

Excerpt from
Rosslyn Chapel
“The Music of the Cubes”
by Thomas J. Mitchell

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After many years of research with no real connection having been made, (*of all the cubes on the ceiling of the Rosslyn Chapel*), there was one avenue that I had not fully investigated: an unusual and highly undervalued science, which was named Cymatics in 1924 by Dr. Hans Jenny, but which was first discovered and experiment with in 1725 by Ernst Chladni. (This date is one of the reasons that I left this subject to last since this science was (apparently) discovered at least 300 years after the design of Rosslyn. So it seemed highly unlikely to me that knowledge of this science would have been held by the designer of the Rosslyn cube music).

Nevertheless, extensive study and research into this sound-wave phenomenon proved to be the ‘under one roof’ scenario that I had been looking for. Every pattern that I found produced by those ‘pure notes’ mirrored in every detail the six basic patterns on the Rosslyn cubes. Before we go on, I will give you a brief overview of the historical application of Cymatics and how these patterns are produced, by using an unbelievably simple apparatus that could have been invented at any other time in history.

The first experiments involving waveform patterns were performed and recorded by Ernest Chladni, an 18th century scientist, and this led to further experimentation in the 19th Century by Margaret Watts Hughes, a singer and amateur scientist. Incredibly, the apparatus used by each of these groundbreaking enthusiasts on this subject produce similar patterns, and the higher the pitch, the more complex the patterns and forms become. Chladni used a glass plate with fine sand strewn across it and ‘stopped’ or dampened the plate at various points then vibrated the glass with a violin bow, during which the sand, ‘excited’ by the frequency of the vibration (note/pitch) produced a geometric pattern, symbol or signature. Margaret Watts Hughes used a method/instrument she invented name the Eidophone, basically a ‘flower pot’ with a hole in it and she stretched Indian rubber over the top to act as a diaphragm, onto which she scattered fine sand. She would sing a very controlled note of definite amplitude and pitch to produce intriguing forms/patterns extraordinarily similar to those which Chladni had brought forth but with her voice. Mrs. Watts Hughes’s observations and patterns are in my opinion the closest examples there are to the Rosslyn Chapel symbols.

The later experiments by Swiss medical doctor and natural scientist, Hans Jenny (1904-1972) investigate these phenomena in even greater detail using crystal oscillators to generate a pure tone using a machine he himself invented, call a Tonoscope. Dr. Jenny named this new area of research ‘cymatics’, which comes from

the Greek word *kyma*, meaning 'wave'. Cymatics could be translated as: the study of how vibrations generate and influence patterns, shapes and moving processes. Even though Dr. Jenny's experiments used a higher and more efficient technology than his predecessors, the outcome of all the experiments over a three hundred year period, produced broadly the same (geometric) results. *In all, the effect of the pitch and amplitude of a note universally creates the same fundamental pattern even under different conditions, materials and apparatus.*

One of the Margaret Watts Hughes experiments in 1825 that intrigued me was when she began to apply powder with colour pigments, such as yellow, blue and red, where she found that the colour powders would arrange themselves into specific areas and patterns due to the frequency of the note applied. The note is simply vibrating in sympathy with the frequency (waveform) of the colour itself.

It would be extremely interesting to have had the opportunity of asking these pioneers of waveform vibration what their conclusions regarding the symbols on the Rosslyn Chapel cubes would have suggested. I feel with great certainty that they would have been remarkably surprised and intrigued to be confronted with an array of symbols that, in reality, had obviously been explored and discovered at least two centuries before their own discoveries and experimentations. If only Ernst Chladni or Margaret Watts Hughes had visited Rosslyn Chapel during their lifetime, we may have heard the music that those symbols produce, in order of their sequence, at least 200 years ago. However, I have applied the system to the cubes and believe that this is the music that was intended by its creator.

Interestingly, the fact that all of these geometric symbols on the cubes are collectively found under the wave form phenomena of Cymatics merely confirms that the arrangement of cubes are in fact musical notes and I believe it is beyond coincidence that Cymatics symbols match the Rosslyn Cube symbols and are the by-product of the frequency of diatonic musical pitches and their effect upon nature. All things considered, this means that the designer of the symbolic notational system within the chapel was aware of this science at least 250 years before its initial discover, or potential "re-discovery." By Ernst Chladni in the 18th Century.

If you begin to think about Cymatics as musical vibration upon the world of nature, you begin to see the patterns emerging in a bigger picture and even in a macro-cosmic way. Cymatics is present all around us, it always has been and it has been expressed and utilized for over 2000 years within Vedic and Hindu meditation and chant. They claim they are "channeling and patterning their energies up and down the lines of frequency using specific frequency vibrations (specific note pitches depending on the meditation) produced by their voice and body resonance". Chanting the word 'OM' in F# resonates your energies into the Earth frequency while other notes and tones serve other energy patterns for healing and spiritual cleansing of the aura.

There was also an interesting discovery made during the experiments of Dr. Hans Jenny when he reported in his book 'Cymatics' that when the vowels of the ancient languages of Hebrew and Sanskrit were pronounced into his Tonoscope, the sand took the shape of the 'written' symbols for each of the vowels; our modern languages however did not produce the same phenomena. This could mean that the original ancient languages were born out of knowledge of sound and vibration and its healing/therapeutic properties.

Recent Cymatics experiments performed on the Sarcophagus in the The Great Pyramid at Giza by acoustical physics and sound engineer John Reid may confirm this. He explains in an interview that while firing note frequencies across the membrane stretched over the top of the sarcophagus for the first time, to his astonishment the sand was producing patterns he had never seen before in any other cymatics experiments; the sand was organizing itself into well-known Egyptian hieroglyphs. This is because of the properties of the quartz crystals within the granite of the sarcophagus itself allow the box to make its own sound and generate its own frequencies. Each hieroglyph that was produced by John (over twenty of them) has found its way into the Egyptian language by the vibration of sound. This also means that if you were reading hieroglyphics you would also be hearing a pitched note at the same time in your head. Languages based on the fusion of image (pattern) and sound (frequency) would (to a musician) make a lot of sense.

Note from Christina: I could go on and on with the exciting and thought provoking information in this book but you have had a tidbit of this fascinating book. Here is the information to get your own copy of the book and the CD.

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