Inner Octaves and Eastern Music

By Jeffrey Werbock

A central idea in Gurdjieff's system of knowledge outlines one of the two fundamental laws governing every process in the universe. According to this idea, the universe is a singular wholeness that divides itself into seven degrees of density. These divisions are in turn divided into seven degrees of density, and so on. By the action of this law, the universe expresses the eternal relationship between its wholeness and its divisions, as well as the relationships between all the divisions.

Gurdjieff explained that although this law operates in all phenomena, in our current condition we are unable to observe it in action. With some form of help, however, he assures us that it is possible. One form of help mentioned in numerous places in his writings and lectures is music. Thanks to Gurdjieff, we now know that by examining the structure of music we are exploring the structure of reality.

This study has two aspects, both essential to understanding. One part is analytical, the other part is experiential.

Our analysis can begin with the natural properties of sound. Sound is produced by a material vibrating at a definite frequency inducing waves of acoustical energy in a medium of transmission. The essence of sound, as in all other natural phenomena, is vibration. A vibration is a continuously and smoothly alternating pulse of energy. Vibrations are scaled by their frequencies (rates of vibration) and their amplitudes (strengths of vibration).

When two vibrations of the same frequency vibrate in the same medium, they simply add to each other the strength of their combined signals. When they vibrate at different frequencies, however, their relationship becomes more complex. In music, when two vibrations of different frequencies interact, it is called an interval.

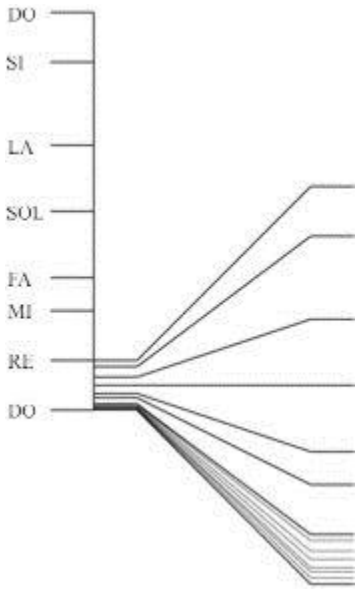
Among all intervals, one stands out as unique. This interval is called the octave, and it is obtained by doubling or halving the rate of vibration. Because Mr. Gurdjieff placed such importance in his writings and lectures on the octave, we are called to take up the challenge to try to fathom its import. We can begin our inquiry by examining what the octave is in the realm of music.

The octave interval serves as the frame for all musical scales everywhere. It can be divided into many smaller intervals to make many different scales. Usually, it is divided into seven intervals framed by eight tones; hence the word 'octave.' There are

a number of commonly used seven-tone scales that span the range of an octave. Mr. Gurdjieff chose one of them, known as the major scale, to describe the action of the law of seven.[1] This division of the octave into seven intervals is based on the property of sound known as consonance.

In music, consonance and dissonance refer to the human response to an interval. However, there is objective physics behind the subjective experience of hearing what happens when two tones interact. When most vibrations of differing frequencies interact, some dissonance appears in the form of a third vibration. The octave, however, is totally consonant, as the interaction of the two tones that compose it produce no third vibration.

The most consonant interval after the octave, known in music as the perfect fifth, produces a tiny amount of dissonance in the form of a third vibration, a 'third force.' The next most consonant interval—known as the dominant fourth—produces even more third force, and so on. The seventh in the series of intervals of diminishing consonance and increasing dissonance produces so much third force that it begins to be noticeable. This interval, known in music as the minor seventh, begins to exhibit audible dissonance. Continuing with this progression from total consonance toward increasing dissonance, the 12th interval in the series—called the tritone—is so dissonant that at one point in the history of music, it was referred to by the Church as the 'devil in music.'



Most western music is composed using the seven-tone scales that are derived from the twelve most consonant (or least dissonant) intervals. Music of the east, however, often includes intervals that are even more dissonant than the tritone. Known in music as microtones, they correspond to the notes on 'inner octaves.'[2]

Traditional eastern music is strictly monophonic, which means that it uses only melodies, and it can easily support the inclusion of intensely dissonant microtonal intervals. Western music is mostly polyphonic, which means it also uses chords. Generally, western polyphonic music avoids the inclusion of microtones because of the effect they would have on the harmony of the chords.

Even without microtones there can be considerable dissonance among the 12 most consonant intervals, but if polyphonic music were to include intervals other than the 12 most consonant, it would be very hard to listen to. We can tolerate and even enjoy

the energy issuing from a moment of intense dissonance that occurs in some eastern melodies, but the release of energy that would occur in western chordal music that included the strongly dissonant intervals of microtones would be a cacophony.

According to Gurdjieff, certain melodies composed of microtones on inner octaves have the power to affect the inner states of humans and animals.[3] Primed with this idea, we can survey the music throughout the world in which melodies can be found that include microtones.

The playing of melodies that include microtones is actually fairly common around the world. Exotic, haunting melodies heard in every eastern culture and among native indigenous tribes everywhere express the great variety of ways for playing melodies that include microtones. In this way, each culture, each tradition, has its own unique 'fingerprint' or 'signature' of microtones, framed by the tones of the 'outer' octave scale.

The power of music that includes microtones depends not only on playing the melody with the correct intonation, but also on the musician's intent. Played unintentionally, a microtone will just sound out of tune. Played intentionally, the same microtone will have an entirely different effect on the listener. The energy of microtones can reach the finer vibrations on the inner octaves of the listener's being, but only when the listener is convinced the musician is playing that microtone intentionally. Part of the experience is induced by the energy in the sound of the music, especially when played on the instruments designed for microtonal music, and part of the experience is brought on by the listener listening with his whole attention. To inspire that quality of listening, the musician must do something more than just perform well. The musician must be present and listen actively with the aim to intend each and every note.

As with everything, intention is expressed in degrees. The first stage of intention is imitation. The musician plays a specific microtone because he has heard it all his life and for him there is nothing strange about it. The challenge is a technical one, a challenge that all musicians face if they are singing or playing on instruments that require high degrees of tonal accuracy, such as any fretless stringed instrument.

The second stage is reached when there is a real wish to hear a specific microtone. The interest has evolved from merely wishing to play correctly, to wishing to experience the energy of the microtone. When the musician arrives at this stage of intention while playing in the presence of others who are actively listening, an impression of another level will be transmitted that resonates with the inner octave vibrations in the listeners.

The third stage of intention begins when the musician wishes with his whole being. This stage goes beyond time and place. The relationship between the outer and inner octave tones then expresses something that transcends the local origins of the music. At that moment, the universe, in the form of a human being playing this special music, expresses the universality of the relationships between all vibrations.

To help those who have become accustomed to the music prevalent in western cultures to be able to listen more deeply to traditional eastern melodies, perhaps some guidance can be offered. There are three areas of significant differences. The first is the intentional use of microtones embedded in monophonic melodies.

The second difference is the principle that guides the composition of the melodies which serve as the framework for the playing of microtones. In most traditional eastern music, melodies are composed of sequences of tones that follow a pattern that resembles waves, going up and down the scale of frequencies. The sequence of tones may at times be orderly and simple, and at other times delicate and complex, weaving a filigree of fine detail. Simple or complex, it is this wave-like pattern that enables the energy of microtones to work their magic.

Something of this original knowledge about the relationship between states and sound can still be found among the musical traditions of the Middle East, the Caucasus, Central Asia, and East Asia. These ancient musical traditions continue to carry this knowledge forward in time, bringing to us the opportunity to feel the depth and intensity of music composed centuries ago when the knowledge of the power of tones and microtones shared the human stage with other great works of art, some of which endures to this day.

The third difference is the playing of melodies without a time signature. This brings us to the other meaning of the word ‘interval,’ which applies to the dimension of time. In general, time-intervals make it possible to more easily accept the intensity of strongly dissonant tone-intervals. When two tones of a strongly dissonant interval are played simultaneously, the sound may seem harsh and if sustained, difficult to listen to. When the same two dissonant tones are played sequentially, the harshness is neutralized. Time-intervals are needed between the tones of melodies that include microtones so we can be open to their energy and feel the finer vibrations reverberate on our inner octaves.

When the music has no time signature, as in certain traditions of eastern music, the rhythm becomes highly elastic. Without a rigid time frame, the timing of the tones requires the same deliberateness, the same degree of intention required to play microtones effectively. Deliberately choosing the moment the microtone is played

serves to increases the audience's feeling of certainty, an experience that can help to open one to receive the energy of the instrument and the energy of the music it carries.

Gurdjieff wrote that he listened actively to microtonal music from a very early age. Throughout his lectures and writings Gurdjieff returned to the themes of music and vibrations. His regard for the importance of special music in connection with his ideas about inner work can still be appreciated today through his collaborative effort with Mr. Thomas de Hartmann. Even though it is not possible to play microtones on a piano, they found a way to overcome that, and thanks to their efforts, we now have a tradition of polyphonic music that is based on the knowledge of the inner workings of the octave, and the inner yearnings of humanity.

Gurdjieff presented us with a system of knowledge informing us that all matter and energy vibrates. Modern science has corroborated that revelation. Everything is a composition of pulsating energies vibrating across the whole spectrum of frequencies. We ourselves are just such compositions made of finer and denser energies, and by actively listening to the microtones on inner octaves, we may experience a relationship with the finer levels of energies that are an integral part of our own being. Sensing the presence of another level of energy, we find that the higher is accessible through the inner.

But how, exactly, can that be? As the frequencies of microtones are only slightly higher or lower than the outer octave tones that frame them, how is it possible that they can touch another level of energy in us? Gurdjieff's system describes how this use of inner octaves can bring to the listener the experience of an energy that is on an entirely different scale of vibrations from the ones we actually hear.

Gurdjieff showed how the materialities of different levels—called 'worlds'—stand in relation to each other: the materiality of world 48 is composed of inner octaves of the materiality of world 24, the materiality of world 24 is composed of the inner octaves of the materiality of world 12, and so on.[4]

Melodies that include microtones have two levels that relate to each other in the same way as two adjacent levels in the universe: outer octave and inner octave. Music that includes microtones needs the outer octave notes that frame them, because our attention cannot listen actively to a melody composed exclusively of microtones played on one inner octave.

Moreover, a microtone is only a microtone in relation to an outer octave tone. By itself it is just another tone, but when a microtone is played within the context of the outer octave tones of a seven tone scale, it has the power to reach our inner octaves. Inspired in part by the intentional playing of inner octave microtones framed by outer

octave melodies, our active listening bridges the gap between the two levels in us and offers another way to become aware of the presence in us of a level of energy higher and finer than that which is accessible from our common everyday state.

Perhaps our search for ways to understand Gurdjieff's ideas on vibrations, octaves, intervals and inner octaves could include the study of traditional forms of microtonal music, a study that is a full immersion in the experience of the music's power to evoke the sense of another level in life. Gurdjieff provided us with all the indications we need to conduct this research on our own, without telling us in advance what to expect from it.

~ • ~

[1] Peter Ouspensky, *In Search of the Miraculous* (1949), pp. 123–132.
[2] Ibid, p. 136.
[3] Ibid, p. 297.
[4] Ibid, p. 136.

~ • ~

Jeffrey Werbock joined the Gurdjieff Foundation in Los Angeles in 1971. The following year, Mr. Werbock met an unusual elderly musician living in Los Angeles. Originally from Daghestan, a country in the north Caucasus, Zevulon Avshalomov knew how to play the art music from Azerbaijan known as mugham. *His instrument was the* kamancha*, a four-stringed spike fiddle with a spheroidal resonator. On first hearing, Mr. Werbock was deeply impressed by the sound of the instrument, the power of* mugham*, and by the energy and presence of the old man from Daghestan.*

Inspired by the power of mugham *and the knowledge that it originated in Gurdjieff's homeland, the Caucasus, Mr. Werbock experienced a strong desire to try to learn this ancient music. After nearly one year of apprenticeship, Mr. Avshalomov decided to move to Brooklyn. Soon after, Mr. Werbock followed his teacher east, where they lived together for three years, engaging in the tradition of student and teacher, disciple and master, while immersed in the old world atmosphere generated by Avshalomov.*

In 1977 Mr. Werbock moved to Manhattan and continued to study with his first teacher for another ten years. In 1987, after a protracted illness, Mr. Avshalomov died. The following year, a troupe of professional Azerbaijani musicians came to America. Still grieving over the loss of his teacher and father figure, Mr. Werbock went to their concert in New York, and after the performance approached one of the

musicians and asked how to get an invitation to Azerbaijan for the purpose of meeting musicians and furthering his knowledge of the art of mugham.

Since his first visit to Azerbaijan in 1989, Mr. Werbock has had many adventures, music lessons, concerts and public appearances there. During this time he has been bringing this beautiful and ancient music to members of Gurdjieff groups and other audiences in the United States and Europe. Samples of his playing mugham *on* kamancha*, and his thoughts about this music can be found at the website: www.mugham.net.*

Featured: Fall 2004 Issue, Vol. VIII (1)
Revision: February 9, 2011