FROELICK GALLERY

Michael Schultheis

Pythagorean Eyes, 2015

Analytical Expressionism

I paint math equations, their geometric forms that visually render in my mind, and how their relationships develop into geometric models that describe narratives about the human condition. I call this conceptual process Analytical Expressionism, and it expands the definition of geometry in art.   In history's long arc of artists using geometric forms in their artwork, none of it has been true geometry. Written in the universal and timeless language of mathematical equations, Analytical Expressionism allows– for the first time ever – true geometry in art.

For those without a mathematics background, I paint the geometry as I see it. However, viewers who know mathematics can read the equations in my paintings and see the geometry for themselves on the internal chalkboard in their own minds. This is a whole new way of seeing geometry in art.

Pythagorean Eyes

Pythagoras of Samos (c. 570 BC – c. 495 BC) was a Greek philosopher, mathematician, music theorist, and someone who inspires my love of the polar coordinate system.

In these paintings, I envision Pythagoras falling into a deep sleep and dreaming of all the progenies of his original ideas. I paint the geometric forms that represent what he would have seen on the internal chalkboard of his mind. Pythagoras saw mathematics in everything. I agree. Our ability to see in this way is what I call Pythagorean Eyes.

My favorite geometric progeny of Pythagoras is the limaçon, a beautiful snail-like shape with an elegant interior and exterior curvature. This form was studied by the painter and mathematician Albrecht Durer (1471 – 1528), and I find its polar equation and curvature fascinating as well as the perfect structure for modeling human and geometric relationships. For example, by varying two parameters in the limaçon equation, I create a visual representation of the continuum of consciousness from the Swiss psychotherapist Carl Jung (1875 – 1961). Then to better understand how people see the continuum of their own consciousness and connect with each other, I use integral calculus to calculate the area enclosed by each polar curve, visualize where they intersect, and find the area enclosed by two polar curves using integration.

Once a geometric form such as a limaçon is imbued with symbolism, I call it a geometric model or geom. The geom of an orbiting limaçon is the optimal model for explaining Soul Mates: our own consciousness, that of another person, and the relationship that takes form as the interstices between them. This mapping describes how two humans orbit, first trying to find their other half and then to remain fused together over time.

Equations for Swallows

On a spring morning run around Greenlake in Seattle, Michael Schultheis discovered a tragic man-made disaster for an entire flock of baby swallows nesting around the shore. At first heartbroken with grief, he later went to his studio to work out solutions on canvas, transforming the experience into these works of art. Using a process of conceptual geometric art called *Analytical Expressionism*, Michael works out his ideas in polar coordinate system on canvas. Michael uses integral calculus to calculate the area enclosed by polar curves, visualize where they intersect, and find the area enclosed by two polar curves using integration. These paintings capture his thoughts about how to re-engineer and problem solve - and allow next year's swallows to fledge freely.

He shared this process with his cello teacher, Dylan Rieck, and together they collaborated on geometry, sequences, themes, and compositions - in both painting and music. ***Realignment,*** to be performed for the first time at Froelick Gallery, is a composition for live cello and violin with pre-recorded strings and sound-design. Based on ideas exchanged between painter and composer, ***Realignment*** explores the use of musical events as symbols to construct models of physical shapes and structures. The source material of much of the piece is derived from stylized instrumental interpretations of the songs of barn swallows.