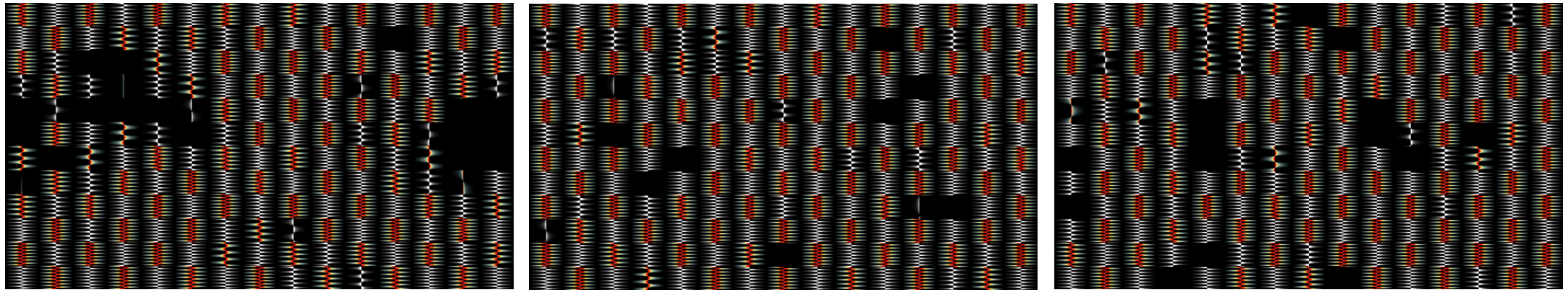


# The Ising Model

The Ising Model series consists of a number of computer-generated animations and works-on-paper that consist of a matrix of cells that transition between 2 states, taking stock of their neighbors' actions. The process goes back and forth between states of stability where all cells try to be like their neighbors, and states of transition where the cells know their neighbors' state but can't decide if they should be like them or not. A certain degree of deviance is programmed so that some of the cells resist or differ from the general status quo of the collection. Each cell's status is determined by itself, influencing its neighbor's status. This results in an emergent state where local actions create a global outcome.

A mathematical model by the physicist Ernst Ising (1924 thesis) describes how magnetic particles set their polarization according to their neighbors' under temperature changes. At low temperatures, particles want to have the same polarity as their surrounding neighbors. As the temperature increases, the magnetic property becomes erratic, destabilized, flipping back and forth its polarity between positive and negative. This mathematical theory is here used to create visual transition between two states of stability and erratic disorder. It also provides a perspective of how individuals in culture groups adjust their behavior based on social norms and pressures.

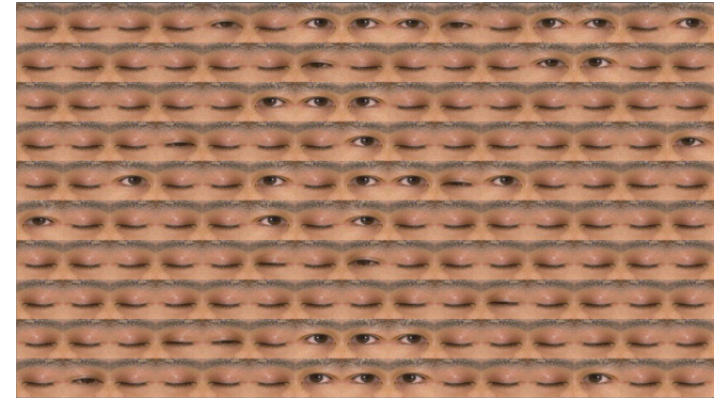
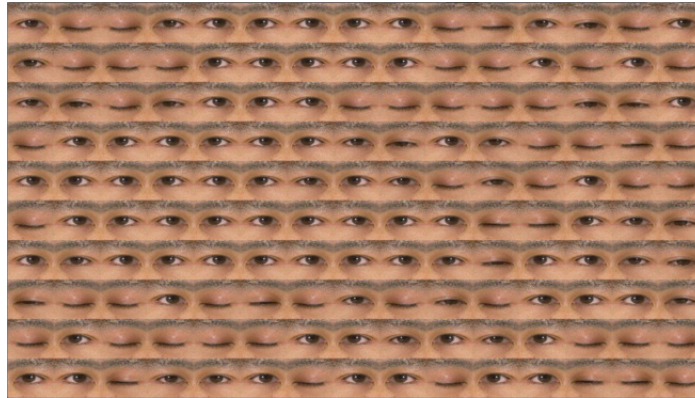
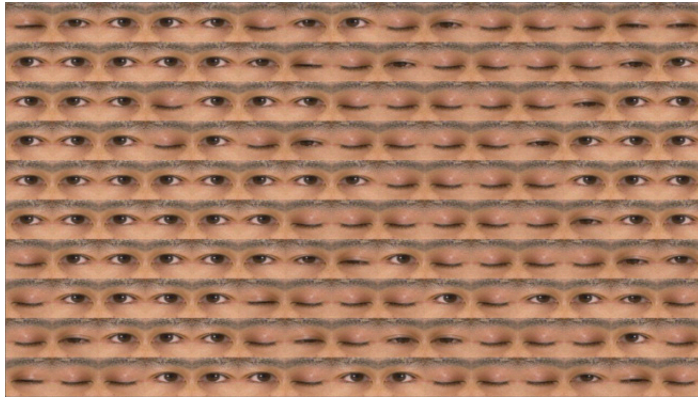
**George Legrady Studio**, March 2018



“**PolyPiston**” is a computer animation of a matrix of cells that transition visually between two states, based on their neighbor cells' behaviors. Each cell's state is dependent on statistically evaluating what its neighbors are doing, dynamically calculated in real-time.

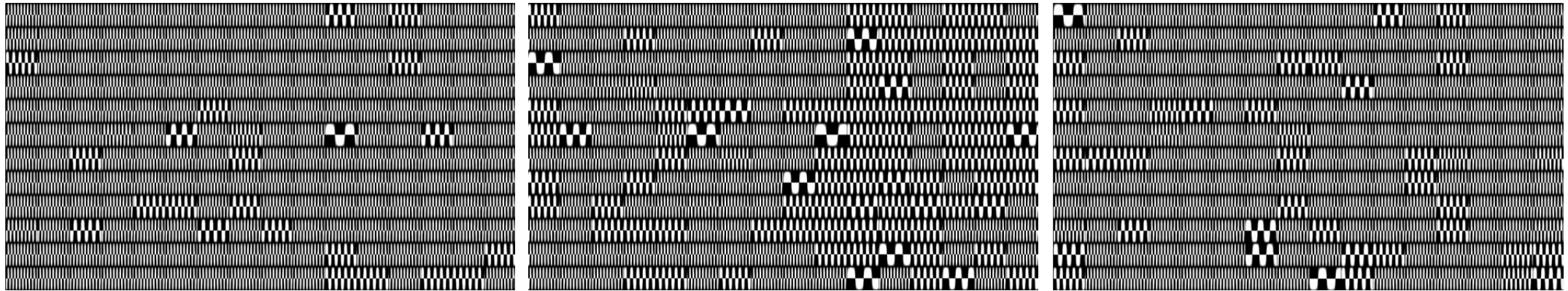
View the animation: <https://vimeo.com/257845525>

**George Legrady Studio**, March 2018



“**Blink**” consists of a matrix of eyes that open and close based on their neighbors' behaviors. Each eye's decision is dependent on statistically evaluating what its neighbor eyes are doing, dynamically calculated in real-time. Every five minutes, all the eyes briefly go into a state of frenzy. View the animation: <https://vimeo.com/257843869>

George Legrady Studio, March 2018

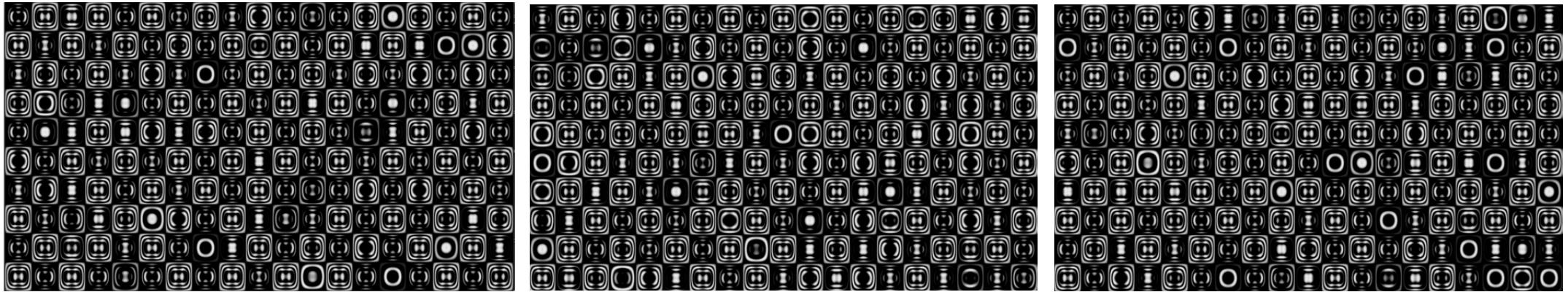


“**GeoNerve**” is a computer animation of a matrix of cells that transition visually between two states, based on their neighbor cells' behaviors. Each cell's state is dependent on statistically evaluating what its neighbors are doing, dynamically calculated in real-time.

View the animation: <https://vimeo.com/257844629>

**George Legrady Studio**, March 2018

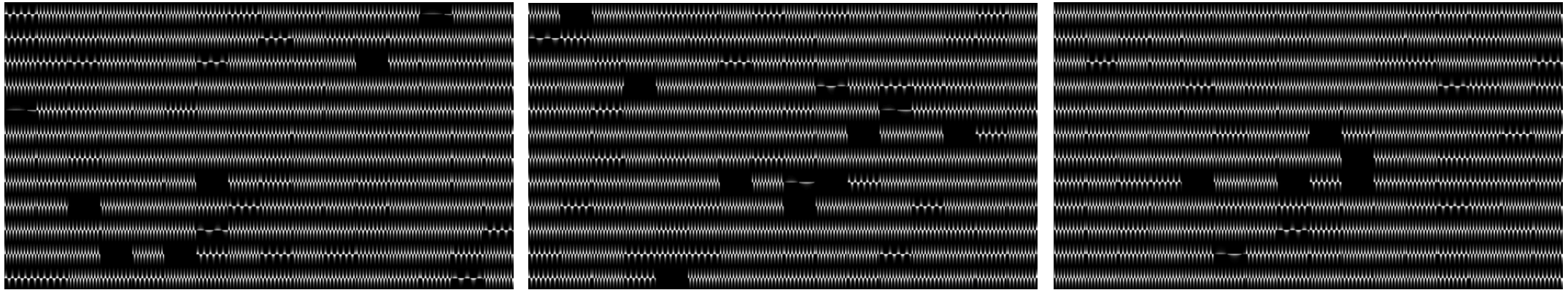




“**PolypTelic**” is a computer animation of a matrix of cells that transition visually between two states, based on their neighbor cells' behaviors. Each cell's state is dependent on statistically evaluating what its neighbors are doing, dynamically calculated in real-time.

View the animation: <https://vimeo.com/257847233>

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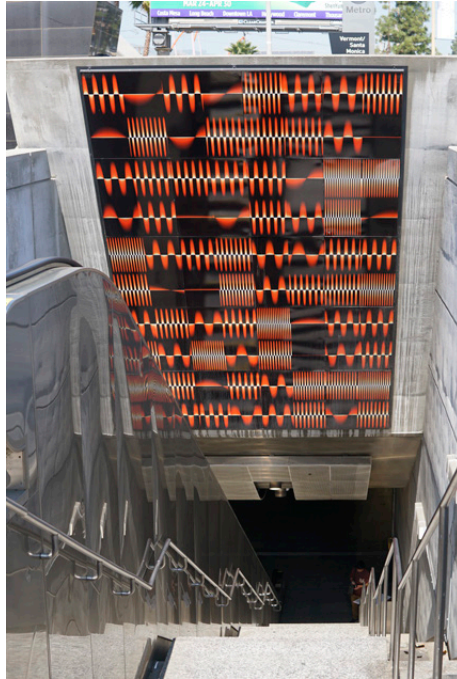
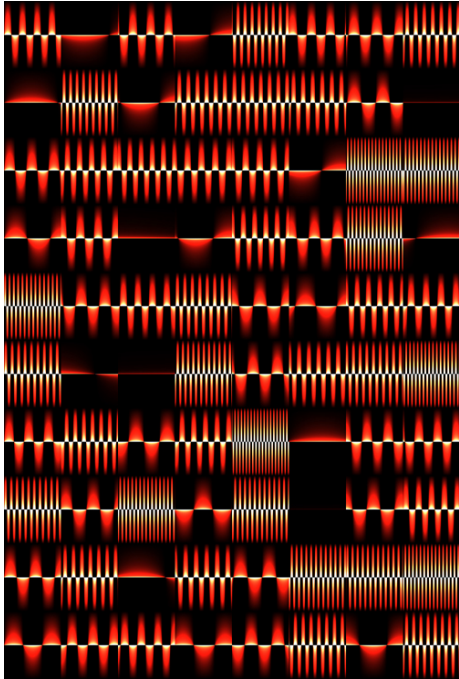


“**PolypTic**” is a computer animation of a matrix of cells that transition visually between two states, based on their neighbor cells' behaviors. Each cell's state is dependent on statistically evaluating what its neighbors are doing, dynamically calculated in real-time.

View the animation: <https://vimeo.com/257848243>

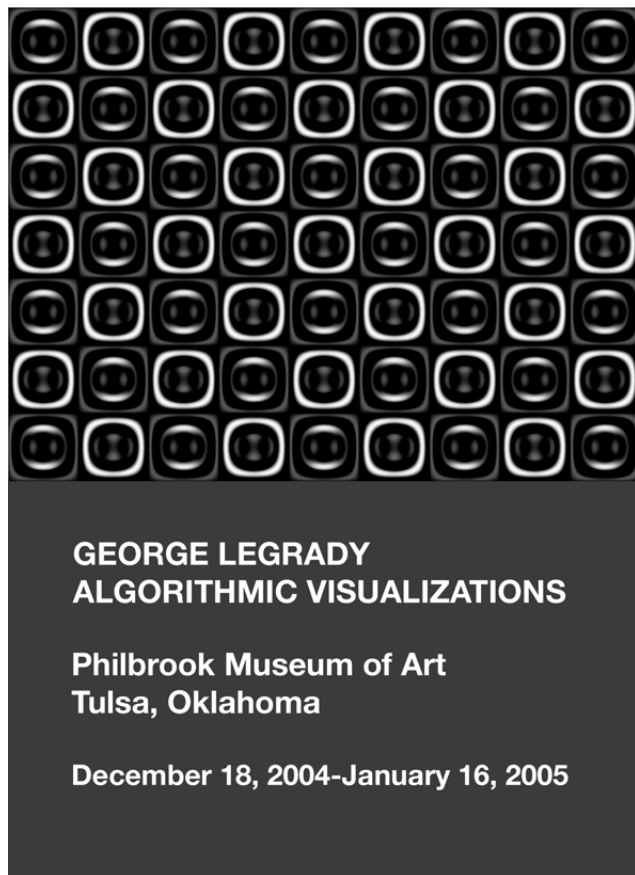
**George Legrady Studio**, March 2018





“**Kinetic Flow**” (2006) a permanent installation at the Vermont/Santa Monica Station, Los Angeles MTA subway system consists of a porcelain on enamel visualization on a leaning 24' concrete wall above escalator unit at the entrance of the subway station. The design concept is to engage the kinetic experience of the pedestrians' movements on both escalator and staircase, one smooth, the other sequential. The computer-generated image is based on statistical data sampled from LA metro traffic circulation to seed the image generating equation.

**George Legrady Studio**, March 2018



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