

Review of Transformation of Iranian Sistan Gheychak and Baluchistan Gheychak from a Developmental and Modal (Maqam) Perspective

Abstract

In recent years, many efforts have been made to compare types of Gheychak in the province of Sistan and Baluchistan. This present article aims to compare the apparent and modal forms of this musical instrument in two local regions. This study seeks to answer the following questions: 1. What are the musical developmental and modal principles of the instrument of Gheychak in both Sistan and Baluchistan? 2. What is the playing of these two instruments characterized by? There are two types of Gheychak in the province of Sistan and Baluchistan. This study is descriptive-analytical and gathers data via library sources. Studies have suggested that the Sistan and Baluchistan Gheychaks have transformed over time with the transfer of this musical instrument to key Iranian music centers, decorative work by the local people on the instrument, including mirror work, elimination, and changes made to the size and its development. Today, we are witnessing the presence of Gheychak in traditional and hybrid music groups; meanwhile, with disregard for local originality, the Sistan's Gheychaks are, to some extent, similar to the Baluchi Gheychak in appearance and component characteristics; however, its developmental components and the way it is played are simpler and easier than the Baluchistan's Gheychak. With Robab (also a musical instrument) gradually being forgotten, Gheychak is the only stringed instrument of the Sistan region and the most important one used to enrich the songs of this region. Notably, this instrument is taller and slimmer than its Baluchi counterpart.

Keywords: *Sistan Gheychak, Baluchistan Gheychak, Arsheh, Local music, modal*

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Introduction

Music refers to any tone or sound that is heard and pleasant and causes a man or living creature to transform. Music is an expression of human feelings through sounds; it is an art that has tone and stillness. The word music is derived from the Greek word of *Mousika*, originally coming from *Muse* which was the name of the goddess of poetry, literature, and music in ancient Greece. In Arabic, the word *music* is pronounced *Musighi* which is also Greek. Since the reign of Mansour, the Abbasid caliph, attention was directed at Greek works, and then, in the reign of Haroun, the fifth Abbasid caliph, this endeavor reached its peak with the foundation of the Beit Al-Hekma. It was in this era that the word music prevailed and gradually replaced the Arabic songs.

For two thousand years now, the word "muse" served as the basis of the word "music", denoting the art of music or just "music". Even though music is as old as human history, it found its forum, meaning, and status since then. By definition, it refers to the expression of human feelings and thinking that tells of his inner states. Hearing a pleasant and comforting song can relieve man from daily pains.

Documents reveal that the word music and its synonyms are also reported in the Kharazmi's *Mafatih Al-Uloom* and *Akhavan Al-Safa Music Treatise* which both belong to the 11th century. Defining music, Kharazmi says: "Music denotes bonding of songs. In simple terms, music or musical sounds are pleasant sounds which humans rejoice upon hearing them". As the level of culture and art improved, pleasant sounds refer to sounds that follow a special rhythm and establish certain

regularities among them. For this, numbers in music are significant.

Defining this art, Abu Alisina says: "Music is a branch of knowledge which involves the qualities of mildness, discordance and time workings of the songs so that it is determined how a tone should be composed". In Ehsa' Al-Uloom, Abu Nasr Farabi defines music to be the knowledge of identifying tones that includes two types of knowledge: one is practical music and the other is theoretical. This classification still goes strong in modern times.

Gheychak (Ghizhak or Ghazhak) is a local instrument that has gained attention in recent years. Gheychak is a local musical instrument of Sistan and Baluchistan province, made differently in the two northern (Sistan) and southern (Baluchistan) parts of the province. These two different instruments have distinct specifications. In the local language of Baluchistan, Gheychak denotes a song that is highly popular among the people who sometimes use it as a cure for illnesses. As stated, the present research studies the transforming trend of Gheychak in Sistan and Gheychak in Baluchistan from a developmental and modal point of view.

Theoretical Foundations of the Research Sistan's Gheychak

Modern urban Gheychak uses Western instrument techniques and is made based on Soprano and Alto which, the most significant reason for it, has been to eliminate the shortages of stringed instruments in the traditional Iranian music repertoire. This instrument was used since the early 1970s in most traditional Iranian musical orchestras, which is ongoing. The inner side of the instrument is made of two separate parts, with

the lower part being smaller and semicircle, where the skin is stretched onto the frontal surface, and the bridge is laid over the skin. The upper part is larger laid over the lower part, both connected from the rear by a curved surface; thus, forming two cavities in the frontal lower side. The frontal upper part, except for the middle part laid under the neck of the instrument with

the other half above, is connected to the machine heads. The top side is composed of a small machine head (the place where four machine heads are installed, with two machine heads on one end of it) and a curved-shaped horizontal appendage leaning backward to hook the instrument (Akati, 2016:35).



Figure 1: Structural View of Gheychak (Iranian Arcopolo site)

As figure1 The Gheychak's (resonant) bowl is voluminous that has two large recesses on both ends, turning it into two smaller and larger parts. Part of it connects the bowl to the machine heads on which two heads stand. The other part is an empty bowl of wood laid on the instrumental handle where the heads are installed on both ends. The wooden part head is located on both ends of the top in the form of hobnails which tune the strings.

The wooden part nut is low-rise and narrows the size of the instrument's hand that lays between the top and the handle, which through the tracks, the strings pass through and move to the heads. The bridge is a solid wooden part with two small bases laid onto the skin on which wires pass.

Strings are narrow metallic threads used to produce sound in the instrument. A tailpiece (string clipper) is installed at the end of the body beneath the bowl, with which the knotted end of the string is tied. The bow (arsheh which translates to stick) is made of horse's hair and of wood which vibrates the strings and produces sound as it is stretched on the strings. Kakol (the crown) is the end part of the Gheychak handle which is almost hook-shaped. Takht (plate) is the wooden part laid on the mouth of the Gheychak which transfers the sound from the bridge to the resonant bowl.

1. Characteristics of Sistan's Gheychak

The wood used is better to be from mulberry in the cold regions, because it is softer and has fewer cellular densities compared to the mulberry of tropical regions. Thus, it is more suited to make the bowl. However, stronger woods such as walnut wood are used to make the bowl. Woods of high special weight (compressed and heavy woods) causes a treble sound, while woods of low special weight (hollow and less-compressed woods) cause bass sounds in the instrument.

Mulberry wood must be fresh, without knots, and have straight vascular streaks. If the vascular streaks are straight and close to each other, a pitch sound is produced, but if the streaks are straight, but not so close to each other, a treble sound is produced (Akati, 2016:21). To make Gheychak in Sistan, the skin of young goats and deer is used. Unlike the Gheychak of Baluchistan which imitates the Chabahar's launches, the overall Gheychak design in Sistan is more stretched and narrower than can be compared to the Totans (local boats) of Hamoun River.

2. Characteristics of Sistan's Gheychak components

Like other Gheychaks, the Sistan's Gheychak bowl is made of two independent parts which are more stretched and narrower; the lower part, known in Sistan as skin coverer, is smaller and semi-circle, that is stretched on the frontal surface, and the bridge is also laid over the skin. The upper part is larger and takes an umbrella form laid on the lower part; these two parts are connected by a curved surface known as Damagh or Khazaneh, thus forming two cavities on the front or between the two parts.

The Gheychak's handle is made of the wood used in the body. The handle is made of wood cut into one single piece covering the whole body. The Takht (plate) is made of mulberry of Grilled fish form, which has several geometric cross-shaped cavities and holes and is laid on the instrument's chest, i.e., on the mouth of the large part of the bowl.

The top or Sarpanjeh which is made of a single piece with the body is a small and hollow box that stands at the beginning along with the handle, holding space for ten heads on each end. The Sistan's Gheychak heads stand in a hobnail form on both ends. This type of Gheychak has 12 heads, ten of which are mounted on the top and two on the handle.

3. Preparation of wood and peripheral cutting

The pre-prepared model is placed on an unfissured and unknotted, same-color with straight vascular streaks of the mulberry piece of wood in a rectangular 1-1-4 form of at least 24 cm wide, 80 cm long, and 19-20 cm high. Both sides of the wood are lined, and an ax is used to carefully cut the extra margins of the outer body part, first from the frontal side and then from a lateral side. In the later stage, the outer part of the bowl is straightened by a chipper and a file to form the intended shape, and the bowl is made ready for the emptying of the interior part.

In the emptying stage of the inside of the bowl, when parts of the instrument's body take shape, a blade is used to first empty the larger part of the bowl, and then a larger blade is used to cut deeper into the depth of the bowl.

Later, a peeler or small blade is used to cut the smaller part of the bowl, as the peeler should be used in an oblique form to prevent the breaking of the bowl when emptying the middle part of the two small and large sections of the bowl (because it is oblique). To increase the strength, the section connected to the handle and the end of the bowl, i.e., where the tailpiece is installed, must be made thicker than other sections.

Then, the components on the handle, including the sarpanjeh (top) and crown are sawed and furnished, while the lower part of the handle is cut into a semi-circle so that the player can easily change hands when taking the strings. Upon making the sarpanjeh on the body, a cavity of 8 cm deep, 9 cm long, and 4.5cm wide is made by a chisel. To install 5 heads on either side of the sarpanjeh, 10 holes are made by a drill, because the heads are larger and pass through the other sides, too. Thus, the holes on either side must be opposite each other. Then, two more holes are created on the handle for the smaller heads to get lodged in the holes. Using an electric drill, the holes in the place where the heads pass through are shaped like a cone cane so that the heads are lodged more firmly in the holes.

Fully dried Mulberry wood is used to make the takht (plate). To this aim, the wood is cut in proportional to the dimensions of the bowl around 10 cm thick. However, the final furnishing dimensions must correspond to the specifications shown in Table 1 & 2. The bowl edges are placed on the plate as a pattern, and its periphery is lined while its extra margins are carefully cut off by a jigsaw. The plate's thickness must be around 6-10 cm after the final furnishing. The more the thickness of the plate, it produces treble sound, and the less the thickness, the sound will be bass.

First, the beginning part of the handle is made proportional to the width of the handle, and the pate is cut from the middle using a chisel. The cut section is separated to get lodged in the handle. In this stage, the edges of the bowl are immersed with adhesive, and the plate is placed on those edges to get firmer.

In the furnishing and decorating the body stage, a file and sandpaper are used to furnish the outer surface of the instrument. Then, the decorative work on the body of the Gheychak is engraved with metal pens. Sistan's Gheychak should not have the visible defects as follows:

- A) non-uniformity on the body surface;
- B) Asymmetrical body structure;
- C) Cracks or rot in the wood of the body;
- D) Failure to furnish the edges and
- E) Breakages or cracks in any of the components of the Gheychak.

Baluchistan's Gheychak

Baluchistan's Gheychak (Ghazhak) is an Iranian instrument that falls under Arsheh instruments (i.e., instruments with bows) made of wood, skin, and metal. This musical instrument can be used as solo and ensemble. This instrument is used in different regions of Baluchistan. Gheychak denotes a *song* in the local language.

1. Components used for the Baluchi Gheychak

The selected wood should not be too dry or too wet; rather it should be moist to some extent. If the wood is too dry, it will be not only hard to peel it down, but also any impact on the bowl could cause it to break down when the bowl is in the final stages. If the wood is too wet, when the peeling down process is finished, the constructed body rapidly begins to get dry, thus more likely to cause the bowl to title and lose its final form. It may also impact other parts of the body.

To make the body of the Gheychak, an unknotted piece of wood with straight vascular streaks of mulberry is cut down. This piece of wood is a rectangle of 24 cm wide, 60 cm long, and 19-20 cm high. The trunk should be so cut that the prepared rectangle does not have any cork tissues or the central section of the trunk, so that the body, especially the bowl is made without cracks but with the same color. If the diameter of the trunk is not as the size intended or is not cut properly, it will be more likely to see fissures at the lower end of the bowl, i.e., where the tailpiece is installed, or cork tissues in the depth and center of the bowl; meanwhile, considering the different colors of this section contrast to the main tissue and lack of integrity in the said section, the bowl becomes two colored and its acoustic quality is reduced.

The pre-prepared pattern is placed on the rectangular cubic piece and is lined, then, an ax is used to carefully cut the extra margins of the outer part of the bowl.



Figure 2: Cutting the outer part of the Kuempba (Photo by the author)

The surrounding the peripheral lines above the Gheychak, i.e., the handle to the crown is cut in a rectangular cubic form so that the crown, Jagougi, and the neck are carved out following the emptying of the inside of the bowl. Then, the outer part of the bowl is furbished with a chipper and a file to create the form intended and to empty the interior side of the bowl.

In the bowl-emptying stage, a wood peeler is used to first empty the larger bowl (Figures 2). Wood peeler has different sizes, at every stage of emptying, as the depth of the bowl increases, the wood peeler or an ax should be used. In the beginning, a peeler or an ax of medium size is used, while a larger ax or peelers are used for deeper layers.

Later, to empty the smaller part of the bowl, a peeler or a small blade is used, as the peeler should be used in an oblique form in order to prevent the breaking of the bowl when emptying the middle part of the two small and large sections of the bowl (because it is oblique). The act of emptying the inside of the bowl continues until, in proportion to the type of the wood, the

bowl's thickness measures 10-15 mm in a moist state before the final drying and furbishing. To increase the strength, the section connected to the handle and the end of the bowl, i.e., where the tailpiece is installed, must be made thicker. The length, width, and depth of the bowl should be so adjusted to maintain the apparent form proportions.

The rectangular cubic considered at the end of the bowl for the Gheychak's handle is laid on the ground, and the lateral view pattern and crown of the Gheychak are outlined on the rectangle's cross-section. Then, extra areas are sawed and chiseled which form the handle and components on the handle (Figure 65-3). The width of the handle at the section where it connects to the neck of the bowl measures 6 mm, but as it approaches the top of the instrument, it measures 7-8 mm, i.e., the tip of the crown. It may also measure 6 mm equally. The lower section of the handle is carved semi-circle so that the player can easily change hands when taking the strings.



Figure 3: Formation of the components on the handle (Photo by the author)

Following the making of the Jagougi on the instrument's body, a cavity of 8 mm deep, 8 mm long, and 4 mm wide is created by a chisel (Figure 3). Using a drill, 10 holes are created on the Jagougi with four big holes made for four larger heads; i.e., two holes on either side. These four holes must be fully opposite each other, as holes for smaller heads are created on either side so that the heads are lodged firmly in those holes.

To make the plate, the fully dried mulberry wood is used. The wood used for the plate must be without knots, and have a straight and paralleled vascular streak. For this, the wood is cut

in proportion to the bowl's dimensions of 10 mm thick. Here, the wood's vascular streaks are along with the handle. The wood prepared must be kept at a dry place until the stage of cutting and plate furbishing. The bowl's edge is placed on the plate as a pattern and has its surroundings lined and has its extra margined sawed with a jigsaw.

When the plate is connected to the Kuempba using the chisel, the beginning section of the handle is cut in proportion to the width of the handle. At this stage, the Kuempba edges are immersed with adhesive, and the plate is placed on the

kuempba edge. This process continues for a while until they stick together. Decorative work on the instrument is made by carving, while, at some times, partial embellishments are added to it. The decorations, if added unduly, could reduce the quality of the instrument.

Research Methods

Table 1: Physical characteristics of Sistan’s Gheychak

| Gheychak components | Dimensions | Location |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Bowl | 43-45 cm in length Width of the small part (12-13 cm) Width of the small part (18-22 cm) Depth (16-18) Khazaneh diameter (the arch between two parts of the bowl (12-13 cm | Gheychak’s lower part |
| Handle | The total length of the handle from the where it is connected to the bowl until the tip of the crown (30 cm) From where the handle is connected to the bowl until the nut 8)cm(Width in the nut (5-6cm) | On the bowl |
| Takht (plate) | The length is about 18 cm equal to the length of the large part of the bowl plus 4 cm that is placed on the handle The width in the wider part is about 13 cm The width in the middle is 11 cm | Middle of the large part of the bowl |
| Heads | The length of large heads is 12 cm The length of small heads is 10 cm | |
| Strings | Length from the tailpiece to the heads Diameter of the strings from 18μ to 22μ | From the heads to the tailpiece |
| Bridge | The length is about four to three and a half cm The height is one and a half cm Diameter about is 2 mm to 3 mm | On the skin |
| Kakol (crown) | Height is 16 cm and width is 6cm | The end part of the Gheychak’s handle |
| Top (Sarpanjeh) | The Interior cavity width is cm4 The length of the interior cavity is about 10 cm The thickness of the walls is about 8 mm to 10 mm | Between the nut and the crown |

This study falls under theoretical research. The research method is descriptive-analytical. Research data were gathered by the library method and includes books, articles, and credible electronic sites.

Findings

Table 2: Physical characteristics of Baluchistan’s Gheychak

| Gheychak components | Dimensions | Location |
|---------------------|------------|----------|
|---------------------|------------|----------|

| | | |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Kuemp (bowl) | The length is 32 cm to 33 cm The width of the small section is 12 cm to 13 cm The width of large section is 21 cm to 22 cm The depth is 16 cm to 17 cm The diameter of the arch between the two parts of the bowl is 11 cm to 12 cm | Lower part of the Gheychak |
| Neck (handle) | The total length of the handle from where it is connected to the bowl until the crown is about 21 cm From where the handle is connected to the bowl until the nut is about 7 cm The width at the place of the nut is about 5 cm and at the place of connection to the bowl is about 6 | On the bowl |
| Dalouk (plate) | The length is equal to the length of the large part of the bowl plus 4 cm that is placed on the handle The width in the wider part is about 10 cm The width in the middle is 5 cm which is 7 cm with the addition of the congresses | Middle of the large part of the bowl |
| Gough (heads) | The length of large heads is about 15 cm The length of small heads is about 5 cm | On the Jagougi |
| Strings | Length from the tailpiece to the heads The diameter of metal string is 18 μ to μ 22 | Between the Jagougi until the tailpiece on the nut and the bridge |
| Bridge | Length is about three and a half cm Height is one and a half cm Diameter is about 2 mm to 3 mm | On the skin |
| Crown | The height is about 16 cm and the width of the connecting section is about 6 cm and the tip is about 8 cm | Top of the Gheychak |
| Jagougi | The width of the interior cavity is 4 cm to 5 cm The length of the interior cavity is about 8 cm The thickness of the walls is about 8 mm to 10 mm | Between the nut and the crown |

Since Sistan's Gheychak is made similar to Totan boats and produces relatively treble sounds, compared to Blauchistan's Gheychak, it is most of the time used as a melodic instrument; conversely, the Baluchistan's Gheychak is similar to a launch and is shorter than its Sistan's counterpart. It is mostly played by a singer and answers the song.

Modals played by the Sistan's Gheychak are mostly adopted from the southern Khorasan and the neighboring country of Afghanistan. These models have also affected the type of melodies and songs selected by composers of Sistan. Also, the selection of the rhythm in playing Gheychak is complicated (i.e., combines two or several fractions of a simple level). Baluchi models are also affected by those of the neighboring country of Pakistan. Also, the type of string configuration, type of the bow, and playing dynamism are inspired by Pakistan and India's music. Most of Baluchistan's Gheychak playing is simple while some others are complicated.

The type of wood selected for the Gheychak instrument is affected by the climate of the regions. In Sistan and Baluchistan where mulberry trees are abundant, Gheychak is mainly made from those trees, while walnut trees are seldom used. However, the wood used for the Baluchistan Gheychaks is Bunge which is similar to the walnut tree. This tree has straight vascular streaks. Both Gheychaks of Sistan and Baluchistan use the skin of young goats or deer. The genus of the strings used in the instruments is similar and involves alloys of brass and steel. The genus of the wooden plate on Sistan's Gheychak is the same wood used for the making of the Baluchi Gheychak, which is mulberry.

The genus of the wooden plate on the Baluchi Gheychak is from mulberry. In Sistan's Gheychak, 12 strings are used which are all made of steel. Unlike the Baluchi Gheychak where sheep's gut is used, the Sistan's Gheychak has no such string. The length and stretching of the strings in Sistan's Gheychak are longer than those of the Blauchi counterpart. Decoration on the Sistan's Gheychak is in the form of carving,

while the Blauchi Gheychak uses small colored objects and colored flakes, in addition to wooden parts.

Conclusion

The modals played by the Sistan's Gheychak have sometimes been inspired by Southern Khorasan and Afghanistan. Baluchi music models are also similar to those of Pakistan's culture (these countries were once part of Iran). In Baluchistan's Gheychak music, we have more independence in tone and rhythm, and the dynamism of this instrument as a melodic instrument in answering the songs and the creation of new tones is noticeable. Due to the recent drought in the country, the wood used to make the Gheychak is imported from the neighboring country and the northern parts of our country; however, in both Sistan and Baluchestan, Gheychak is mainly made of mulberry. Walnut and hives trees are rarely used to make these instruments. The dimensions of the Gheychak change by the factors ordered by the customer. The apparent forms used to decorate the instrument, such as the crown, the outer part of the bowl and the heads also change in color and shape consistent with the customer's taste and order.

In Baluchistan's music, most of the models include epic, etc.; however, in Baluchistan, the songs are played for celebrations. Baluchi musical rhythms are more dynamic and diverse. In Sistan's music. However, the rhythm is uniform and continued. Because fewer sources have reported the music in the province of Sistan and Baluchistan, this study can be a prelude to research for other research about the instrument of Gheychak. The right-handed playing manner for playing Gheychak is common in both Sistan and Baluchistan; however, the role of the left hand in Blauchistan's Gheychak is due to the extra string and shorter length of the handle compared to Sistan's Gheychak which has fewer strings because of the taller handle. Both instruments have several strings to produce resonance which is shared by the two Gheychaks.

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Conflict of interest

None.

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Ethics statement

None

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