

"Tyger, tyger, burning bright / In the forests of the night, / What immortal hand or eye / Could frame thy fearful symmetry?"

- William Blake, "The Tyger"

In art and architecture symmetry designates the beauty characterized by proportion or harmony. But in mathematics, symmetry means something else. In this field, anything that preserves its form after undergoing some transformation is said to be symmetrical. The symmetrical transcends a singular point of view. So a symmetrical figure will appear the same to two observers who are in different positions. A surface of a still pond, for example, has a high degree of symmetry; it looks the same almost everywhere. There's intense energy contained in symmetry. It doesn't take long staring into a ganzfeld before near hallucinatory effects appear. When symmetry is broken, this energy is released and patterns form. Symmetry breaking occurs everywhere in nature : it appears in a tiger's stripes, in the swell of ocean waves, in the ripples of a pond after a pebble is thrown into it. When pressure is applied lightly, stable geometrical patterns form. As pressure is intensified beyond a critical point, symmetry is shattered, and all order and harmony seems to be lost. Things spin out of control. It is from such unstable states that new unpredictable forms emerge.

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