



# The Fractal Art Manifesto (by Kerry Mitchell)

Information : Art : The Fractal Art Manifesto



As a genre, Fractal Art (FA) has been around for approximately 15-20 years. Its first major public display may be considered to be an article about the Mandelbrot Set published in "Scientific American" in 1985. Since then, many advances have been made, both in fractal rendering capabilities and in the understanding of fractal geometry. Perhaps now is an opportune time to make a defining statement about what is (and what is not) Fractal Art.

Fractal Art is a genre concerned with fractals—shapes or sets characterized by self affinity (small portions of the image resemble the overall shape) and an infinite amount of detail, at all scales. Fractals are typically created on a digital computer, using an iterative numerical process. Lately, images that are not technically fractals, but that share the same basic generating technique and environment, have been welcomed into the FA world.

Fractal Art is a subclass of two dimensional visual art, and is in many respects similar to photography—another art form which was greeted by skepticism upon its arrival. Fractal images typically are manifested as prints, bringing Fractal Artists into the company of painters, photographers, and printmakers. Fractals exist natively as electronic images. This is a format that traditional visual artists are quickly embracing, bringing them into FA's digital realm.

Generating fractals can be an artistic endeavor, a mathematical pursuit, or just a soothing diversion. However, FA is clearly distinguished from other digital activities by what it is, and by what it is not.

## Fractal Art is not:

- Computer(ized) Art, in the sense that the computer does all the work. The work is executed on a computer, but only at the direction of the artist. Turn a computer on and leave it alone for an hour. When you come back, no art will have been generated.
- Random, in the sense of stochastic, or lacking any rules. Being based on mathematics, fractal rendering is the essence of determinism. Apply the same image generation steps, and the same result will follow. Slight changes in process usually lead to slight changes in product, making FA an activity which can be learned, not a haphazard process of pushing buttons and turning knobs.
- Random, in the sense of unpredictable. Fractal Art, like any new pursuit, will have aspects unknown to the novice, but familiar to the master. Through experience and education, the techniques of FA can be learned. As in painting or chess, the essentials are quickly grasped, although they can take a lifetime to fully understand and control. Over time, the joy of serendipitous discovery is replaced by the joy of self-determined creation.

- Something that anyone with a computer can do well. Anyone can pick up a camera and take a snapshot. However, not just anyone can be an Ansel Adams or an Annie Liebovitz. Anyone can take brush in hand and paint. However, not just anyone can be a Georgia O'Keeffe or a Pablo Picasso. Indeed, anyone with a computer can create fractal images, but not just anyone will excel at creating Fractal Art.

### Fractal Art is:

- Expressive. Through a painter's colors, a photographer's use of light and shadow, or a dancer's movements, artists learn to express and evoke all manner of ideas and emotions. Fractal Artists are no less capable of using their medium as a similarly expressive language, as they are equipped with all the essential tools of the traditional visual artist.
- Creative. The final fractal image must be created, just as the photograph or the painting. It can be created as a representational work, and abstraction of the basic fractal form, or as a nonrepresentational piece. The Fractal Artist begins with a blank "canvas", and creates an image, bringing together the same basic elements of color, composition, balance, etc., used by the traditional visual artist.
- Requiring of input, effort, and intelligence. The Fractal Artist must direct the assembly of the calculation formulas, mappings, coloring schemes, palettes, and their requisite parameters. Each and every element can and will be tweaked, adjusted, aligned, and re-tweaked in the effort to find the right combination. The freedom to manipulate all these facets of a fractal image brings with it the obligation to understand their use and their effects. This understanding requires intelligence and thoughtfulness from the Artist.

Most of all, Fractal Art is simply that which is created by Fractal Artists: ART.

- ▶ [Step-by-Step: the Creation of a Fractal](#)
- ◀ [Of Fractals and Art](#)
- ▲ [Return to Art](#)
- ▲ [Return to Information](#)
- ▲ [Return to Entrance](#)



Copyright © 1996-2004 Damien M. Jones, Copyright © 1999 L. Kerry Mitchell