

Firmament of Sound

Before there were eyes to see
when a vast darkness still permeated the void,
All rested beneath a firmament of Sound.

I stare into the primal pool
breath ripples the water
and light appears –as if from within–
a raiment of pastel profusion
barely the faintest hint of definition.

I open myself and eyes appear
–as if from within–
so that I might see myself
apart from the landscape,
a part of the landscape–
my original face
peering out of the darkness,
peering into the void.

Without fear; without pain;
no sharp edges; no hard places;
no borders.
Nothing to recoil from
no need for protection
no need for rejection–
no separation.

I raise my voice and Behold! I Create
my own personal playground,
a universe of figure, form and motion
arising from my impetuous imagination.

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FROM VIBRATION TO MANIFESTATION: Assuming our Rightful Place in Creation

All is vibration! —Novalis

Editor's Note: The following article builds on *Cymatics: Insights into the Invisible World of Sound*, published in the Summer 2009 issue of *The Quester*. A brief overview of the science of Cymatics will be given at the outset, but for a more thorough understanding, please refer to that article at <http://www.cymaticsource.com/pdf/CaduceusArticle.pdf>.

Cymatics in a Sound-bite

Cymatics, the study of wave phenomena and vibration, is a scientific methodology that demonstrates the vibratory nature of matter and the transformational nature of sound. It is sound science at its finest, and its implications are vast! The term (*Kymatiks* in German), was adapted from the Greek word for wave, *ta Kyma*, in the 1960s by Swiss medical doctor and natural scientist, Hans Jenny (1904-1972).



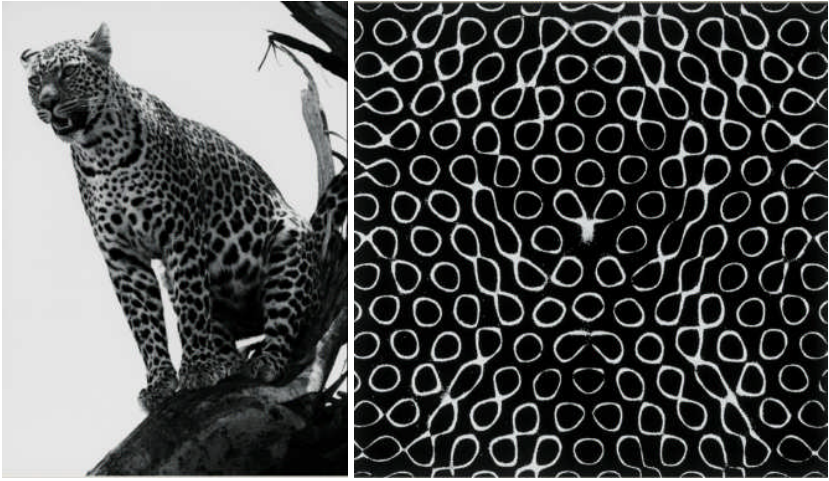
Hans Jenny demonstrating his electro-acoustic 'tonoscope'.¹

What sounds like very dry science is actually a marvel to behold. Watching just a few seconds of Jenny's experiments using audible sound frequencies to animate inert powders, pastes and liquids into life-like flowing forms, offers a rare glimpse into the hidden dynamics of nature.²

The similarity between these "standing wave" patterns of resonance and the forms of flowers, plants and animals, hints at the universality underlying manifest creation. Witnessing the processes that bring these forms into being, offers us penetrating insight into how an elaborate web of vibrations interacts to create the world we perceive.

Penetrating the Mystery of Perception

It's important that we remind ourselves of the magnitude of this mystery...that all the things we see around us as solid, unchanging and inert, are actually oscillating fields of pulsation, and that in a very real sense (whatever "real" may mean) they only become "things" when we



The pattern formed in lycopodium powder on this steel plate (vibrating at 10,101 Hz.) bears a striking resemblance to the markings of a leopard.³

perceive them as such! This has been repeatedly demonstrated, using accepted scientific methodology, in the enigmatic experiments attempting to isolate and define subatomic particles, which appear as particles when searched for as such, but as waves of energy when approached with that expectation. From this perspective, one can begin to perceive the world as a vast interlacing network of discreet fields of oscillation, which become “things” as they interact with the pulsations of our perceptual senses, which are also subtle vibrational fields. As I contemplate this, a snowy egret glides in to perch in the shadow of the footbridge arching across the narrow inlet of a small pond. It is focusing its attention a few inches beneath the water, looking for the shimmering glint of its next meal. Meanwhile, the muted sunshine of this cloud-swept afternoon reflects her graceful white curves back to my eyes as specific pulsations of light, which interact with the pulsations of my neurons to create an impression (as standing waves in my visual cortex), which then stimulates the subtle ethers of my memory center (more pulsating neurons), and I perceive it as a bird. Is the bird out there, or a composite of oscillating impulses assembled in my brain? Well, I guess we’ll have to ask that little striper, who is now pulsing inside the egret’s gullet!

This may seem like a frivolous exercise in abstraction, but simply questioning a few of our basic assumptions about the way we perceive our world (and ourselves!) may yield rich, and unexpected insights. The beauty of Cymatics is that it provides us with a solid foundation to

begin to question some of these assumptions. One might well wonder, what is so interesting about watching a mass of powder moving around a steel plate? Perhaps it depends on your ability to discern patterns, not just in the migrating sand, but in the interplay of sound—the animating principle of vibration, interacting with substance—the dense matter that gives form to these dynamic structures. These experiments provide a physical representation of the creative and transformative potential of vibration—sound, in this case—in a way that is readily seen, heard and understood, and which is scientifically verifiable and repeatable. Viewed from a broader perspective, one may begin to recognize certain universal principles that apply as much to the way we think and feel as they do to the machinations we observe in the external world.

The Persistence of Repetition

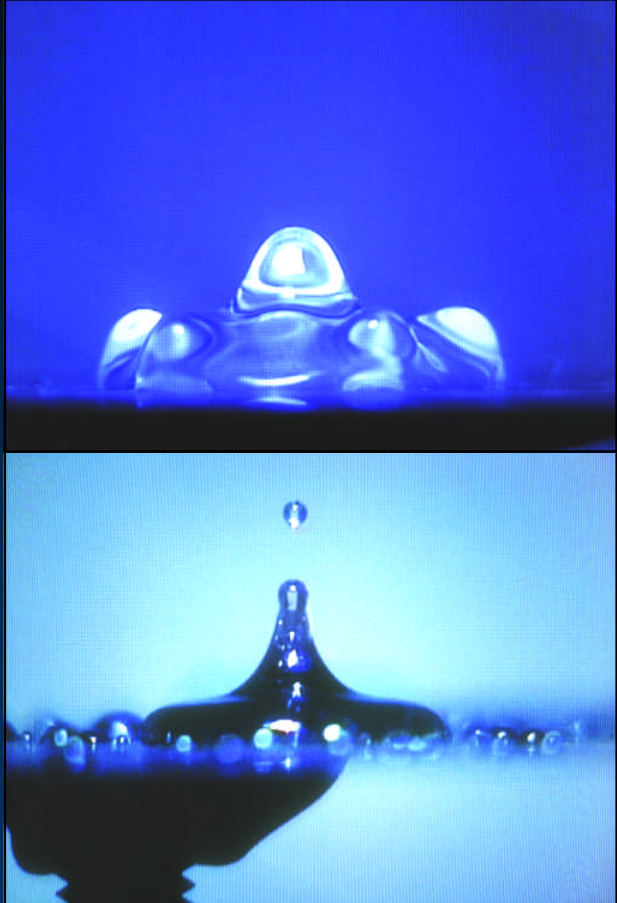
All throughout nature, from the infinitesimal to the infinite, there is a striking consistency of form and structure—though, as with snowflakes, there seem to be virtually endless variations or iterations of a few basic patterns. Materialistic science is at a loss to explain why certain geometric forms, like the golden mean spiral, hexagon and sphere, comprise the basis of so many of these nature-forms, and why these same patterns tend to replicate in such diverse dimensions as single celled sea creatures and cosmic dust clouds light years in diameter.

An increasing body of scientific evidence suggests that the material world is held together via resonance—that mysterious property that determines how subatomic particles orient and bond with one another, as well as the massive oscillations of gravitational fields in galactic interactions. On a more human scale, this same principle underlies the science of homeopathy (Doctrine of Similars) as well as the practice of dowsing. Dowsing shows that what seems to be unrelated from a material perspective may be linked in ways that are not immediately perceptible, and the science of Cymatics offers deeper understanding of these normally invisible workings of resonance. As we witness audible sounds exciting inert masses of sand and water into dynamic forms that mimic living organisms, we can begin to visualize the hidden mechanisms that animate our world.

While Jenny's experiments, and those of subsequent researchers in Cymatics, are conventional physics and solidly based in the observation of causal relationships of physical phenomena, the magic of this scientific artistry comes in its interpretation. Cymatics shows how vibrations interact to create the world we experience 'out there,' in the dense physical world of matter, form and function—while illuminating hidden

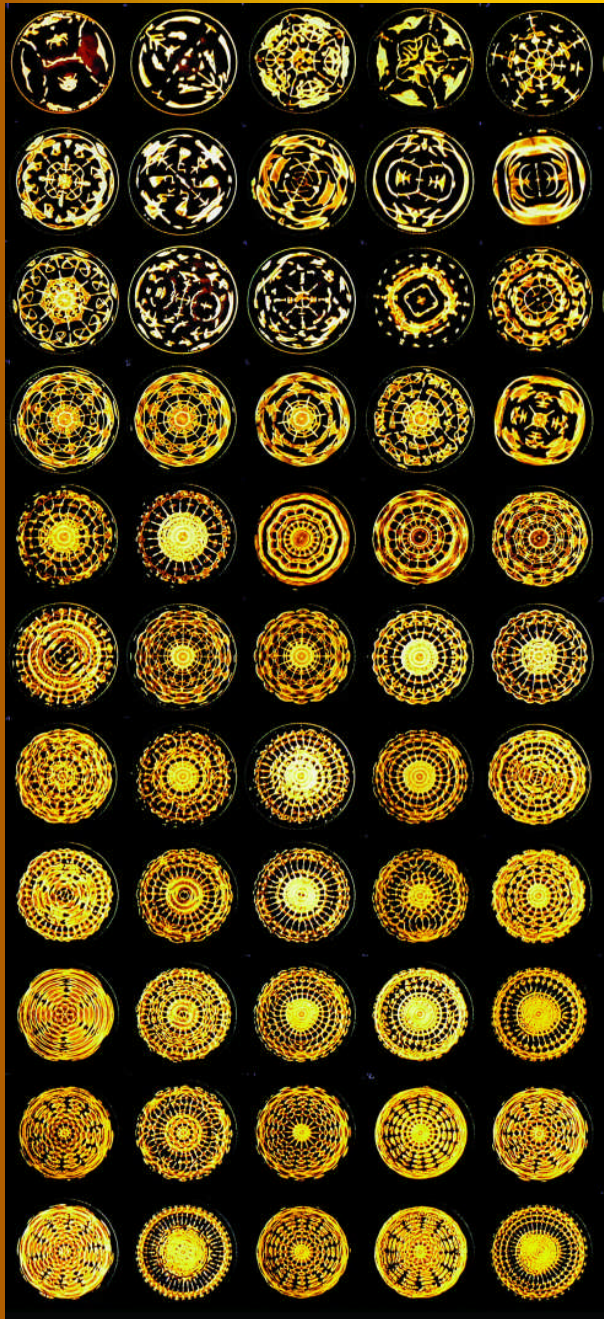
WAR OF THE WORLDS: The Dynamics of Polarity

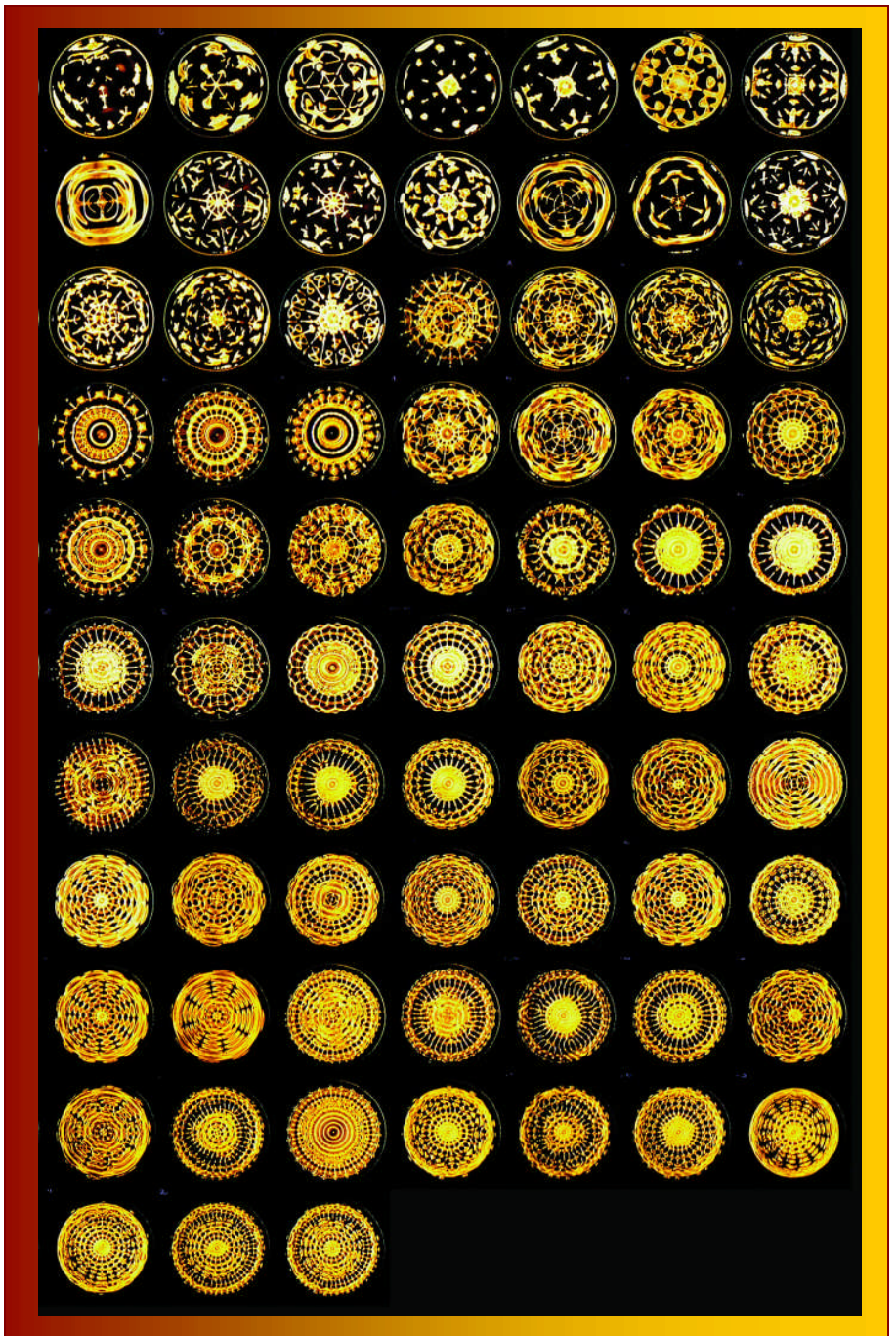
A small sample of water is placed on a Petri dish and illuminated from above. As electronic impulses in the audible range are fed into a small crystal attached to the bottom of the plate, the plate and the water it contains, begin to vibrate in response to the specific frequency imposed...and immediately chaos ensues. The water responds by moving away from the imposing force, only to strike the edge of the dish where it is reflected back, flowing back through itself again toward the source of the impulse. This is similar to what you can observe when ocean waves strike a vertical rock face. But here, because of the confining circumference of the dish there is nowhere for this energy to dissipate, and due to the extraordinary fluidity of water, within a short period of time, complex and intricate three-dimensional flow patterns are created which suffuse and circulate throughout the entire mass.



Phases of oscillation in water droplets under the effect of vibration. Although these droplets are not contained, the viscosity of the water itself creates similar effects to those described above.⁴

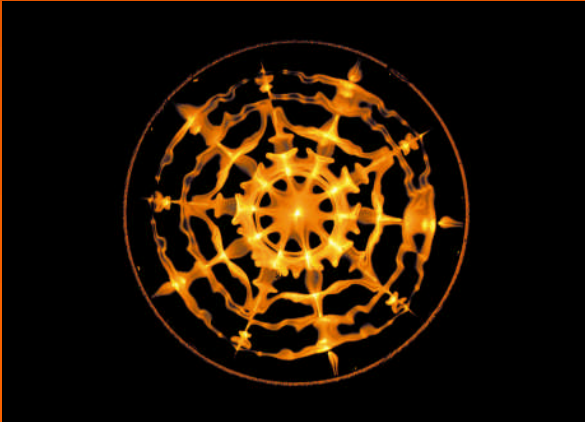
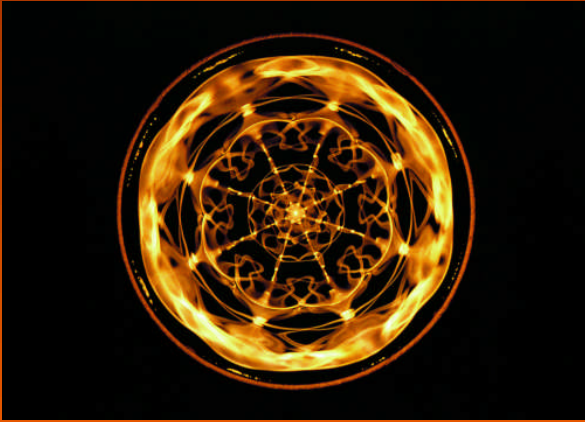
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#6]







Intricate geometric forms arise as 'standing wave' patterns, reflected on the surface of small samples of water while under the effect of vibration.⁶



principles that underlie all natural processes. These very same principles are also operative in our subjective worlds. Once we truly understand these causative principles, we can apply them to every aspect of our lives, including the rarefied vibrations of perception, feeling, emotion, thought and belief. It is these subtle realms that must be brought into coherency in order to effect lasting change or “sound health.”

What we’re observing in these dynamic patterns is the result of two conflicting principles in action; matter’s innate tendency toward wholeness and integrity (in this case, water’s viscosity, its propensity to ball up into a droplet or a sphere) and the effect of an external force (whether it be the “pull” of gravity, or in this case, the “push” of an imposed vibration). This can be viewed at another level of function as the tendency toward repetition vs. the compulsion to change. This dynamic between stasis and growth goes on constantly and is characteristic of the domain of physicality. It is the “yin/yang” principle that underlies heredity and evolution, racial and cultural identity and individuation, tradition and innovation.

Since the water is contained in a dish with a certain radius, when the animating frequency is in direct whole number ratio to that diameter, a phenomena called ‘standing waves’ appears. This simply means that the pulsations passing through the water form crests and troughs that appear static, due to the stable relationship of the frequency of pulsation to the size of the container. Every particle of water is still vibrating, pulsing and flowing, but when viewed from above, the sample appears as a fixed geometric pattern, which Jenny called a harmonic structure, since it is literally a harmonic of the energizing frequency⁵. [Refer to images on pages 34]

In his book, *Water Sound Images*, Alexander Lauterwasser created montages of these ascending harmonic forms of sand on steel plates, and in water, as pictured here. [Refer to image on pages 32 - 33]

As the water is subjected to gradually increasing frequencies, the complexity of the patterns increases with the pitch of the exciting tone. At a critical pitch, the sample dissolves into chaos, only to re-configure into a higher order of complexity as the tone continues to ascend. This process of chaos and re-integration continues as the frequency ascends, while the periods of chaos become shorter in duration and arise at more frequent intervals.

This process may be observed in many phenomena, from the valence fields of electrons within the atom (whose complexity increases as you ascend the Periodic Table of Elements), to the harmonic series that is

generated each time a string is plucked, to complex turbulences that create weather patterns, to the intricate physiological processes within our bodies that allow us to function in homeostasis within an ever-changing sea of vibrations (our environment). I like to think of it as a “living metaphor” for the process of evolution that occurs at all levels of creation, from the physical to the subtlest domains of consciousness, where its implications are even more impressive.

Once you’ve objectively observed how a stable structure can dissolve into chaos, but then in just a matter of seconds, re-configure into a more complex and finely-ordered form, you can begin to view your own tumultuous circumstances a bit more objectively (and perhaps with a bit less apprehension!) as a purposefully evolving process leading toward greater personal equanimity and coherency. It’s also heartening to note that although the periods of chaos may be rather disorienting, and arise with greater frequency as you “ascend,” at least they don’t last as long!

The Illusion of Circumstance

This has been but a brief sampling of the myriad implications of how we might view our lives through the principles of resonance, as portrayed through the science of Cymatics. One last principle that I would like to consider is about *recognizing yourself as the sole cause of your experience*. It’s very convenient to blame circumstance for our lot in life, or why we feel the way we do at any given moment. This is actually a very disempowering attitude that keeps us victimized through our own adherence to the world of appearances. **Once one has truly penetrated the illusion of circumstance (things happening to you) you may become free to fully enjoy your experience of life as the sport of creation.**

We tend to be creatures of habit, not just in what we say and do each day and in how we like things to be, but more so in the subtle vibrations of that complex of thoughts, feelings and unconscious tendencies—the self-concept that we entertain. These fixed “frequencies” (states of consciousness) tend to predominate, and we then animate our experience of life in a manner that is consistent with our habitual beliefs about the way things are, or should be. It is a monumental undertaking to attempt to change these habits, but we *can* become aware of them as they arise, and then choose to view our experience in a more fluid way, as a process that’s not fixed and solid, defined as intractable needs vs. immutable laws. In that moment of choosing, we may begin to view life as a resonant field of potential that exists in a perpetual state of flux...a super-charged atmosphere that is extremely sensitive to the subtle influence of

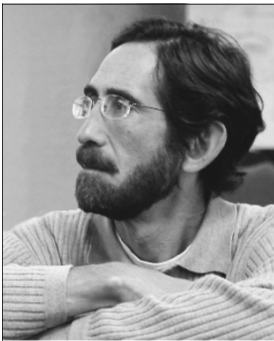
however we may be thinking and feeling in the moment. This is a very challenging undertaking, demanding diligence and determination...but any effort put forth toward this goal will be richly rewarding.

Cymatic phenomena clearly demonstrate that “how things show up” is *always* a result of more subtle, invisible vibrations. Change the vibration, and you change the manifestation. From this enlightened perspective, you can begin to accept that “The world in which you live has not been projected onto you, but by you.”⁸ In other words, we can re-define circumstance in accordance to its literal meaning: that which happens around (circum) the “stance” that one maintains.

As we recognize this simple truth—that it is the way we view things that determines how they appear to us—we grant ourselves the freedom to see things the way we’d like them to be. By making a deliberate effort to view from the broadest perspective possible, we immediately begin to resonate more fully with the life current which is flowing abundantly and unerringly through everything all the time...even in this moment, now. As we tune into this current we’re instantly flooded with feelings of happiness and bliss; a sense of ease pervades our consciousness that is totally independent of circumstance...and we begin to recognize that this expanded awareness is who we truly are. And all we *really* want is more of *that*!

“There is no technique for awareness, only the dissolution of illusion.”⁹

These are some of the themes we’ll explore at my presentation Saturday morning, 25 Sept., at the Quester’s Conference and in greater depth during my experiential Post-Convention workshop, **Cymatics: The Experience! Vibration Creation Transformation** on Sunday afternoon. I look forward to seeing you there!



Jeff Volk; Poet, Producer and Publisher. For the past 25 years, Jeff Volk has been popularizing the science of Cymatics, which demonstrates, through simple physics experiments, how “inert” matter can be “animated” into life-like flowing forms, by the subtle, invisible forces of vibration. The implications of these experiments are vast, and have inspired profound insights into the invisible realms of nature, in many who have seen them.

These insights pertain not only to our world at large, but also in deeply personal ways to the hidden realms of human nature, which are often just as mysterious.

As a producer, his 1993 documentary, *Of Sound Mind and Body: Music and Vibrational Healing*, won the Hartley Film Award through the Institute of Noetic

Sciences, and its phenomenal success inspired him to produce The International Sound Colloquium, the premier conference exploring the power of sacred sound and healing music, throughout the 1990s.

He has distilled this wealth of experience into multimedia presentations and into feature articles, which have been published worldwide. MACROmedia Publishing, Jeff's company, publishes books and electronic media which inspire and enlighten the discerning spiritual seeker.

Jeff's penetrating poetry springs from pondering how these universal principles of cause and effect that are demonstrated objectively in the realms of physics by Cymatics, play out subjectively, in our personal lives. His work spans a wide range of topics, but always seeks to offer a wider perspective and inclusiveness that integrates the disparate...in ways that only poetry can.

His first book of poetry, *The Ambiguity of Autumn: Poems of Love, Longing and Transcendence*, has just been published by In'fable Impressions.

Further information may be found at www.cymaticsource.com

References:

1. From *Cymatics: A Study of Wave Phenomena and Vibration*, by Hans Jenny. ©2001 MACROmedia Publishing, Newmarket, NH USA. <http://www.cymaticsource.com>
2. Film footage of Dr. Jenny's experiments has been compiled into a DVD, *Cymatic SoundScapes: Bringing Matter to Life with Sound*, available from MACROmedia Publishing, Newmarket, NH USA. Excerpts from this program, and other Cymatics footage may be viewed via links from our website, <http://www.cymaticsource.com>
3. Images by Alexander Lauterwasser from *Water Sound Images* ©2005 MACROmedia Publishing.
4. Images by Alexander Lauterwasser from *Water Sound Images* ©2005 MACROmedia Publishing.
5. This is not necessarily a logarithmic harmonic of the frequency, per se, as in the overtone series of a particular fundamental. Rather it is a harmonic of the substance itself, in relationship to the animating frequency and the material upon which it is vibrating. In *Water Sound Images*, Lauterwasser documents the distinct 'scales' of two different steel plates as determined by the intervals of the modes that appear in sand spread across the plate, as the frequency is steadily increased. Each coherent pattern (called a mode, in physics) that emerges from the turbulence of chaos, corresponds to a 'note' for this particular plate's 'scale.' Interestingly, he found that most plates had very definite repetitive sequences with major transformations in the complexity of the patterns, occurring at regular intervals of seven or eight modes.
6. Images by Alexander Lauterwasser from *Water Sound Images* ©2005 MACROmedia Publishing.
7. Images by Alexander Lauterwasser from *Water Sound Images* ©2005 MACROmedia Publishing.
8. Sri Gary Olsen, founder of MasterPath, representing the Light and Sound teachings in North America. <http://www.masterpath.org>
9. Sri Gary Olsen, <http://www.masterpath.org>

No Relief

Don't run off seeking relief from the discomfort
or slink back into that familiar den of regret.

Self-pity only feeds the fires of anguish,
Just as blame casts the snare ever wider.

Rather breathe into the fullness of this expertly crafted dilemma
which you have composed as the symphony of your life
so skillfully orchestrated for your own execution.

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March 8, 2005