarded as the most prominent. It was incredibly popular among the folk players that would play the *kamanche* in streets and public places, where it was warmly received. Due to the introduction of the violin in Iran in 1880s, the *kamanche* lost its popularity. Fortunately during the monarchy of the late seconf Pahlavi (1925-1979), via the establishment of a major on Iranian Classical Music at Tehran University, the *kamanche* was revived and reclaimed its former glory.\(^{(Mehdi,94)}\) In modern times, it is among the most popular instruments in Iran and its techniques have progressed extensively throught the years. There are three main types of *kamanche* in Iran; *kamancha*, *tal* and *gheichagh*. Each vary depending on the culture and region.

In Iran, there are two methods to construct the *kamanche*. Either it is made using narrow parts of wood or by one piece of wood. It is usually made of curved wicker from walnut or mulberry trees. For instruments assembled from a singular piece, it is shaped by turning a piece of

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\(^{21}\) Oloumi, Mehdi. *Kamanche, the bowed string instrument of the Orient*. International Journal of Arts and Commerce. www.ijac.org.uk
wood. The outward diameter of the sound box is between 20-22 cm, its sound board, covered by a piece of parchment, is about 9-11 cm. Sheep parchment is used to cover the soundboard on which the bridge is placed and it is stretched to different tensions according to the humidity of the region. The *kamanche* of past Iran had three strings, but the violin contributed to the addition of one more string. The length of the neck is in the range 29-31 cm. At the end of the soundbox is a stand, which is connected to the tailpiece, which allows the player to support the instrument on his or her lap or on a chair while playing.

In terms of the bow, it consists of a piece of wood 60 cm long and is slightly curved outward. It has a leather strap for the musician to hold. The hair of the bow can be adjusted, which creates various subtleties of sound. The sound range is two and a half octaves. The *kamanche* tuning is altered from low to high with a distance of perfect four or fifths, which is changeable according to the piece being played.

**Tal (Lori Kamanche)**

*Tal* emerged from the Lorestan region (western) of Iran. The sound box is a frustum and geometrical in shape. The soundboard is covered by parchment where the bridge and strings are located and other opposite end is left uncovered. For this reason it is known as the “open ended kamancha.” (Medhi,96) Because it is uncovered, the *tal* has a loud sound. It is usually played in open areas like the plains or mountains, so a bigger sound was appropriate for location. It is the most popular instrument for players from Lor, Lak and Bakhtiari regions of Iran and is played both solo and accompanied by singing. Just like the *kamancha*, the *tal* once had three strings but now has four. The range is the same as the *kamancha* and its tuning can be adjusted to fit the performance. (See Figure 3-5)
Gheichagh (Turkmen Sahra Kamanche)

With respect to size, the *gheichagh* is the smallest type of *kamanche*. Hailing from northeastern Iran, the instrument is made from some kind of pumpkin wood or nut, which had a regular shape. The Turkmen Sahra is close to the Caspian Sea, resulting in humid weather, which allowed for an abundance of fruit, so the *gheichagh* was often created from those. Since humidity has little effect on pumpkins, the integrity of the sound box is preserved. Nowadays, the instrument is made by woodturning one piece of wood. Woodturning refers to the craft of using the wood lathe with tools to carve a shape that is symmetrical. This allows for very precise and accurate
results, which are a must for musical instruments. The diameter of the soundboard is 6.5-7 cm and the soundbox 11-12 cm.

The main reason the soundboard is so small is once again attributed to the humidity. The smaller the soundboard the more secure the parchment that covers the instrument. If it is made wider, than high humidity will render the parchment loose so much so that the player will not be able to make sound. The skin of camel heart is more suitable than fish for humid regions and therefore it is used on the gheichagh. It has three strings and its tune cannot be changed during performance. They are tuned at intervals of perfect fourths and its sounding range is two octaves. (See Figure 3-6)

Azerbaijan

It is also rather interesting to note that the kamancha is found in Azerbaijan culture. Here it is called kamancha and its sound box is cone shaped a pointed on one side. The diameter is roughly 20 cm and partly covered by parchment slightly bigger than its Iranian sister. The kamancha, crafted from mulberry or walnut tree wood, is played with a bow made of horse hair. Just like the Iranian kamancha, it consists of a body, neck and spike which protrudes through the end. The neck is shorter and is between 27 cm and 29 cm long. It has four strings tuned to a perfect fifth. The tuning is fixed and its repertories are played with a single tone. The kamancha plays an important role in the music of the country, as the nation’s ensembles most often consist of one, a tar and a singer who is also the tambourine player.
In large scale orchestras, the *kamancha* are soloists, along with the *tar*. The sound is brighter mostly because the parchment on the sound box is tighter and also since a piece of fabric is often placed under the low pitch strings to prevent excessive vibration. (Medhi,99) Fish skin covers the soundboard which is unusual. The instruments are decorated on the neck and sound board with shell and bone. (See Figure 3-7)

The *kamancha* of Azerbaijan is characterized with a, “charming, tender and melodic sound, which has been improved through the centuries and survived till our times.”22 Besides the usual four string, three and five string *kamanchas* also exist. A pearl encrusted three string *kamancha* can be found in the Ethnography Foundation of the Museum of History of Azerbaijan. The uniqueness of this 19th century instrument is that a part of its body is made of a vertical section of wood covered in leather clothing.

Composer Uzeyir Hajibeyov discussed the sound timbre of the *kamancha*, “…Music played by the kamancha is perfect as for the sounding and is closer to the human voice.” It has been noted as the ancient grandfather of the violin, as many scholars believe that the invention of the modern violin followed the influences of the *kamancha*.

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In closing, the *kamanche* has taken on various forms throughout the East and is still in use today. It is able to adapt to new ethnic and environmental characteristics, while still being able to maintain its essential traits which allowed for each player to express themselves in their own way.
CONCLUSION

In this research paper, the development and summation of non western bowed instruments throughout history has been discussed. Additionally, the connection between the non western instruments and the modern violin have been presented.

As new materials became available and times changed, so did bowed instruments. Prior to the violin as we know today, most Non western bowed instruments were used in religious ceremonies, festivals and for entertainment. Additionally, they were used to expand the palate of sound and create melody similar to the human voice.

Each country was influenced by one another, while still maintaining their own specific characteristics to make it their own. Bowed instruments seemed to have originated in the Middle East/Central Asia-regions of the world that share countless overlapping ties-which then spread to the West. With the Chinese huqin family as the model, each nation took qualities from the instruments and added parts to change the tone and increase either volume or timbre. Amazingly, all bowed string instruments of the East are bowed upright, and it is only in the European countries that a vertical rather than horizontal performance style is practiced.

Through this Eastern journey, we have seen the growth and expansion of the violin. As society advanced, so did the violin. As we have progressed through time, string instruments began to use the bow to create a more singing quality. The implementation of the bow became popular in the 18th century, but was already used by the Eastern versions of string instruments. The development of the modern violin was gradual and complex, having a long history in folk music, but became more standardized after it went to court.

The violin is a instrument that has withstood the test of time. Beginning with the Chinese erhu, the violin idea was constantly remodeled and built upon by innovators for centuries. Whether
it was a time of rejoicing, sorrow or religious feasts, the violin and its eastern ancestors have captured the heart and soul of thousands. There is no doubt in my mind that the violin will continue to live on, impacting lives and creating music till the end of time.
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