



## AN ATTEMPT OF OBJECTIFYING THE SHAMANIC WAY OF TRANSFORMATION BASED ON THROAT SINGING: A STATISTICAL APPROACH

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### **Abstract**

*The throat overtone singing is a cultural and healing tradition developed in Autonomic Republic of Tuva, Russian Federation. Because of absence of the medical equipment, the shamans had to move towards the development of the latent psychic abilities, and the throat singing became their instrument to immerse into trance state and broad consciousness, which serves both the personal growth and treatment. The purpose of the study was to explore the effects of the Shamanic Healing, using throat singing, upon physiological arousal which is often assessed by electrodermal activity, a peripheral measure of the sympathetic nervous system activity, of the energy reserve parameters, by determining the evoked electro-photonic potentials using Kirlian photography method. The test was carried out with 13 apparently healthy people with meditation background. During the first stage of the experiment, the subjects were measured before and after an intensive seminar Un-Hun and then again after six days. Most of the participants experienced increase in values of the measured specific parameters. With all of these parameters simultaneously improved, the participants reported a good benefit from these sessions. The session of the Shamanic Healing, had statistically significant positive influence on the psycho-emotional condition for the experimental group in six days after the influence.*

**Keywords:** *khoomei-throat singing, overtones, psycho-emotional status*

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### 1. INTRODUCTION

The throat overtone singing is a cultural and healing tradition developed in Autonomic Republic of Tuva, Russian Federation. It is situated in geographic center

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of Asia, in Southern Siberia, on the border with Mongolia. The way of Tuvan's life is animism, which means that they worship to nature and see the live spirit in every manifestation of nature. To learn the way of communication with spirits, they started to imitate the sounds of surrounding life. In this way, by copying the voices of animals and birds, sounds of wind and rivers, was created the unique art of khoomei-throat singing, when the performer is able to sing with two and more voices at the same time, producing the overtones.

Overtones, or harmonics, are the additional frequencies which appear simultaneously to basic sound and exceed its frequency on the number (value) of the basic sound. It is the overtones which creates the timbre of different sounds and enable us to discern the instruments and voices. In Tuvan, throat singing are particularly prominent overtones from 5th to 13n, which creates the effect of second voice, but in singing of famous performers can be heard even three and more voices ([http://un-hun.com/un-hun\\_en.html](http://un-hun.com/un-hun_en.html)).

### 1.1 THE SHAMANIC HEALING

For the centuries and up to beginning of last century shamans in Tuva were the only assistants for the bodies and minds of their countrymen. They accumulated a great experience of individual and group healing. Because of absence of the medical equipment, they had to move towards the development of the latent psychic abilities, and the throat singing became their instrument to immerse into trance state and broad consciousness, which serves both the personal growth and treatment.

The healing effect of overtones is based on their ability to affect on different levels of matter and energy. First of all it is physical influence based on the resonance effect. Each cell of the body has a membrane, which able to vibrate in response to sound similar to membrane of the drum, changing the cellular metabolism. The second aspect in effects of shamanic sounds is neuro-physiological. Under the influence of overtone singing and rhythm of drum the patient's consciences turns into so-called hypnogogic state, defined by presence of theta-waves (4–7 hertz) in brain electric activity. This state activates the recovery process in body. Another aspect is energetic. Sound vibration is form of energy, so it is able to influence the human energy field and energy centers. Using special exercises, shamans create the energy impulse in the base of the body and rise it up using a sound, activating step by step the energy centers.

This ancient tradition was used by Dr. Vladislav Matrenitsky and his teacher, Tuvan shaman and master of throat singing Nikolay Oorzhak, to create the modern system called Un-Hun (The Sound of Sun, in Tuvan language). It concentrates the best shamanic sound techniques in form of seminars, available for perception of Western students, and proved itself since 2005 as reliable tool for self-healing and development ([http://un-hun.com/un-hun\\_en.html](http://un-hun.com/un-hun_en.html))

## **2. OBJECTIVES AND HYPOTHESES**

### **2.1. OBJECTIVES**

The purpose of the study was to explore the effects of the Shamanic Healing, using throat singing, upon physiological arousal which is often assessed by electrodermal activity, a peripheral measure of the sympathetic nervous system activity, of the energy reserve parameters.

### **2.2. HYPOTHESES**

The Shamanic Healing session, using throat singing, has significant positive influence on the psycho-emotional condition for the experimental group, in six days after the influence.

## **3. METHOD**

### **3.1. PARTICIPANTS**

The subjects for the studies came from different areas of occupation, as well as citizens of Bucharest, Romania. There were six females and seven males, totalling 13 participants. All 13 study participants ranged from 35 to 61 years old, all had meditative experience. All participants were explained the terms of the experiment and they were measured in random order.

### **3.2. INSTRUMENTS**

The following instruments have been used in the study:

1. GDV Camera Pro, instrument produced by KTI Co.
  2. Aura Video Station 5.1 produced by Inneractive Aura Video Systems, USA.
- Data were processed in “GDV SciLab”, SPSS 20 and “MS Excel” software.

#### **3.2.1. EPI/GDV TECHNIQUE**

Electro-diagnostic methods such as EEG and EKG are widely used in medical practices worldwide. A promising method based on the Kirlian effect, already utilized to great success, is bioelectrography. „The Kirlian effect occurs when an object is placed on a glass plate and stimulated with high voltage current; a visible glow occurs, the gas discharge. With EPI/GDV (electro-photon imaging through gaseous discharge visualization) bioelectrography cameras, the Kirlian effect is quantifiable and reproducible for scientific research purposes” (Manolea, 2012a). Images captured for each finger on each human subject, relieve detailed information regarding psychosomatic and physiological condition for each subject. Manolea (2011) stated that „the interpretation of the fractal and spatial distribution of quantum bio-electro-luminescence streamers as a manifestation of the emotional and psychosomatic parameters accompanying daily stress indicates that this electronographic information captures snapshots of the structure of the proximal

quantum human radiative field. These proximal quantum radiative fields are directly related to the human's mental, emotional and psychosomatic changes".

### 3.2.2. THE AURA VIDEO STATION

The Aura Video Station is a computer expert system built on the principle and studies of biofeedback, color psychology, human quantum field and mind-body-spirit knowledge. This expert system uses the hand biosensor to measure the electrical conductivity of the skin of the hand, the electro-dermal activity and its temperature. The data is analysed and is displayed as the energetic activity of the individual being correlated to specific emotional-energetic states. The Aura Video Station also measures the activity of the quantum vortexes and shows the percentage that each one is operating at. Basically, whenever a mental, emotional, or energetic change occurs within or around a person, the human quantum field will change.

### 3.3 PROCEDURE

Regarding the measurements GDV using the method, it can be said that we have measured and analyzed some patterns of the emitted light by electrical discharges around the ten fingers of the hands, under the action of a high-voltage electric field. These images are processed by specific software, which creates an energy field model (quantum field) around the body. This representation is consistent with an interpretation based on a model of association between different areas of discharge, recorded for each finger and parts of the human body (Mandel, 1986).

### 3.4 EXPERIMENTAL DESIGN

The experimental design used was one using repeated measures before and after the shamanic seminar. The independent variable was represented by the shamanic technique—throat singing.

The dependent variables corresponding to the psycho-emotional and somatic states of the subjects participating in the research:

- *quantum field area*- the number of pixels in the GDV image having brightness above the threshold; the bigger value are better;
- *normalized quantum field area*- the ratio of GDV area to the area of the inner oval – a fingerprint; it is reported in relative units. This parameter allows comparing people having fingers of different sizes. The bigger value are better;

- *average intensity* - average brightness of GDV image measured in number of gray levels, from 0 to 255, it is an evaluation of the intensity spectrum for the particular GDV image; the bigger value are better;
- *form coefficient* – it is a measure of the degree of the irregularity of the image contour; the small value are better;
- *average radius of isolines* – average radius of the curve displaying averaged brightness of the GDV image; the bigger value are better;
- *length of isoline*: - the length of envelope of the image contour.
- Size\_Quantum\_Field, BASE\_Quantum\_Vortex, NAVEL\_Quantum\_Vortex, SOLAR\_PLEXUS\_Quantum\_Vortex, HEART\_Quantum\_Vortex, THROAT\_Quantum\_Vortex, THIRD\_EYE\_Quantum\_Vortex, CROWN\_Quantum\_Vortex, MIND, BODY, SPIRIT, Energetic\_Level and Color\_Delta\_Lambda, (Korotkov, 2002, 2010).

#### 4. RESULTS

##### 4.1 FIGURES AND TABLES

Every person was measured before, after and six days after the shamanic seminar with Aura Video Station and GDV Camera. We obtain a huge number of data which consist in 16 parameters from Aura Video Station and 43 parameters from GDV Camera. All data were analyzed using SPSS 20, Exell 2010 and GDV Scientific Laboratory. When the  $p < 0.05$ , the difference was considered statistically significant.

Table no. 1

Parameters	Mean Rank
THROAT_Quantum_Vortex_before	1,50
THROAT_Quantum_Vortex_immediate_after	1,96
THROAT_Quantum_Vortex_6days_after	2,54

Test Statistics<sup>a</sup>

N	13
Chi-Square	9,150
df	2
Asymp. Sig.	,010

Table no. 2

Parameters	Mean Rank
CROWN_Quantum_Vortex_before	1,46
CROWN_Quantum_Vortex_immediate_after	1,92
CROWN_Quantum_Vortex_6days_after	2,62

Test Statistics<sup>a</sup>

N	13
Chi-Square	12,32
df	2
Asymp. Sig.	,002

a. Friedman Test

Table no.1 and no.2 Friedman test's results

The statistical study, using Friedman test, of data achieved from Aura Video Station, show that only two parameters are statistically significant, the Troat and

Crown Quantum Vortex. The Friedman test compares the mean ranks between the related groups of data and indicates how they differed.

It was a statistically significant difference (see table no.1 and no. 2) in level of activity of the Throat Quantum Vortex  $\chi^2(2)= 9.15, p=0.01$  and in level of activity of the Crown Quantum Vortex  $\chi^2(2)= 12.324, p=0.002$ , as a result of practicing shamanic technique.

There were no significant differences for the rest of 14 parameters registered with Aura Video System. The applied statistical test was Friedman Test, a non-parametrical one because the data are not normal distributed.

For GDV measurements were calculated differences between values of the 43 parameters for each psycho-somatic and physiological condition. For psycho-somatic condition those parameters who demonstrate statistically significant differences are as follows:

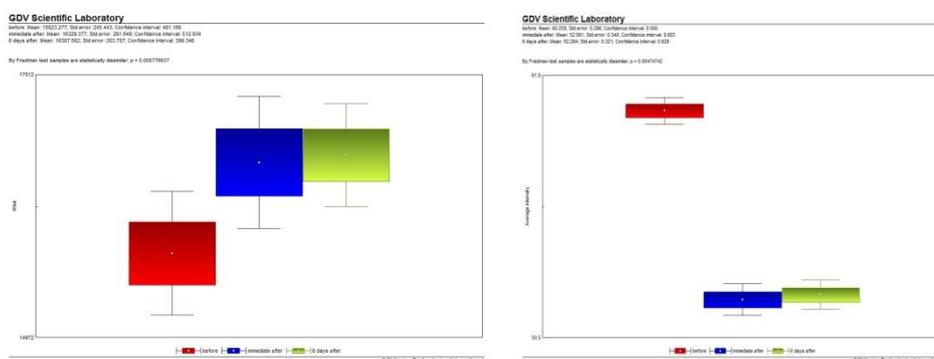


Figure no.1 Values distribution for human "quantum field area" and "average intensity" parameters, psycho-somatic condition, before, right after and 6 day after shamanic session

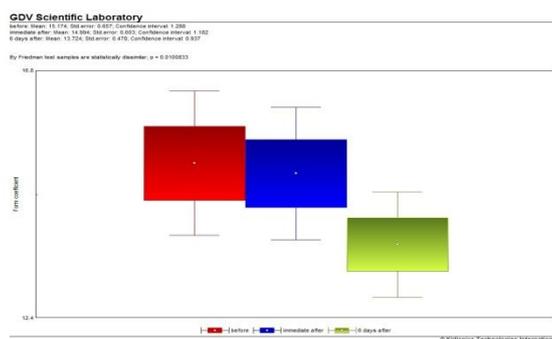


Figure no.2 Values distribution for "form coefficient" parameter, psycho-somatic condition, before, right after and 6 day after shamanic session

## **5. DISCUSSION**

It can outline a possible mechanism of transformation of human quantum field during a shamanic healing intervention type. First, we observe that the activity of the Throat and Crown quantum vortexes significantly increased, that means that by using the throat singing we are working in the spiritual domain. In shamanic terminology, this activates the primordial power of human's Soul. „Using the special breathing exercises and practice of sound concentration, one will learn to control his or her internal power and listen the body, understand sense of diseases and manage with positive and negative emotions” ([http://un-hun.com/un-hun\\_en.html](http://un-hun.com/un-hun_en.html)). The Sound, being transformed into energy, broadens the space of consciousness and creates the preconditions for transpersonal experience (contact with Spirits of Heavenly Power, according to shamans).

On the other hand, parameters measured with GDV Camera immediately after seminar showed an increase in area and a decrease in average intensity (fig.1) of human quantum field. This variation of the parameters field shows that there is a flattening action by spatial redistributing and smoothing field strength. At the same time, the decrease of parameter form coefficient (fig.2 - low value means that the field is more evenly) confirms reducing spatial shape variations of the human quantum field. These evolutions of the parameter's values were also found in a study on the influence of psycho-quantum therapy (Deep Quantum Psychotherapy – QDP) (Manolea, 2012b) within a framework of doctoral thesis, QDP is still essentially a shamanic type technique. These changes prove positive effects of the shamanic healing on mechanism of ANS regulation, and on psycho-modulation (increasing the mental power and decreasing the stress manifestations). It look like, there is an effect on the immune system involving psycho-immune mechanisms. Connection brain-immune system was highlighted by Lambrecht, 2001, who have shown that T lymphocytes cells have receptors for neuropeptides (like methionine-enkephalin) generated by the brain, neuropeptides being mediators of brain immune systems interaction.

## **6. CONCLUSIONS**

In summary, this study demonstrates that shamanic healing causes a positive change of ANS activity, which is detectable and long lasting. This effect on the ANS has been common for many subjects, confirming the stability of shamanic healing effects. Activation of altered state of consciousness is the direct result of the harmonization of the brain bio-potentials, mental state, and bioenergetics fields. This is due to changes in the psycho-energetic and psychosomatic self-regulation. This conclusion (Bundzen, 2002) is important to see what happens in systematic mental training. Application of shamanic healing decreases both sympathetic and parasympathetic activity of the ANS, as observed when a subject is aware of the flow

of energy, being in a state of emotional detachment that generates a state of inner peace.

Sound vibration is form of energy, that is why it able to influence the human energy centers and energy field. Using special exercises, a shaman create the energy impulse in the base of the body (Base chakra) and raise it up using a sound, activating step by step the energy centers. Finally it reach the brain and upper energy centers (see table 1 and table 2), enable shaman to enter in the altered state of consciousness. This, according to shaman's terminology, gives them access to the Power of Spirit, or universal field of information, according to modern views They became able to understand the reasons, which brought their patients to have personal problems, and find the best ways to help their. Thus this approach has proven to be appropriate to show the way in which the subtle energy is accessed when performing shamanic healing.

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