



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
ΑΡΙΣΤΟΤΕΛΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ

Θεσσαλονίκη, 15/5/2017

ΣΧΟΛΗ ΚΑΛΩΝ ΤΕΧΝΩΝ  
ΤΜΗΜΑ ΜΟΥΣΙΚΩΝ ΣΠΟΥΔΩΝ

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### Ανακοίνωση

Την Πέμπτη 18-5-2017, στις 12:30-15:00, στην αίθουσα 9, θα φιλοξενήσουμε τη Nana Simopoulos για διάλεξη και συζήτηση στο θέμα: «Sound and Healing». Η διάλεξη είναι ανοιχτή σε όλους όσους ενδιαφέρονται για το θέμα:

For over 20 years I have taught sound and music to visual artists. My classes began with opening up their ears and teaching them to shift their focus from frontal vision to multi-dimensional hearing. We focused on what the ears could hear and how to listen for the different elements in music and not just the music as a whole. My first exercise in class is dimming the lights, having the students listen to the sounds around them with closed eyes. After a few minutes, we open our eyes and discussed the individual sounds that occurred at that time.

It wasn't until a few years ago when a deaf student came to take my class that my understanding of how we hear sound changed completely. When we did the listening exercise, I wondered how she would do this task but she was able to tell us what she felt around her in terms of vibrations. I had her listen to the speakers with her hands and soon she was able to differentiate between subtleties such as deep sounds and high pitched ones, whether a sound had reverb or was dry. She composed a minute-long piece of music for the opening of her film.

My conclusion after working with her is that we don't hear sound just with our ears. We hear sounds with our entire body, with every cell in our body, with the mitochondria that live inside our cells and give energy to our bodies.

Our ability to produce sounds ourselves to release the tension in our bodies gives us an advantage over other types of therapies which are typically dependent on other individuals such as doctors or therapists. We have the ability to change the constitution of our cells, to reduce and eliminate tension and stress which if perceived to be harmful by the individual can be responsible for a host of ailments resulting in depression, unhappiness and even early death.

*If you look further into the science behind music you realize that the patterns of vibration and harmonic overtones that make up this art have a far greater impact on our world than anybody could ever imagine.*

Brian Deegan Peck

Pythagoras was a mathematician, healer and musician. He invented an instrument called the monochord. Instruments such as this one, the digeridoo and other resonating instruments such as the sitar produce overtones and undertones when played that are helpful in smoothing out the cells, creating more space so that the water can flow around the cells and release toxins. The monochord is an instrument with many strings, I played and recorded one that had 140 strings. All these stings are tuned to one note, the fundamental. The more you play the strings the more overtones emerge from the fundamental, creating melodies that float on the air. The sitar has 2 layers of strings, the upper strings are the ones that are played with the hands and the lower ones resonate by sympathetic vibration. The strings have to be perfectly in tune to the pure scale. The

didgeridoo's overtones are produced by the friction of the wind passing through the lips and amplified by the long tube. This is similar to Mongolian overtone signing where the singer creates tension by singing and "er" sound and changing the shape of the mouth to control the overtones.

Overtone series are more prominent in scales that are tuned to the Pythagorean scale, just intonation and pure scales and less prominent in equal temperament. This is due to the fact that the notes are tuned to the overtone series in the scale and can blend freely with the melody. This means that the piece being performed cannot change keys because the overtones will not agree with the notes since they are specific to the key that one is playing in and if a song modulates into a different key the ratios will change and be out of tune. Here are the harmonic overtones.

## Ratios of the physics of sound

- Ratios in the order they occur. Example is based on a frequency of 55 Hz (note A.)

|                            |        |    |
|----------------------------|--------|----|
| • 1:1 Fundamental (Unison) | 55 Hz  | A  |
| • 2:1 Octave               | 110 Hz | A  |
| • 3:2 Fifth                | 165 Hz | E  |
| • 4:3 Fourth               | 220 Hz | A  |
| • 5:4 Major third          | 275 Hz | C# |
| • 6:5 Minor third          | 330 Hz | E  |
| • 7:6 Minor third          | 385 Hz | G  |
| • 8:7 Major second         | 440 Hz | A  |

The brain emits certain frequencies when we are in different states. The most common is the Beta waves which emit frequencies above 13 Hertz. This is the active brain state when we are engaged in conversation or are mentally active. The Alpha brainwaves between 8-12 Hz come about when the mind is more calm and quiet, in a meditation state. Theta waves 4-7 Hz are rare and occur in deep meditation usually able to be done by people who have dedicated a considerable amount of time to meditation. The Delta waves 3 Hz, occur during REM sleep. A chart of the frequencies can be seen:

<http://hypertextbook.com/facts/2004/SamanthaCharles.shtml>

One of the most therapeutic things a person can do for themselves is get a good nights sleep. To many of us sleep with our cell phones nearby, have worked all day in florescent lights, have computer jobs, etc. All of these vibrate at very high frequencies. The brain has the ability to be entrained by the sounds and frequencies that these items emit and are around the person. In other words, the brain will match the frequencies that are nearby. With the use of binaural beats, we can entrain the brain to slow down and enter the Alpha, Theta and Delta states without being asleep.

In addition, certain breaths and sounds that Caryn Heilman will demonstrate are useful in slowing down brainwaves, increasing the energy emitted by the mitochondria and even erase memory.

Με εκτίμηση

Θεοδώρα Ψαλτοπούλου  
λέκτορας