

## OVERTONE SINGING : AN INTRODUCTION

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*This is the first part of a series of pieces on the overtone singing of traditional and western cultures. Here we present by way of introduction some technical background to the harmonic series and an overview of three different traditions of overtone singing, the Mongolian, the Tibetan and the Western.*

The rediscovery of the harmonic series is a hidden story in the music of this century. This series is the natural sequence of notes you get when you blow an open pipe. You can only get certain notes this way, notes whose frequencies go up in whole numbers. Bugle calls are tunes that go up and down this series. The higher up you go, the closer the notes sound together. Some of the higher harmonics may sound "out of tune", that is they are not familiar from the equal tempered tuning that we use on our western instruments.

Harmonics can also be demonstrated on one of those children's toys that consist of a serrated plastic tube that looks like it came from a vacuum cleaner. Whirl it around your head and you get a different harmonic depending on the speed. The faster the whirl, the higher the harmonic. Stringed instruments can also produce harmonics by touching lightly at certain points along the string, halfway, a third of the way, a quarter and so on producing the second, third, fourth etc harmonic.

Even within a single note played on a musical instrument such as piano, guitar, flute, violin, or sung by the human voice harmonics are present as overtones. Normally they are not distinguishable as separate tones but they are what gives the note its timbre or tone colour. If they weren't there, each instrument would sound the same like a pure colourless sine tone - the sound you get from a tuning fork. But sometimes the playing or singing deliberately makes these overtones audible, particularly in certain folk instruments. The individual note seems to fragment into a spectrum of sound. The Jew's or Jaw's harp is based on this principle as are some of the sounds of the Australian Aboriginal instrument, the didgeridoo. Certain types of traditional singing also bring out the overtones of the harmonic series.

This type of singing involves sounding a fundamental drone and then producing a melody by reinforcing certain of the overtones of that fundamental. It is also referred to as biphonic singing, split tone singing, throat singing or the one voice chord. It is not a difficult technique to learn but to refine and master it can take years of dedicated practice. Traditionally it comes from the musical culture of the Turko-Mongol peoples of Central Asia, in particular the west part of Mongolia and Tuva (part of the Russian Federation) where it is known as *xöömii* (or *khöömii*) singing, from the Mongolian word for throat or pharynx. The Mongolians relate *xöömii* to the sounds of nature and it is considered spiritual in that it is a way of communing with the spirits of air and water for example to summon the god of the wind. We will look in greater depth at the Mongolian tradition of *xöömii* in the next article.

In Tibet, the style of overtone singing as heard in recordings by the Gytö and Gyume monks is a way of chanting the Buddhist scriptures using a particular quality of voice, a very low note which could be described as an undertone. The chanting is not intended to produce a melody as it is in Mongolian and Tuvan music, rather the nature of the repeated words will produce harmonics and when the words change the spectrum of harmonics changes too. This type of chant is known as tantric and according to legend was originally revealed in a dream to Tsongkhappa, the founder of the Tibetan Yellow Hat school.

In the west where the diatonic scale and the key system has ruled for the last two hundred years, it was the post-war avant garde in its quest for new and unusual sounds that began the rediscovery of the harmonic series. In Germany, Karlheinz Stockhausen produced the first "classical" piece based on overtone singing "Stimmung" in 1968. This piece for six singers lasts about 70 minutes and is based on only one chord. All the action happens inside the chord as the overtones change and the harmonics shift. Stockhausen decorates this apparently static sound with magic or sacred names. The shift of attention to what's happening *inside* the sound can lead to an altered state of consciousness akin to meditation.

At around the same time, American composer David Hykes was influenced by the minimalist experiments of La Monte Young who was working with long held drones in the tuning system known as just intonation. Hykes developed the same effect with the human voice using overtone singing and in 1975, started the Harmonic Choir with five other vocalists performing in resonant spaces such as New York's Cathedral of St John the Divine. In 1983 they released their acclaimed first album *Hearing Solar Winds* followed by *Current Circulation* and *Harmonic Meetings*. Other musicians brought out albums in this western overtone style, in particular Michael Vetter's solo voice albums with tamboura or gong and Nigel Charles Halfhide, a British overtone singer who lives in Switzerland.

The type of overtone singing they performed was different from the Mongolian *xöömii* singing. According to Michael Ormiston who has studied *xöömii* in Mongolia and who now teaches in the UK, the real difference in Western overtone singing is a quality of voice. In Mongolia and Tuva there is a strength and intensity to the *xöömii* singing that comes from a technique called *shahaltai* which gives a rough quality to the voice and a sharper edge to the harmonics. This consists of constricting the air flow using the false vocal folds which are the vocal folds above your normal vocal chords to create something like an American "twang", something that has to be learned and practised. On the other hand singers of the Western tradition including David Hykes, Michael Vetter, Rollin Rachele, Danny Becher sing with a voice quality that is more acceptable to those used to the western vocal tradition.

Many claims are being made about the healing value of *xöömii* and overtone singing. In Mongolia it grew out of the indigenous animistic belief system and shamanic practice. For the Tibetans it is part of the practice of Buddhist ritual. As an exotic import into our own culture it has been described in some promotional literature as "magical voice technique" or as "chanting for psycho-physical transformation". On the other hand it has been pointed out that the intense practice of overtone singing is something that has to be taken step by step like weight lifting, gradually building the strength of the voice. Here is not the place to unravel the threads of this debate except to say that for the listener, the sound experience can be one of ethereal unforgettable beauty.

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