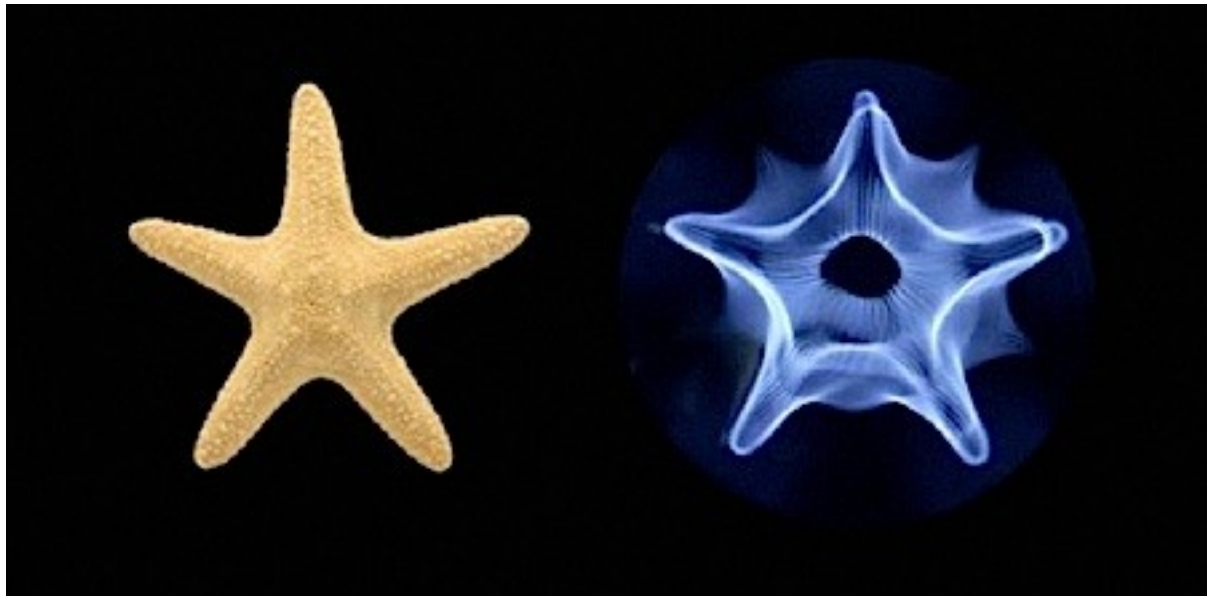


**KYMATIK,
THE STUDY OF MAKING THE SOUND VISIBLE.**



INDEX

Cymatics.....	3
History.....	3
Devices.....	4
Influences in art	4
Cymatic therapy.....	5
Animal language recognition.....	5
Crop cycles.....	6
Relationship to Lauteurythmy.....	6
Conclusion	7
Resources.....	7

CYMATICS

Kymatik (translated Cymatics) is the name given by physician and Anthroposophist, Hans Jenny to his study of how vibrations in fluids and particles affects form. Inspired by systems theory and the work of Ernst Chladni, Jenny delved deeply into the many types of periodic phenomena but especially the visual display of sound. He documented much of his work in still photos and videos that were published. Nowadays Cymatics is considered a scientific branch, the study of visible sound and vibration, a subset of modal phenomena. Typically the surface of a plate, diaphragm, or membrane is vibrated, and regions of maximum and minimum displacement are made visible in a thin coating of particles, paste, or liquid. Different patterns emerge in the excitatory medium depending on the geometry of the plate and the driving frequency.



The experiments results shows us that only modulating and changing the frequencies the matter reacts as we are used to see in our daily life in nature and in our bodies. Let us summarize some of the effects under the influence of vibration: the creation of forms, formations, the creation of figures, patterned areas, circulation, pulsation, rotation, interference, dee-saw effect, integration effect, individuation, conjoining and disjoining of a single mass, dynamics of eruption, dynamics of current flow, etc...

History

The history of the study of the patterns produced by vibrating bodies starts with the ancient Chinese with the spouting bowl on healing and spiritual uses. They were the first know to use the Cymatics. In the western, one of the earliest to record that an oscillating body displayed regular patterns was Galileo Galilei. On 1680, Robert Hooke was able to see the nodal patterns associated with the modes of vibration of glass plates. Hooke ran a bow along the edge of a glass plate covered with flour, and saw the nodal patterns emerge. In 1787, Ernst Chladni repeated the work of Robert Hooke and published "Entdeckungen über die Theorie des Klanges" ("Discoveries in the Theory of Sound"). Throughout the 1960s, up until his death in 1972, Hans Jenny took a methodological and exhaustive approach to documenting Cymatic phenomena.



Devices

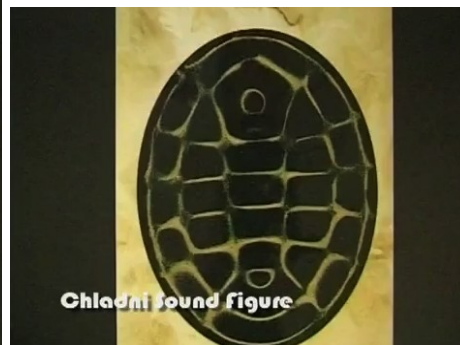
The ancient Chinese spouting bowl, or Chinese singing fountain, in which copper handles are rubbed and cause the copper bottom elements to vibrate are the first known device that uses the Cymatics effects. Other examples are a Chladni Plate or advanced such as the CymaScope, a laboratory instrument that makes visible the inherent geometries within sound and music. **The Tonoscope** is a **simple device** that uses a tube, a sounder box and a surface covered with a membrane **to make human voice visible**.



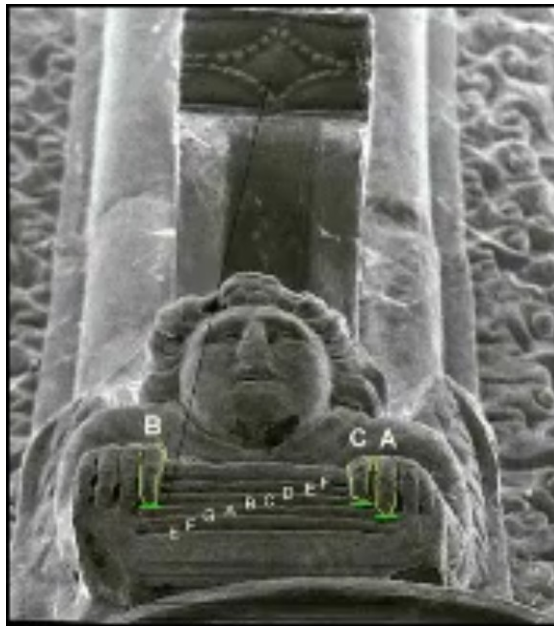
Influences in art

Hans Jenny's book influenced Alvin Lucier in the creation of his composition Queen of the South. Jenny's work was also followed up by Center for Advanced Visual Studies (CAVS) at MIT. They develop an experiment where small **flames** of gas burned through holes and thermodynamic patterns were made visible.

Alexander Lauterwasser photographer, philosopher and Cymatic researcher, published the book Lauterwasser that is particularly focused on creating exquisitely detailed visual **analogues of patterns found in nature**, ranging from the distribution of spots on a leopard, to the geometric patterns found in plants and flowers, to the shapes of jellyfish, the intricate patterns found on the shell of a tortoise.



The composer Stuart Mitchell claim that Rosslyn Chapel's matching Cymatics/Chladni patterns to the 13 geometric symbols carved onto the faces of 213 cubes emanating from 14 arches.

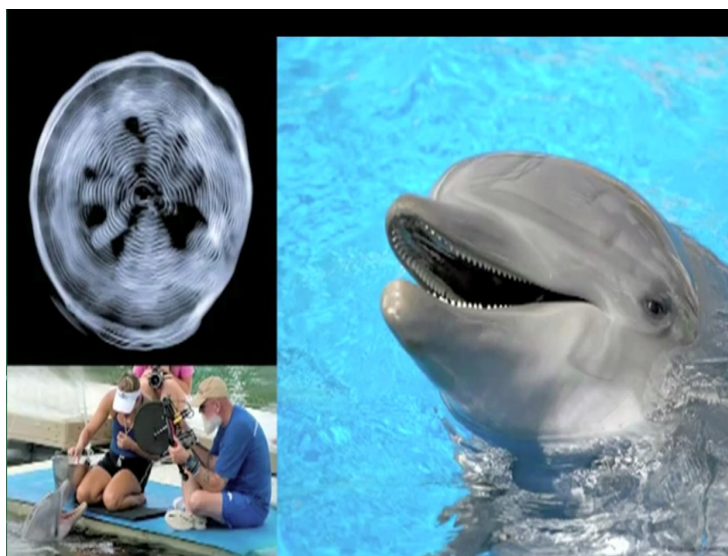


Cymatic therapy

"Cymatherapy", is an alternative medicine technique using acoustic waves which was developed in the 1960s by Sir Peter Guy Manners. This technique tries to return to its natural sound the ill parts of the physical body and energetic bodies, so there is also an energetic, an emotional and thinking process on it, instead of only physical vibrational treatment.

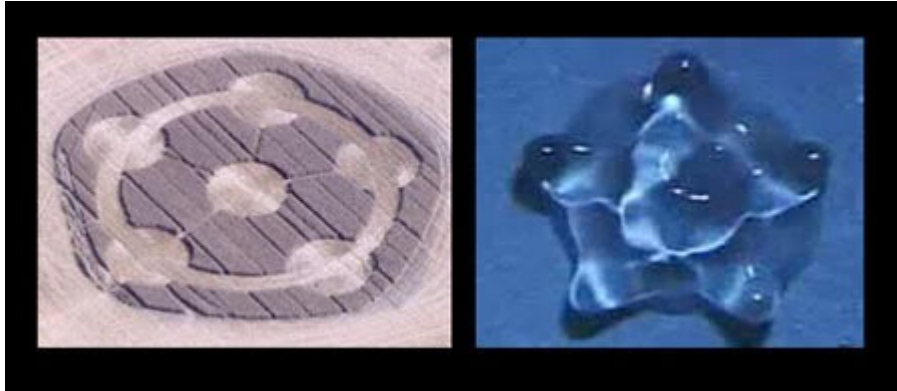
Animal language recognition

One of the most impressive and application is in the biology field when the animal language (sound communications) comes visible and the human being can trace and distinguish the different messages underlying on it. The first succeed in this field where in Los Angeles Aquarium with the creation of a basic dolphin lexicon.



Crop cycles

Some human beings saw a "hidden" message into the Crop Cycles mystery, lots of them were Cymatic patterns of certain vibrational effects on some specific matter. The Crop Cycles subject is very interesting because it opens to us the possibility that some advanced being, human or not, try to help us understanding this magnificent universe which such a beautiful and harmonic messages.



RELATIONSHIP TO LAUTEURYTHMY

The question is: how Cymatics science can help Eurythmy?

The smoke techniques to visualize human sound, that had been shown in the Lauteurythmie Symposium some weeks ago, makes a great inspiration and reveals clearly some important points that had been taken in the development of Eurythmy. Also it manifests the relationship between Air element and the Lauteurythmie gestures.

But Eurythmie is not something external, so how can we connect the Cymatics vibrational phenomena, that creates the geometrical patterns that we can see in Nature, with the human movement? What is inside the human being that creates our physical structure? Is Cymatics telling us about how the inner movement, that our spiritual being produces, becomes visible through our physical body?

Thinking on it, I start to view that Cymatics can be used to help Eurythmist to tune themselves and see how their individual archetypal sounds are produced. The tonoscope may help in the visualization of sound in different elements: earth, water, fire, air.

The patterns can be associated with the geometrical work that Eurythmie trains our mind in the process of achieving the universal laws. The sound that produces that patterns can be inspiration of thoughts, emotions and physic manifestation. So we can trace the moods, thoughts and body reactions as an archetypal dictionary of universal patterns that sound is associated with.

The encephalography can help to tune and show mind patterns and then can be translated into sound and create a kind of visualization of mind activity, brain cerebral processes. We can see it as a way of researching the archetypal thoughts that are behind the movement. So if a eurythmist do a A sound we can register the whole aspects from the mind, the sound, the movement and then translate and see it as a sound transforming matter so that can be a picture for inspiration in the formation of eurythmist or educational pictures in the pedagogical and therapeutic Eurythmie.

Eurythmy works with the super-sensible aspects of vibration: in the soul, in the mind and at the same time there is a dialogue with the Air Element that creates forms, because Eurythmy sounds. Some of the super-sensible aspects with certain technology can be shown (brain

waves, thermometry, kirlian images) and that can be translated to sounds and then visualize the patterns and geometrical formations.

As an artistic work the patterns and the geometrical formations can be a part of the choreographic creation in the Artistic Eurythmy because the music can be also observed in its dialogue with the elements.

In the speech, *Lauteurithmie*, we can visualize the important patterns and form creations (movements) in the verses as a part of the inner message underlying the poems.

So the simple tonoscope can be a powerful tool to inspiration, study, therapeutic and own discovering for eurythmists when they work. Moreover if we use a complicated instruments we can go further.

This ideas, in my point of view, has to be taken as a complementarity instrument for the Art of Eurythmy that can help eurythmist to face up with their creations as a feedback picture to grow in this spiritual art. Otherwise the Cymatics pictures could be a mind inspiration when we trace an association with *lauteurhythmical* archetypes and its effects on matter.

CONCLUSION

Cymatics can teach us much about understanding the formation of structure in the Universe at all scales from atomic and cellular through all living things to planetary and galactic.

Metaphorically, our physical body, emotions, and thought processes are like cymatic forms which are organized by underlying vibrational fields, the densest (the physical), being animated by the subtler vibrations.

Eurythmy could be inspirited by such of natural phenomena and at the same time strength its teaching with spiritual scientific results of Cymatics in both theoretical and practical way.

RESOURCES

Publications

- 1954: *Der Typus* (The Type) a study in morphology
- 1962: *Das Gesetz der Wiederholung* (The laws of Repetition)
- 1967: *Kymatic* (Cymatics) Volume 1
- 1972: *Kymatic* (Cymatics) Volume 2
- July 2001: *Cymatics: A Study of Wave Phenomena & Vibration* (3rd ed.) (Vol. 1 and 2)
- Jenny, Hans (2006). *Cymatic SoundScapes*.
- Lauterwasser, Alexander (2006). *Water Sound Images*.
- Web resources:
- Cymatics: <http://en.wikipedia.org/wiki/Cymatics>
- Hans Jenny: [http://en.wikipedia.org/wiki/Hans_Jenny_\(cymatics\)](http://en.wikipedia.org/wiki/Hans_Jenny_(cymatics))
[http://de.wikipedia.org/wiki/Hans_Jenny_\(Arzt\)](http://de.wikipedia.org/wiki/Hans_Jenny_(Arzt))
- Cymatica.net : Architectural thesis investigation into the synthesis of space and form generated from sound
- Cymatics.org: Cymatics images & video capturing the interaction of sounds with liquids
- The Frozen Music of Rosslyn Chapel
<http://www.interferencetheory.com/Articles/files/544e307e7c540c745a0340683695d1a0-3.html>

Online video sites anyone is able to find plenty of videos about Cymatics, how to build tonoscope, hypothesis of further applications, etc ... There is a lot of web sites that dedicates articles to Cymatics and its application and philosophical and spiritual interpretations.