

Frank Chester Artist, Sculptor, Geometrician

CHESTAHEDRON

The chestahedron is a new geometric form discovered by Frank Chester. It has seven faces of equal area, is comprised of four equilateral triangles and three guadrilaterals, and has a surprising amount of unique geometric properties. Frank's research has revealed a number of promising potential areas of application of this form, from architecture, vortexial mixing, beehive construction, bell-making, and the interior structure of the Earth, to the inner geometry of the human heart, not to mention its purely aesthetic applications.

A R T I C L E * BY ULRICH MORGENTHALER, TRANSLATED BY DR. KARL MARET

Occasionally one is blessed with the good luck to be allowed to meet a phenomenal human being: The kind of person who has followed his individual



The Chestahedron -

path to discover mysteries of our world, and who then continues, without distraction, to follow his path in order to bring one treasure after another into the light and life. Such human beings

It started with seven sticks in the mud...

* This article first appeared in Das Goetheanum No. 20-10

inspire and vitalize, solely through their presence and their inner dynamic, and leave one somewhat speechless and in awe. Among such humans, I count Frank Chester. His life theme arose from a study of the so-called platonic solids that have the fundamental property of being constructed only from identical equal-sided polygons.

The Venus form, an inversion of the Chestahedron traced through time.

The Discovery of the Chestahedron

A European journey in the 1990's led Frank Chester, the San Francisco retired teacher, sculptor and geometer, to Dornach in Switzerland. Prior to this journey he had never heard anything about Rudolf Steiner or Anthroposophy. He was immediately impressed by Steiner's two-dimensional, seven-sided planetary seals, and equally by his seven-sided capitals on top of the columns within the model of the first Goetheanum. While gazing upon these forms a question arose in him: Could a three-dimensional, seven-sided form exist that might also demonstrate the harmonic nature of a platonic solid?

Not being satisfied with existing seven-sided models, Frank Chester began to experiment: with clay, string, straws, wire, paper, soap bubbles, and all manner of forms. After many This special bell-shape is made by spinning the Chestahedron.

failures he discovered, in the year 2000, while artistically playing, an entirely new, never-before seen geometric figure that was simpler and more elegant than anything seen before. He called his discovery the "Chestahedron" (Chestaeder in German). This solid has seven surfaces with exactly the same surface area. It consists of four equilateral triangles and three additional, four-sided surfaces which resemble kites. It shares the same property with the five regular platonic solids in that each of the seven surfaces has the same area. It is unique in that it contains two different shapes and two different side lengths while in the five platonic solids these are always the same. Interestingly, Chester could utilize two circles in the ratio of the golden section (Phi) to lawfully and reproducibly develop the surfaces of his form.

The Heart as an Organ of Flow

After he had discovered this new form, Frank Chester was not at all clear what its importance would be for the world. A quote from Rudolf Steiner guided him: 'Geometry is knowledge that appears to be produced by human beings, yet whose meaning is totally independent of them.' Chester continued to experiment for ten years more. Among the most important findings that he has discovered to date is the following: After he had seen that his seven-sided form can be harmonically integrated into a cube when it is oriented at an angle of 36 degrees, and that it appears to resemble a

/ The Venus and Bell together in a chalice.



Through what he saw developing within the water, Frank Chester developed a sculpted model and then opened it in cross-section. This result reminded him immediately of an image of a vertical cross-section through the human heart. Driven by curiosity, his joyous experimental nature, and further inspired by a drawing from Rudolf Steiner, he finally arrived at a three-dimensional depiction of the formative forces which underlie the human heart and create its asymmetric form through its muscular

layers. His conclusion: the formative forces which form our heart muscle are active as vortices and are oriented and maintained through the seven-sided form discovered by him.

The geometry of the Chestahedron shows why the heart is e positioned at ared a particular angle in the chest.

Since Frank Chester developed this insight, the heart is no longer a pump. For him, it has instead become an organ of flow (regulation). If the heart were a pump, the paperthin tissue at the apex of the left ventricle could never

kind of heart shape when he dipped the wire frame model into a soapy liquid and created convex surfaces by expanding the enclosed soap bubble gently with a straw, he had an idea: He took a solid model of the expanded, seven-sided form and dipped it along its axis into a water-filled vortex chamber. When he spun it vertically, the resulting water vortex was stable. However, when he spun the form attached to a high-speed drill and introduced it into the water at an angle of 36 degrees, a type of pocket-shaped vortex developed on

the side of the main water vortex.

withstand the developing pressure. However, from the perspective of a vortex model of the heart, it becomes understandable why this part of the heart is never exposed to these higher pressure dynamics.

> In the developing human embryo, blood is already streaming rhythmically through its blood vessels



before the heart has even formed. Something other than the heart, therefore, must be responsible for this movement of the blood. The heart that develops later appears to function more like a balancing brake: blood streams into the left ventricle in a clockwise direction and then vortexes around itself, finally emerging from the left ventricle in/the opposite, counter-clockwise direction. At the moment when the blood flow reverses, there is no movement; absolute stillness reigns. However, this is a dynamic rest. This is the exact moment, simultaneous in time and space, that for Frank Chester represents the eternally present heartcentered state in each human being.

Frank has created many architectural designs using the Chestahedron.

"A KIND OF TETRAHEDRON"

After addressing the human heart, Chester then turned his attention to the earth. A further statement from Rudolf Steiner gave the impulse: In a lecture about the causes of earthly volcanism, Steiner indicated that on the basis of his spiritual scientific researches, the earth in its foundational form was not a sphere but rather had at its basis a "kind of tetrahedron": In Middle America, at the south pole, in the Caucasus (mountains) and in Japan, are the four corners of the tetrahedron, a form that was created out of the cosmos through the joining together of four triangles.

Chester's calculations showed that an equilateral triangle would be created if one joined points together in Japan, the Caucasus, and a third point in Kansas, North America, rather than the point in Middle America mentioned by Steiner. An inverted tetrahedron constructed downward from this triangle would be short of reaching of the South Pole (inside the earth) by 4,132 kilometers. In order to reach the South Pole from this tetrahedron, one would have to equally stretch its three south-pointing faces. However, with this construc-

The Chestahedron



TETRAHEDRON, SOMETHING OF A TETRAHEDRON AND THE CHESTAHEDRON IN THE SPHERE OF THE EARTH



Warm and cool zones on the Earth correspond to the form of the Chestahedron.

Understanding Earthly Phenomena

Subsequently Frank Chester found phenomena which appeared to confirm his suggestion that the Chestahedron acts as a fundamental geometric form within our earth. If one follows a lawful transformation involving surface-point-surface mapping, it can be shown that the Chestahedron has a cube as its foundation (ed.: within it). With reference to the dimensions of the earth. this cube has the same diameter as our moon (the earth's core has a diameter of 3400 km; the diameter of the moon is 3474 km). In 2008, scientists at Uppsala University in Sweden published findings that appeared to confirm that the core of the earth is a cube (Translator note: Specifically, the round earth's core has a cubical iron crystalline structure and not a hexagonal one as assumed in older models).

tion, one no longer has an "exact" tetrahedron, but rather a "kind of tetrahedron." According to Frank Chester, one can open the downward-pointing sides of the tetrahedron (hinged to the base triangle) at an angle of 94.8304 degrees. At this point the three triangles stand in the exact relationship to one another as the four equilateral triangles in the Chestahedron. An inverted Chestahedron constructed on the above triangle, formed by Japan-Caucasus-Kansas, touches the South Pole exactly with its lower apex point. Perhaps it was the Chestahedron that Rudolf Steiner saw clairvoyantly as the basic form on which our earth is based and had tried to suggest in his lecture? Because a Chestahedron could also be described as a "kind of tetrahedron."





Hot and Cold World

These findings, which are aligned with the idea of a Chestahedron in the earth, offer an explanation why seismic waves travel (through the core) faster along the Earth's axis (from pole to pole) in comparison to their movement from equator to equator. It can also be shown that notable synchronic lines that join regions of cooler, warmer, and hotter earthly zones in seismic maps correspond essentially to the suggested Chestahedron model within the Earth.

Perhaps the most impressive application of this work may be an explanation for the underlying phenomenology in the appearance of the northern lights: The distribution in the appearance of both the northern lights (aurora borealis) and the



southern lights (aurora australis) (on the earth's surface seen from space) appear to be in alignment with the rings that Frank Chester found in his experiments with the Chestahedron creating water vortices while studying the energetic origin of the human heart. Using the Chestahedron, Chester found a common denominator, a starting point which promises to offer a deeper understanding of both earthly phenomena as well as those of the human heart.



The Chestahedron may be related to the form of the auroras. — Questions upon questions now arise in me, but simultaneously wonder and awefilled inwardness are present: Could it be that not only geometrical forms lie at the basis of the human heart or the earth, but specifically the same geometrical structure appears to be the basis of both, namely the sevensided Chestahedron discovered by Frank Chester? And further: If the heart is "the center of the human being" and the heart and Earth stand in such an inward relationship to each other through the Chestahedron, what then is the Earth? How can such questions bear further fruit and insights?

Frank Chester has invented a device, designed upon the geometry of the chestahedron, called the Chesta Vortex Organizer (CVO). The CVO is meant to be utilized in biodynamic preparations, stirring, mixing, aeration and bio-augmentation. The device has two moving forms turning in opposite directions, 90 degrees from each other.

> Frank has been given the opportunity to test the new device at Environment Ven-

> > tures Marketing, Inc. in the

Philippines. He has been invited to a professional laboratory environment which includes scientists, engineers, fabricators, and machines to produce and test many of his ideas.

The dualization of the Chestahedron — into the Decatria, and the Decatria into the Chestahedron.

One way that the Chestahedron can be formed is by rotating a tetrahedron within a cube.







The sale of paintings, - sculptures, and jewelry supports the ongoing development and application of Frank's work.





Frank has invented a unique bell mounting assembly and ringer, which suspends the bell from a point rather than from above, allowing it to resonate with its purest tones.





4. The numbers indicate which edges connect: join them carefully with tape , or glue together using the tabs.

Construction and design by Seth Miller: spiritalchemy.com

rank's work helps crack open new avenues of thinking, new ways of understanding our world, and provides insights that help us better understand ourselves. What he is doing, in a nutshell, is exploring the relationship between geometric form and the dynamic principles that underlie the operations of natural and physiological processes, specifically those related to the human being. He did not set out with this goal in mind, but rather followed the trail of a simple question concerning the possibility of a seven-sided geometric form with faces of equal surface area.

As a sculptor, Frank didn't just think about this idea, he made it - "it" in this case being a new geometric form that had never before been discovered. The significance of this is not just that such a form exists, but that the form has meaningful relationships to other phenomenon which are unveiled through a particular way of engaging with the research process itself. In other words, the significance of Frank's achievements lie equally in the realm of the process by which his discoveries were made as in the discoveries themselves.

Frank's work is moldbreaking in a very important way, and this is in terms of the process by which he does his work. The standard methods by which science builds upon itself have some significant blind spots and assumptions that have historically limited its potential (and created some nasty problems along the way, even while helping elsewhere). Most significantly, the methodologies used are generally designed to eliminate what is innately human from the research process, in an attempt to 'control' the situation so that results fit within the assumptions of the experimental design. This style of research provides a certain kind of answer: answers which are geared towards application through reductionistic analysis and control of component parts. Such approaches, and the answers they provide, are proving to be less and less able to provide fruitful metaphors for a sustainable future.

Frank's work exemplifies an approach that helps bridge this entrenched gap, bringing forth a soulfully engaged style of research that weaves between art and science, allowing the strengths of each to fructify the weaknesses of the other. The result is an integrated style of research that can comfortably deal with both the 'outer' and the 'inner', without over-privileging one or disparaging the other. In addition to this, his work is moldbreaking in that it constitutes a modern extension of the tradition of sacred geometry, providing a number of well-grounded insights that testify to the integration between humans and the laws of the cosmos.

- Seth Miller, Ph.D.c. Transformative Studies

SEE MORE AT FRANKCHESTER.COM



Frank's work is supported by the Seven Circles Trust

Donations are currently being welcomed for the creation of a community research center that will serve to advance Frank's discoveries, for the benefit of all.

Please direct general comments and inquiries to: frankchester.com/contact

BOOKLET DESIGN: SPIRIT ALCHEMY DESIGN PHOTOGRAPHY: JAMES HEATH