

# THE SUPPRESSION OF ANCIENT HARMONIC SCIENCE

*Knowledge of the  
harmonic geometry  
of sound has been  
kept secret from the  
masses by the  
Church and, more  
recently, by science  
but a new era is  
dawning in which  
we'll learn to  
connect with our  
"inner archetype".*

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Two years ago I decided to return to a research project in music perception that I had postponed nearly 30 years earlier. It seemed that time had not diminished my curiosity about how we are able to *organically measure* the degree of dissonance and *mentally anticipate* the direction of resolution in music harmony.

My original work in this area had taken me deep into mathematics and computer simulations in search of an explanation. Now, armed with the scientific method, powerful computer tools and access to the world's latest research, I was sure that I could determine once and for all whether our perception of music is something organic or nothing more than cultural conditioning. I had no idea that what I was about to learn would shake the very foundation of my 21st-century world view.

Slowly but surely I began to put the pieces together. From a wide array of scientific research in music cognition, neurophysiology, genetics, acoustics, quantum physics and my own calculations and experiments, I developed a set of principles and mathematical models to explain how we perceive music. Naming this system *harmonic interference theory*, I found a way to show how harmonics—the overtones of a musical note—play a common role in both sound and the structure of our anatomy.

The theory proposes that life grows as *a balance between resonance and damping*, just like a vibrating string, and that music perception is a *built-in* pattern-matching between the harmonic geometry of sound and identical structures in the ears and the brain. It is from this organic pattern-matching process that the musical qualities of consonance, dissonance, tension and resolution can be defined mathematically and then visualised geometrically as crystalline and quasi-crystalline structures. From this, I came to the conclusion that the entire body is a form of crystallised music.

## The Vitruvian model

Once I had convinced myself of the existence of harmonic properties in human physiology, I found myself drawn to Leonardo da Vinci and his popular illustration of the Vitruvian Man to see what he might have known. I learned that the circle and square surrounding the Vitruvian Man represent the mathematical "squaring of the circle", whereby the perimeter of the square is equal (as near as possible) to the circumference of the circle. First proposed by Roman architect Marcus Vitruvius Pollio in the first century BC, the squaring of the circle was intended to represent the harmony and balance in the ideal human form.

As I pondered what this could mean, it occurred to me that the circle implies an *inside-out resonance* of cells in the body, while the square represents an *outside-in damping* effect to contain the outward push of cellular resonance. It dawned on me that, like the standing wave and ring models in my interference theory, all organic life could be defined as energy exploding outward into space that is then pushed back inward into specific shapes, presumably depending on which

harmonic proportions are emphasised by the DNA.

Looking back on it, this was a very difficult thing for me to accept at first. Like every student, I was taught from the earliest age that space is a complete and utter void. Yet, I simply could not resist the logic of life as a form of resonance and space as a kind of damping container.

Using this as an hypothesis, I decided to find a way to measure resonance and damping in the Vitruvian model. To do this, I overlaid a lattice of right-angled standing waves on the Vitruvian figure (see below). When I scaled the lattice such that the circle radius was exactly equal to  $2\pi$ , I was surprised to find that the proportion between the circle and the square could be expressed very simply as  $\pi / \Phi^2$ , or  $\pi$  divided by the square of  $\phi$ , the golden ratio. Could this be pure coincidence? While both of these mathematical constants are irrational and infinite, the ratio between them can be seen to converge to the rational ratio of 12:10, as  $3.14159 / 2.618033 \approx 1.2$ .

The moment I saw this, I realised that harmonics really can account for our body structure. We have 10 fingers and 10 toes at the extremities (where cellular damping is presumably greatest), yet at the same time we have 12 major articulated joints in the body and 24 vertebrae in the spine (where cellular resonance must be greatest).

Pursuing this line of thought, I decided to add a recursive growth dimension to the lattice, creating what is called "Hilbert space". This was incredibly accurate in predicting each of the key plexus points in the Vitruvian model, convincing me that our bodies (and all life) must resonate or grow into the containment geometry of space. And just to

confirm this, I reverse-engineered the Vitruvian model from the inside out by recursively building up each part of the body mathematically as if it were growing in space! The implications were absolutely mind-blowing for me, since this model seemed to confirm that space is somehow interacting with the structure of life. But this was only the beginning.

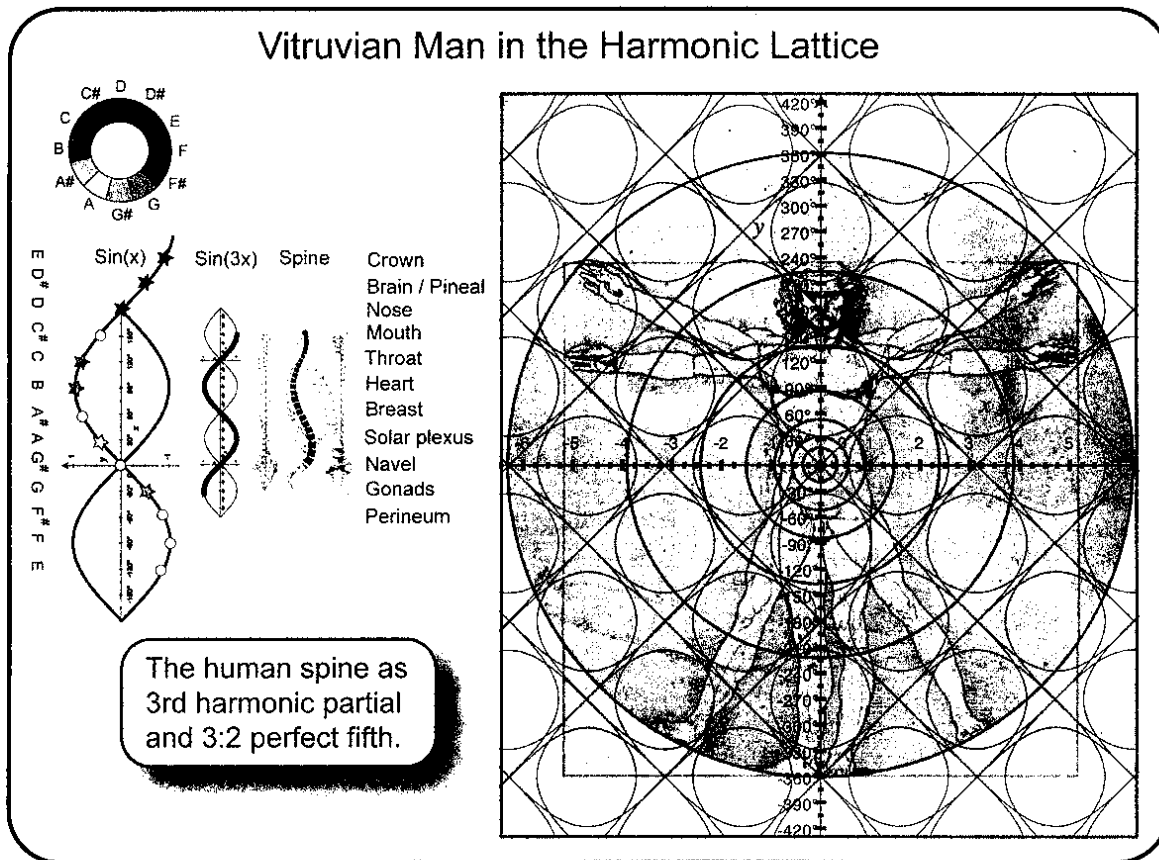
### Hidden symbols, suppressed knowledge

I began to notice how the harmonic lattice can also contain other things, like ancient religious icons, sacred geometrical patterns and the mysterious symbols used by various esoteric fraternities. Not being a member of any such organisation myself, I waded through the literature on these topics to get an idea of where these secret orders came from and what their symbols could mean.

I found an unbroken current of knowledge through all of them, tracing back to the Egyptian Flower of Life pattern (sixth century BC) and its components, particularly Metatron's Cube and the *Vesica Piscis*, which all fit perfectly into the Vitruvian harmonic model. I also noticed that the Hebrew Tree of Life fits within this musical lattice, aligning with the seven points of the Hindu chakra system. Even the Gnostic Cross—a cube unfolded into 3 x 4 squares—fits nicely into the lattice, transforming the Vitruvian Man into a kind of archetypal crucifix. Could something like this have been the pre-Christian meaning of the Cross?

As my belief in Western science began to crumble, I asked myself how this simple harmonic lattice could be so

completely absent from general public awareness. Why is this not common knowledge? Why is this not part of science, music, history and our entire education system? Why would it not at least rate as a "fun fact" in a sidebar in *Popular Science* or on an anatomy poster at the doctor's office? And above all, why would the Church not want people to know all about it? After all, it could be taken as proof of a sacred ordering principle



in nature, of the existence of a cosmic intelligence (call it what you will).

So I reoriented my study of history from this new perspective, and it quickly became obvious to me why we know virtually nothing of this lost knowledge.

I discovered that harmonic philosophy had long been associated with paganism (the belief of God in nature) and that the Roman Catholic Church had worked very hard *over a period of a thousand years* to suppress it through canon law. This is the reason why the tritone interval of a half-octave, nicknamed *Diabolus in Musica* ("Devil in Music"), was banned from sacred music in 1234 AD by Pope Gregory IX (and is still banned to this day). The Church seemed well aware that the tritone could reveal the symmetry in music harmony and open the door to the "carnal knowledge" of harmonics in the body and elsewhere in nature.

As the most powerful force in the Middle Ages, the Roman Catholic Church was very successful in establishing and promulgating a franchise system whereby the faithful could only reach God through the Church (and its iconic brand) rather than through the study of self and nature. Using this marketing and distribution network, the Church was able to social-engineer vast populations by regulating admission to the afterlife.

Through the power of guilt, fear, torture and war against paganism from the Middle East, the mediaeval Church struggled to bring under hand a violent and turbulent Europe. The last thing the Roman Church needed was a resurgence of Egyptian Gnosticism or neo-Pythagoreanism to interfere with its plan. Such pagan harmonic theosophies were a clear and present danger to the Church and its project of social control. Harmonic ideals, often represented by the Pythagorean pentagram or the Hebrew hexagram, were cast by the Church as evil pagan symbols and associated with satanic worship, witchcraft and occult rituals.

Those who studied harmonic properties in numbers, geometry and astronomy, such as the Dualist and Gnostic Cathars in southern Europe during the 11th to 13th centuries, were threatened, executed or exiled, and many survivors were forced to roam the countryside as "gypsies" (a pejorative form of "Egyptians"). The Knights Templar, the primary keepers of the Egyptian temple mysteries, were then hunted down and murdered by the Roman Catholic Church on Friday 13 October 1307, although a few fled to far-flung places like northern Scotland. In these remnants of Egyptian Gnosis were the seeds of Rosicrucianism,

Freemasonry and other "secret societies"—all of which were founded on the study of harmonics in numbers and geometry. This said, few adherents today are the least bit aware of or interested in the science of harmonics, opting instead for the benefits of a fraternal network and the occasional community service undertaking.

But while an honest look at European history seemed to explain how and why harmonic principles had disappeared from Western religion, it still did not answer why science, as the presumed pillar of empirical truth in the world, did not eventually return to harmonics as a unifying field of study. So I dug a little deeper, and here is what I found.

### The anti-harmonics campaign

In the lead-up to the Enlightenment of the late 17th and 18th centuries, the "scientific method" was actually designed to discourage the study of harmonics and its corresponding natural philosophy, known as *musica universalis* or "music of the spheres".

I learned that the exclusion of music and pagan harmonic principles from modern science was first suggested in a letter from the astronomer Galileo to his daughter, apparently prompted by his desire to avoid torture and imprisonment by the Inquisition.

Supported by Newton, Descartes and others who also wished to find a way to coexist with the Church during this period, the separation of the study of harmonics away from mathematics and science into "the humanities" became more and more institutionalised as the scientific method became increasingly accepted. In time, new generations forgot all about harmonics as a unifying property in nature—even taking up the cause of science to discredit any remaining harmonic theories as "smelling of the pulpit"

(a twist of irony).

In the early 20th century, this anti-harmonics campaign reached its zenith in the Michelson–Morley experiment which "proved" space to be an empty void with no intrinsic structure or measurable effect on matter. This belief was quickly accepted as the cornerstone of 20th-century scientific thought and education, and Darwin's theory of natural selection (with the occasional accidental mutation) was elevated as *the* explanation for why life takes the forms it does. Only in recent years has that famous physics experiment been shown to be misleading and even false by much more sophisticated instruments which indicate that space *does* have a measurable effect on matter.

But, like almost everyone, I grew up in an education

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system that still denies the existence of any structuring property in the vacuum or how it could play a role in the formation of life. Even the smartest and best-educated people happily accept the contradictory belief that space is both curved (Einstein) *and* an empty void. No one even thinks to raise the question of how it is that nothingness could be curved or, for instance, why our bodies should grow 10 fingers instead of, say, eight or fourteen. The avoidance and outright ridicule of a structured space remains a point of great disagreement and debate today, not only slowing progress in virtually every field of science but also hiding a very important truth from society. What is that truth?

The truth is that for the past 350 years a *complicity of convenience* has existed between the institutions of western religion and science to avoid any mention of harmonics. This unspoken tradition continues to spill over into society to this day, fragmenting western culture and ideologically supporting unsustainable political, economic and environmental policies.

With the study of harmonics no longer present in our schools and churches, as it once was in the Greek and Roman traditions, we push each generation further and further away from the idea that mankind should seek to follow the harmonic processes at work in nature.

Without having any coherent social and cultural model, most people presume the universe to be a cold, meaningless and random environment within which only accident or brute force applies. Life itself is seen as a quirky accident in a hostile world, making it easy for us to agree with people like neo-Darwinist Richard Dawkins that selfishness is the winning strategy for survival. Under this widespread presumption of a random and violent universe, nihilism has become the popular consensus.

### **Towards a new renaissance**

This said, I do think there is hope in the bright light of quantum physics. While the rest of science continues to be powered by Newtonian machinations, quantum theory quietly proposes a cosmos composed of coherent harmonic waves crystallising into matter inside a polarised cubic space lattice (like a physical hologram). The Schrödinger wavefunction with the "particle in a box" model of quantum mechanics is just another way of describing the harmonic structure of space—no different than the physics of a guitar string. Still, with the long tradition of avoidance, any notion of coherent space has yet to make its way into standard science curricula let alone into other fields of science.

But if the study of harmonics were ever allowed back into the educational system, we might expect a cultural

renaissance that would make even Leonardo's naked Vitruvian Man blush. T-shirts would implore us to "Bring back the aether!", while religious bumper stickers would proclaim "Get in touch with your inner archetype!" The full, intersecting circles of the *Vesica Piscis* would suddenly appear in place of just the fish part on all those stickers on SUVs. Even Einstein's "everything is relative" dictum would sound tired, replaced instead by Pythagoras' "everything is proportional".

Fashion would explode with "sacred geometry" and Egyptian styles would make a comeback. The idea that an archetypal structure in space actually shaped flowers, insects, fish, birds, pets and people would be irresistible and, I think, difficult to suppress once the meme were released.

Driven by grassroots awareness, hardened scientists might find common ground with the modern theosophical movement. They might accept life as non-accidental and geometry as something sacred.

They might even learn to embrace the spirituality of the ancient Hindu *Anu*—the ultimate quantum of material structure buried deep inside every atom. Western religious leaders might also make peace with these pagan ideals and finally admit (with a wry smile) that they knew all along that the Holy Ghost was but a blueprint for Man in the fabric of space. And as these ideas took root in every belief system, maybe

our off-balance governments would finally consider modelling their policies on the coherence demonstrated so beautifully in the human form. ∞

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### **About the Author:**

Richard Merrick is a software entrepreneur, digital media specialist, interactive producer, music theorist, pianist, artist and writer. He was the technology founder and CEO of 7th Level, a global interactive education and entertainment company of the 1990s, and the founder/CEO of Postfuture, currently one of the top Internet marketing companies. He has designed and produced interactive titles and websites with Howie Mandel, Monty Python and Disney and has assisted such companies as Best Buy and Microsoft with their digital marketing strategies. He holds a BA (*magna cum laude*) and an MSCS degree from the University of Texas, Dallas.

Richard Merrick's book *Interference: A Grand Scientific Musical Theory* is due for release in early 2009. For more information or to contact Richard Merrick, email [richard@InterferenceTheory.com](mailto:richard@InterferenceTheory.com) or visit his website <http://www.InterferenceTheory.com>.

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