Khöömei:
The Art of Tuvan Throat-Singing

by Matt Finlay
This book uses two typefaces: Futura for titles and Adobe Caslon Pro for body type. Futura is a geometric sans serif typeface designed by Paul Renner in 1927. It is often considered representative of the Bauhaus design movement. Adobe Caslon Pro is a serif typeface designed in 1990 by Carol Twombly, and is based on specimen pages produced by William Caslon I between 1734 and 1770. Illustrations in this book were produced by Matt Finlay.

Table of Contents

4. Introduction to Tuvan Throat-Singing
7. Sygyt The High-Pitched Whistle
8. Khöömei The Moderate Style
11. Kargyraa The Low-Pitched Moan
12. Additive Styles Ezenggileer & Borbangnadyr
14. Other Tuvan Instruments & Conclusion
Introduction to Tuvan Throat-Singing

Tuvan throat-singing is one of several types of overtone singing practiced by various human cultures for thousands of years. Tuvan throat-singing originated in the small Asian nation of Tuva, which borders Mongolia to the south and Russia to the north, and claims to constitute the geographic center of the continent.

In the 20th century, the country of Tuva came under the control of outside influences; various Russian forces during the Russian Civil War, and finally, Soviet Union annexed the country in 1944. Tuva was isolated from the outside world until the fall of the USSR, and was shrouded in mystery for many westerners, including famous American physicist Richard Feynman, who became fascinated with the customs of the country and with throat-singing, but died before he could visit.

Tuva has gained fame in western nations in post-Soviet years largely due to the unique character and properties of Tuvan throat-singing, which is one of Tuva’s primary cultural exports. And since the 1990s with the widespread adoption of the internet, throat-singing has become more accessible to people around the world.

Generally, the overtone singing technique is designed to enhance the contrast between the natural over-tones and under-tones (sonic frequencies) created in human speech and song, so that they become distinguishable to the unpracticed ear. This can be done by forming the lips and tongue in distinctive patterns and singing certain tones while manipulating the shape and tension of those two features simultaneously in conjunction with throat airflow.

There are three main substyles of Tuvan throat-singing: khöömei, eygüj, and kargynu. Each of these can be further embellished by “additive” techniques such as borbaanqadyr and ezenggideer, but as far as a difference in the pitch of notes produced, those three styles are the primary choices.

Tuvan throat-singing is often further enhanced by the addition of more traditional musical instruments — like the igil (a stringed instrument played like a cello), dohspolours and chanzys (stringed instruments played like a guitar), khomuses (jaw harps that sounds like a spring), percussive objects like horse hooves, and various other instruments that have been played in Tuva for several millennia.
The sygyt style is meant to evoke “gentle breezes of summer, the songs of birds,” and is the most piercing and high-pitched overtone produced in Tuvan Throat-Singing. Like other throat-singing styles, sygyt involves splitting an over-tone and an undertone into easily distinguishable frequencies — in this case, frequencies consisting of a high, clear quality. Of all throat-singing styles, sygyt’s whistle is likely the cleanest and most accessible for the uninitiated. Because it is high-pitched, sygyt reduces strain on the lower regions of the throat and carries very little injury risk for the practitioner’s vocal cords. In this sense, it is the easiest of the three styles to master, and provides the most piercing and recognizable tones. It’s a good starting point for throat-singing beginners, and is often the easiest to recognize for outsiders.

Tuvan master throat-singer Kongar-ol Ondar was a sygyt style specialist prior to his death in August 2013.

Like all throat-singing styles, sygyt may be difficult to master, initially. However, there are special techniques that can allow beginners to work into a clear sygyt overtone without too much trouble. The easiest way to accomplish this is to produce an “eee” phoneme and sustain it for a few seconds at a single pitch. Then, slide the tongue back to roughly the alveolar ridge while still touching it to the roof of the mouth and change its shape to “o” or “u” while still speaking “eee.” Tensing the lips and making the mouth aperture smaller while also oscillating the forward-backward position of the tongue helps to the aspiring throat-singer to find the desired pitch and ease into the sygyt.
Khöömei (hoo•may)

The Moderate Style

Khöömei is often used as a general term for throat-singing, but it also references the medium vocal range and most popular style of Tuvan throat-singing as well as the general concept.

Khöömei, the individual style, is meant to evoke “wind swirling among rocks.” In pitch, khöömei is roughly halfway in between kargyraa and sygyt. However, its production more closely mirrors that of sygyt than of kargyraa. The style has occasionally been described as sounding more metallic or synthetic in some ways than the other primary styles. The constriction of the throat, its moisture, and the oscillation of the tones produced may all contribute to this incongruous perception of a completely organic sound — produced with body components that are innate to all humans — as something synthetic.

Khöömei differs from sygyt in that the movement of the back of the tongue is used to produce the overtone rather than the front of the tongue. Because most westerners are not often tasked with making minute manipulations to back regions of the tongue to produce subtle changes in overtones (consciously, at least), this is probably a harder style for throat-singing newcomers to master consistently compared to sygyt, which is built at the front of the vocal tract, just behind the lips and the top two incisor teeth. Khöömei’s tone is less piercing than sygyt, and it is generated with much less laryngeal tension, and as a result sounds smoother; perhaps more harmonious or coherent.
Kargyraa is the deepest style of Tuvan Throat-Singing. It is meant to evoke “howling winds of winter or the plaintive cries of a mother camel after losing her calf.” Kargyraa differs from the other two styles significantly in sound. It is essentially, a low, resonant rumble, and feels almost as if it is too deep to be produced by a human voice. Yet, it is an established technique, and one of the three main styles of Tuvan throat-singing. Unlike khöömei and sygyt, the kargyraa style is not generated primarily by movements of the front of the mouth. The lips may slightly alter its pitch, but the power of Kargyraa is built at the lowest part of the throat, even in the chest itself.

Kargyraa is produced with much wider mouth position than sygyt or khöömei. However, in order to ease into kargyraa, it is often easier for beginners to to start with a closed mouth, singing a normal tone, opening the mouth and gradually moving lower in vocal range, until a deep rattle begins to resonate at the back of the throat and vocal folds. This rattle has potential to be seriously damaging to the vocal folds of inexperienced practitioners; it is generally advised that singing kargyraa causes discomfort, pain, or tickling in the throat, one should cease throat-singing and drink some water.

Kargyraa (kar•guh•rah)
The Low-Pitched Moan

Kargyraa evokes “the plaintive cries of a mother camel after losing her calf”.

Despite its dangers, when safely executed, Kargyraa is a rich and resonant sound that affects listeners in a way few other human vocalizations have the capacity to do.

Kargyraa ... is meant to evoke “the plaintive cries of a mother camel after losing her calf”
The Additive styles are two forms of embellishment that master throat-singers may choose to add to their songs and performances to enhance the aural quality of the three basic styles of throat-singing.

_Ezenggileer_ is one such additive style. It can best be described as a cadence which, when applied to Kargyraa, Sygyt, or Khöömei, mimics the gait of a trotting horse. In _ezenggileer_ style, the clopping of “horse hooves” corresponds to the periodic clarification of the overtone and undertone in distinct and easily recognizable frequencies, as well as an increase in volume or amplitude. That periodic increase in amplitude and the solidification of distinct sonic frequencies is clearly visible on any spectrogram of a recording of this style, as are the muddier, softer breaks between clarifications.

_Borbangnadyr_ is often considered the most difficult style to master, and is typically the most difficult throat-singing embellishment style. Much like employing vibrato techniques when playing a stringed instrument, inducing _borbangnadyr_ involves rapid, radical oscillation between several tones. This is a difficult style for most people to master because few can move their lips rapidly enough to produce oscillations as frequently as is required by the technique. The lips must be trained to voluntary vibrate when tensed and held taut in an O-shape, a skill which takes many years to produce and many more to control.
There are a variety of additional Tuvan instruments that throat-singing performers and their groups may decide to play either in isolation or in conjunction with throat-singing. These instruments include the *igil*, *khomus*, *doshpolour*, and *chanzy*.

The *igil* is a stringed instrument that is played with a bow. Like a small cello, the Igil is held upright in the player’s lap and braced between the thighs. The Igil typically has two strings, and is played with long bow-strokes.

The *khomus* is often known in the west as a “Jew’s Harp,” “jaw harp,” or “mouth harp.” It is played by bracing the fork against one’s front teeth and plucking the metal reed so it resonates. Melodies are created when the player alters his or her breathing pattern.

The *doshpolour* and *chanzy* are two stringed instruments played like guitars or lutes. Doshpolours typically have a square-shaped resonant chamber and three strings. Most chanzys, while also three-stringed, are typically ornately carved and produce a louder tone.

These instruments, when used to accompany Tuvan Throat-singing create an unmistakeable and totally unique aesthetic. Honed over the course of centuries, no other country or region in the world can claim as enchanting a diversity or quality of throat-singing as Tuva. And despite its current status as a niche musical interest, Tuvans have graciously exported this tradition around the world, and continue to encourage the spread of the ancient techniques via the internet and other new media.
Written and designed
by Matt Finlay / 2013
Carnegie Mellon University