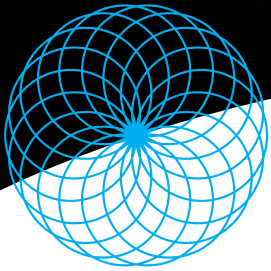


TAPPING INTO SOUND SCIENCE

by Mandara Cromwell



"Cymatics is the science of making sound visible. Through our modern day technological advancements, we can now explore the invisible world of sound. What we consider to be beautiful sounds displays as exquisite geometry."

Sound affects us in a variety of ways, impacting our physical, emotional, and mental health.

There's the "move over" sound—a siren that immediately signals us to "move over" and let the ambulance, fire engine, or police pass by.

The "coffee shop" sounds—the espresso whistle, combined with the scent of freshly brewed coffee, pastries, and desserts, signals our brain that it's time to put something in our mouth whether it be liquid, solid, or both.

"Restaurant sounds" vary from the tapping and clashing of dishes to the fast or slow-beat of background music—sometimes not so background!

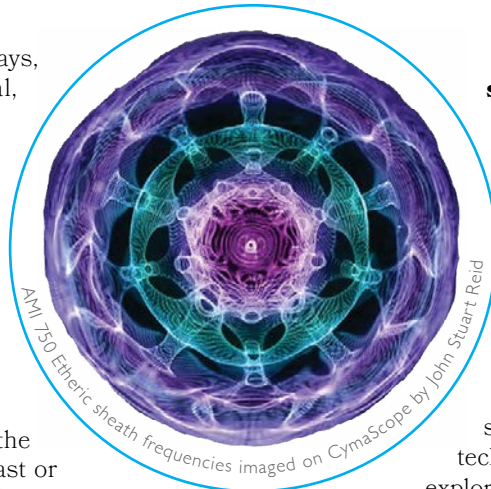
Deepak Chopra says we "metabolize all of the sounds in our environment." At any moment we can do a "sound check" on our environment and ask ourselves, "Are these sounds increasing or depleting my energy? How are they affecting my ability to focus and concentrate?"

Understanding Sound

To help understand sound, let me introduce the other side of the energy coin, light. Visible light is part of the electromagnetic spectrum. The energy of an electromagnetic wave arrives in chunks consisting of little particles of light called **photons**. At the biological level, light is referred to as a **biophoton**.

Sound is not visible, nor is it part of the electromagnetic spectrum. Sound is a wave of pressure—a mechanical wave—and requires a medium such as air or water to propagate. The **phonon** is the amount of acoustic or vibrational energy. The **biophonon** (sound energy) sits aside the **biophoton** (light energy) as an element within our biological structures, so sound and light exist beside each other. Physicists tell us that sound creates the structure for the light to communicate.

Danish scientists theorize that our nerves communicate through sound impulses, not electricity. In my view, sound precedes the electrochemical signaling within the body.



Now, let's employ the principles of **sonoluminescence**—the emission of short bursts of light from imploding bubbles in a liquid when excited by sound.

Sound creates the form for light to communicate, and the vibratory pulses (sound) at the cellular level spark the light. Thereby sound and light begin their cellular dance, resulting in the symphonic orchestra of the human body. It's a beautiful thing!

Cymatics is the science of making sound visible. Through our modern day technological advancements, we can now explore the invisible world of sound. What we consider to be beautiful sounds displays as exquisite geometry. Sounds that are displeasing to the ear represent as an unattractive visual.

Through the National Aeronautics and Space Administration (NASA), the sounds emitted by the planets (and many of the stars) were captured. These sounds were fed into a "cyma scope" and each of them portray their own beauty.

Researchers are currently working to capture the sounds of our cells—healthy and unhealthy ones alike. CymaScope inventor John Stuart Reid reports, "This could be the emergence of a new science that we might call "biocymatics," the study of the biological properties of living cells by examining their effects on sound-induced water-wave patterns. The future applications of biocymatics could be used as part of our biomarker testing—another fascinating aspect of sound science. 🌸"

Mandara Cromwell is the Founder and Board Chair of The International SoundTherapy Association (ISTA), producer of *Cymatics—The Science of Sound and Vibrational Healing* Annual Conference, CEO and President of Cyma Technologies, Inc., and 2013 Nominee for the Thomas Edison Award for Innovation in the fields of Science and Medicine for the AMI 750. www.ISTASounds.org