Reconnection Healing, Emotions and Music

The whole history of technology shows us how people gradually learned to see the source of strength in the natural objects which had seemed to them dead, inert, redundant ... We are present and are vitally involved in the creation of a new geological factor in the biosphere, unprecedented in its power. Creating the noosphere from the biosphere is a natural phenomenon, a deeper and more powerful in its essence than the human history...

V.I. Vernadsky

More than seventy years ago from the time of writing these lines, scientists of many countries tried to develop approaches for measuring the parameters of the noosphere. Leading researchers proved that these parameters were determined not only by the activity of the locally surrounding environment, but also by cosmophysical processes, as well as the influence of human consciousness, both individual and collective. The prophetic insights of the school of "Russian cosmism", primarily of N.F. Fedorov, N.A. Berdyaev, K.E. Tsiolkovsky, the revolutionary works of A.L. Chizhevsky, L.N. Gumilev, and S. E. Shnoll summed up the conceptual and practical basis of V.I. Vernadsky's ideas. Time has come for the pilot study of the noosphere processes.

Measuring human emotions

In 2008-2009 we began testing a new device we had developed to study the environment, and unexpectedly found out that it responds to human emotions, both individual and group. From that time we conducted many experiments with different people, at the workshops, seminars and musical performances.

A series of measurements was made several times in the U.S. and Eurpe during the workshops conducted by Dr. Eric Pearl within his project entitled "Reconnection Healing". The response of the sensor to group emotions was detected, namely, to the emotional response of the participants of the seminar on current events.

The sensor was placed in the room where the seminar was held. We made "background" measurements in an empty room during 1 hour before the arrival of the participants; then we continued measurements during all sessions and presentations; and for another half an hour after the end of the seminar. Measurements were conducted in the U.S. with the help of my friend and experienced researcher Krishna Madappa and by Dmitry Orlov in Holland.

A special value of the experiments in the United States was that the three parallel working groups of the researchers used different instruments to record the same phenomena.

Dr. William Tiller from Stanford University, the author of 8 books and 250 scientific articles conducted research on how to change the physical parameters of a room or space under the action of healing frequencies during a series of educating seminars on "Healing through Reconnection". The results he obtained were so surprising that he repeated measurements three times over the past two and a half years: twice in Los

Angeles, California, and once in Tucson, Arizona, to make sure that the results were not accidental. In all the experiments he noticed a significant change in the "structural frequencies" of space where the classes were held.

In another study a group of Dr. Gary Schwartz from the University of Arizona conducted measurements of the ability of people to work, to feel, to transmit and receive electromagnetic frequencies before and after the seminar "Healing through Reconnection". Of 100 surveyed people who participated in the seminar, all participants completed the workshop with increased healing abilities, regardless of whether they were engaged in healing or not, knew nothing about it or were specialists.

During our measurements in the workshops on "Healing through Reconnection" significant correlations of the signal with the antenna connected to the GDV device were observed from the beginning of lecturing of the key speakers of the seminar. At the beginning of each presentation made by Dr. Eric Pearl an increase of the signal was observed, in many cases with significant differences and peaks, while in the silent moments and pauses the signal subsided. Fig.29 presents one of the examples. We may see some response to the beginning of the workshop, but really significant effect was detected during Dr. Pearl presentation. Energy was increasing during all the time of presentation and became stable, but very high, during group discussion. GDV measurements of fingers of the participants showed a significant glow increase after the seminar, which means that there is a positive impact of such practical training on the psycho-emotional state of man.

Similar results were detected practically at all workshops and conferences led by Dr. Eric Pearl. From physical point of view these phenomena can be explained by the formation of areas with low entropy in the room due to the focused attention of listeners, or, according to Professor William Tiller, "It relates to the formation of a negative magnetic charge in the environment. Furthermore, moreover if we take into account that the team of Professor K. Korotkov made measurements in the same room with us, then we can conclude that the interchange of information takes place between their system of measurements and ours!" A lot of these data are collected in the book "Science Confirms the Reconnective Healing", which may be found at Amazon.com.

Correlation between the results obtained by Dr. William Tiller and Dr. K. Korotkov make them more meaningful and open up further prospects for penetrating into the mysteries of consciousness.



Fig.29. Time dynamics of the Electrophotonic sensor area parameter for the first day of the workshop (September 12, 2008) with marked moments of interest: 1 – empty room; 2 – beginning of the workshop;

3 – break; 4 – second part of the workshop; 5 – discussion; 6 – Eric Pearl presentation; 7 – group discussion



Dr. Eric Pearl during healing session

Opposite effect was found during meditation sessions. In these cases energy in most cases decreased during meditation. An example from the workshop of Dr. Joe Dispenza is presented at fig.30.



Fig.30. Energy changes during Dr. Joe Dispenza workshop

These examples demonstrate that different mental exercises may have different effect both to participants and to the environment, and in many cases this effect is unpredictable as it depends on many factors, both internal and external.

Another important and interesting area of study was the field of musical environment. We carry out these studies in close collaboration with Prof. Eldar Hannanov, a musician and music theorist, Professor from John Hopkins University in the U.S.

Study of the Influence of Music

Despite the extensive information about the structure of a musical composition that has accumulated in music theory, cognitive musicology, theory of musical performance and ethno-musicology, the most important aspects of music remain unsolved. It is pertinent to recall the statement of Heraclitus "Nature loves to hide". The emotional and imaginative content of music is a hidden level of musical expression and musical communication. There are two aspects of the hidden part of music: psychological (dependent on the psychological properties of the individual) and environmental (dependent on the physical properties of music as such). While the psychological aspect may be investigated by experimenting with the body of the musician, composer or listener, the physical aspect requires the measurement and analysis of the wave of the environment of musical execution.

Both aspects may be investigated with the help of a wide range of techniques, including CT scan, EEG and ECG, recorded during the execution, as well as by statistical surveys of large groups of subjects. Nevertheless, all these methods can provide only partial results. They do not cover the basics of musical activity, the interaction between the body of the artist in general and the acoustic environment as such.

The first experiments were conducted at N.A. Rimsky-Korsakov Children's Music School in St. Petersburg on May 22, 2009. The program of works in four styles (Baroque, Viennese Classicism, Romanticism, and the music of XX century.) was performed by Professor E.D. Khannanov. Professor K. Korotkov organized and supervised the experiment; D. Orlov carried out technical support of the experiment including its timing.

The goal was to discover the fluctuations of environmental parameters during musical execution in the classroom. In addition, GDV images of the fingers of the musician before and immediately after the experiment were taken. Actually, quite a lot of musical tasks were put, beginning with the emotional state of the musician to testing the emotionalenergetic aspects of various musical styles, levels of entropy of each composition executed. and environmental characteristics of various musical forms. In musical terminology, the level of entropy can be understood as the level of dissonant harmony, and the form guality of glow in the GDV image may be referred, without significant loss of meaning, to the additional properties of musical form and the formal organization of music.

It was immediately apparent that on the resulting graphic of the Intensity the activity levels for each of the four styles are clearly defined (fig.31A). Here is how Professor Khannanov writes about this:

"The first composition executed in the experiment was the theme of Goldberg's Variations of I.S. Bach. In the graph it was manifested as a sharp decrease in the level of intensity from the background level of 60.00-62.00 to 59.00 followed by a slow rise to the level of 61.00 (Moments from 1 to 2 on the graph fig.31A). In other numerous experiments with the EPI/GDV Camera, including medical diagnostic tests, it was observed that a decrease in the glow intensity was related to the highest psychological concentration during the exercise

(music or sports), up to the altered state of consciousness. The profile presented on the graph was very typical in general for the Barogue style. The main idea of Bach's music is a slow ascent, often expressed metaphorically as an ascent from the earth to heaven. Many of the works of Bach, even large, such as Cantata No 54, got in musicology the definition of the "anabasis" cantatas, meaning those where the ascending melodic and harmonic motion prevails. The time aspect of the Baroque musical form is also reflected in the graph of Intensity. Bach's music is not articulated into small segments (such as the music of Viennese classics). Rather, it begins with the initiating push (with the nucleus, in the terminology of Taneyev), followed by a continuous development, such as the theme of Bach's fugues, for example. We can say that time in the Baroque music is running continuously and infinitely towards the eschatos.

Then the theme of the famous clavier sonata of Mozart K. 331 in A major was executed. Its level of intensity on the graph took the middle position, fully coinciding with the background level. This is the most important characteristic of the Viennese classical style which is often referred to as the "normative aesthetics". The purpose of composing music in this style was not the creation of something unusual, individual or unique, but the repetition of the existing forms and genres until perfection was reached. Beginning from the time of the classical French theater and Nicolas Boileau's treatise "On the poetically beautiful", the classical music has followed these norms and ideals. Accordingly, the level of entropy in this style should be minimal, as can be seen in the Entropy graph below. The form of the graph is also very characteristic of the Classical style: creating a nearly correct sinusoid the curve quickly reaches the lower end point, returns exactly to the median value, then it is doing the same in the upper region and the result is on the median value (Moments from 2 to 3 on the graph fig.31A). This is completely consistent with the concept of emotions in classical art: negative and positive emotions should be in full balance. Also, classic style is based

on a black-and-white scheme, in contrast to the subtle gradations in the musical Romanticism.



Fig.31. Fluctuations of GDV parameters during musical execution in the classroom

Next, two mazurkas by Chopin were performed. And again musicological assumptions were confirmed by the energygram: the trend line in this style was above the background. Indeed, there the highest value of intensity was reached: 63.00 (Moments from 3 to 4 on the graph fig.31A). Next came three pieces from the cycle "Kreysleriana" by Robert Schumann. The equipment adequately reacted to the famous passage at the beginning of the first piece, a stumbling block for many pianists. Also, the famous Schumann's mood swings, the essence of his music, were recorded by the sensor as sudden shifts.

The last sample in the experiment was "Garlands" of the two dances op. 73 by Alexander Scriabin. This last work of the author is so "not out of the world" that it does not fit even in the most abstract composition techniques of the twentieth century. And, as expected, the intensity level was very high, with very narrow spread of values (Moments from 4 to 5 on the graph fig.31A). Thus, Scriabin offers his audience a whole new range of emotions, such, in which, according to the author, "the highest refinement goes with the highest grandeur" and there is no place for human, too human." Thus, we found in the Intensity graph the four levels of intensity and four types of the line, totally relevant to modern concepts of musicologists and music theorists of the four major style periods of West-European music of Modern time.

The authors of the paper are ready for serious discussions on the technique and method of analysis. One of them could be that our equipment detects the simplest changes in the room acoustics, such as changes in volume and frequency, as well as variations of the sound attack. However, the fluctuations and the trend lines on the GDV graphs clearly demonstrate that they do not detect only these parameters. For example, the graph of Goldberg's Variations theme is lower than the segments of the graph, corresponding to the music of Chopin and Mozart, though Bach is executed always louder than Chopin and Mozart. As for the frequencies, Kreysleriana begins in the lower register than Goldberg's Variations but its curve is higher. Thus, it can be asserted that the GDV-gram shows all changes in the wave environment, rather than just its simple acoustic parameters.

What was shown in the graph is the musical-emotional intensity of the execution. Though the term was familiar even to the ancient Greeks, e.g. to Aristoxene, the Aristotle's disciple. In his treatise "Elements of Harmonics" Aristoxene suggests to measure intervals in the intensity degrees (tonos). In the latest study of the phenomenon Fred Lerdal, Professor of Columbian University, in his book "The Tonal High-Pitch Space" pays special attention to the category of intensity. In terms of physics, the music and emotional intensity can be interpreted as a temporary disorientation of the coherency of waves with their subsequent re-harmonization. In this sense, the definition of music from the times of ancient Greece was formulated as a game of tension and solution. In our case, the GDV Camera records this phenomenon as a level of entropy.

It is interesting to compare the elements of musical form with the isolated from the graph corresponding segments of GDVgrams. For example, the graph at fig.31B represents the area that corresponds to the first page of the first piece of "Kreysleriana".

The direction of the melodic line is opposite to the trend line of the Intensity: it is obvious that the Intensity graph is dependent on the melodic line. The higher melody aims, the lower the Intensity curve goes, in full accordance with the laws of GDV, as described above.

Thus, the GDV method enables to reveal the inner work of the emotionally intense component of music. It also offers the tools to work with physical characteristics of the musical-wave environment which was recognized by musicians and used in their work but they were not able to provide it in a scientific form prior to use of GDV technique".

Later we took measurements at various music concerts. Interesting measurements were carried out in the summer of 2009 at the presentations of the world opera stars Renee Fleming and Dmitri Hvorostovsky in the palaces of St. Petersburg. The performance consisted of two parts with a repetition of the same program that was dictated by the requirements of television. On July 13 the filming was attended only by technical staff and organizers; the event took place in the great hall of Peterhof Palace. It was constantly raining outdoors. On July 15 the public was invited and filming took place in the great hall of Yusupov Palace; after recording a violent thunderstorm burst out. In both cases the performances were accompanied by the Symphony Orchestra conducted by Konstantin Orbelian.

We were able to take measurements with Sputnik sensor at all concerts. And in every case the graph of parameter reflected the moments of actors' performance. An example of the graph is presented at fig.32.

This can be interpreted as the change of the entropy of signal at the time of performance compared with the background. We can say that the singers changed the entropy of the space. The difference in the nature of the signal was observed on July 13 and 15 One of the major differences between these points was that on July 13 the recording was made without spectators, and on July 15 it was carried out at the concert when the audience were in a state of emotional excitement throughout the evening.

At the moment it is not possible to conclude which specific emotional state of the performers and spectators had the greatest influence on the sensor signal. Obviously, the environmental conditions change and this does not depend on the number of people in the room, which allows us to reject the hypothesis of changing the composition of the air (first of all changes of humidity due to breathing). In addition, in this case there would be a permanent change in the signal in time, which was not observed in the studies. In some cases, in parallel with the signal of the sensor we measured the signal change of GDV glow of water that also responded to the directed people's attention.



Fig.32. Variations of the GDV Intensity parameter during performance

It is clear that stage performance strongly influence the artiste condition. A good example is the energy field of the orchestra conductor Konstantin Orbeljan before and after the performance. As we see this process has really dramatic effect: after the performance energy field practically vanishes! This confirms the idea that artists earn their bread by their own health.

We plan to proceed study in this field.



Energy Field and Chakras of the conductor Constantine Orbelian taken before and after performance 134 Reconnection Healing, Emotions and Music



After the performance