



About the Cover

The Eventual Triumph of Art

Gary Singh

You don't often encounter an 80-year-old psychiatrist who uses modular graphics synthesizers and mathematical algorithms to generate vibrant fractal fusions in his spare time. In the strange and creative case of Claude McCoy, he has practiced psychiatry for 50 years but now works only one day a week. After initially downsizing his practice eight years ago, he began experimenting with Bryce on a Macintosh, with which he produced fantasy art and images of tall ships. It didn't last long. Fractals eventually piqued his interest, but he couldn't find software with a satisfactory user interface. Enter ArtMatic and the language of algorithmically generated abstractions. With ArtMatic, McCoy's creative output soared to new heights and depths.

In school, McCoy was discouraged to even consider creative pursuits. As is often the case, his teachers emphasized financial security, which artistic practice usually doesn't provide. But because creativity had always existed in his family,

McCoy knew he had it in him somewhere. A dormant muse of algorithmic visual composition lay in waiting. It just took several decades before that muse woke up.

"I grew up in a family with artistic genes and was awed by my mother's ability to use watercolors to paint beautiful flowers and bunnies on Easter eggs," McCoy tells me. "In junior high, my favorite classes were the art classes. I told my ninth-grade art teacher that I would like to become a professional artist. She encouraged me not to do that because of the difficulty of making a significant living with art. I took her advice and went in a completely different direction with my professional career."

In college, though, McCoy took as many art electives as he could, knowing he'd get good grades and that it would help jack up his GPA. It apparently worked. Art helped him get into grad school, and nearly half a century later, he was toiling away at a Macintosh, algorithmically spawning a consistent oeuvre of vibrant imagery.

Tweaking the Tiles

ArtMatic works somewhat like a modular electronic synthesizer—an ARP 2600, a Buchla, a MiniMoog, and so on—with the user patching together various modules to generate images instead of audio waveforms. You can systematically design a patch knowing the math ahead of time, and with an exact output in mind from the start. Or, you can just tweak the process on the fly, adding multiple components and mathematical processes just to see the resulting imagery. McCoy says he isn't a mathematician, so he often winds up choosing the latter approach.

"A person does not have to be a professional mathematician to use this program," McCoy says. "I struggled to acquire a C grade in second-quarter calculus in college. ... I wish I could tell you that my art is the product of calculated competence. Alas, it is not. My images are the result of endless

Figure 1.
Generative OCF.
To make this image, Claude McCoy used flowers in at least one of the modules in the algorithmic ArtMatic patch. (OCF stands for Obsessive Compulsive Flowers.)



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experimentation and tile manipulations and the exploration of large numbers of iterations of assembled tiles.”

Sometimes, such endless experimentation leads to something pretty; other times, it doesn’t. You can spend hours manipulating parameters that don’t lead to anything usable, but on other occasions, every other click produces something alternative and unique. ArtMatic’s infinite possibilities are what McCoy finds alluring. The variations can go on and on, just about forever.

The cover image, *Algorithmic Plate 109*, is one of McCoy’s earlier experiments with the sample trees provided by ArtMatic. He has long since lost any explanation of the process.

“When I started working with the ArtMatic program, I did not save the resource formulas for most of my images, which was a grave mistake,” he admits. “The mathematics involved in the trees is so complicated that it would be next to impossible to try to sit down and reconstruct the image that you started with. Sometimes iterations have a very obvious resemblance to the parent image, and at other times, the iterations’ resemblance is not always obvious.”

Generative OCF (see Figure 1; OCF stands for Obsessive Compulsive Flowers) represents just one in a long succession of images in which McCoy used flowers in at least one of the modules in the algorithmic ArtMatic patch.

“I enjoy creating images with interesting form and with contrast and saturated colors,” McCoy says. “I like to create images that have the effect of pulling the viewer in to explore the variations of shape and color.”

One such image is *Assault by the Blues* (see Figure 2), which looks like a painting. Although you can easily identify fractal components and elements of self-similarity, the image doesn’t seem altogether algorithmically generated.

Secret Meeting (see Figure 3), on the other hand, exudes the symmetry often characteristic of such programs, but with a more polished aesthetic. You can imagine seeing it printed many ways: on metal, hanging from the ceiling, on glass, or even as a computer-generated mural of some sort.

Algorithmic Rug Shop

Lately, McCoy’s youngest son is fronting an effort to market McCoy’s art. The goal, says McCoy, is to eventually infiltrate high-end galleries and interior-decorating businesses.

“We are going to explore how my images will look when printed on metal,” he says. “I would also like to find a company that can weave rugs

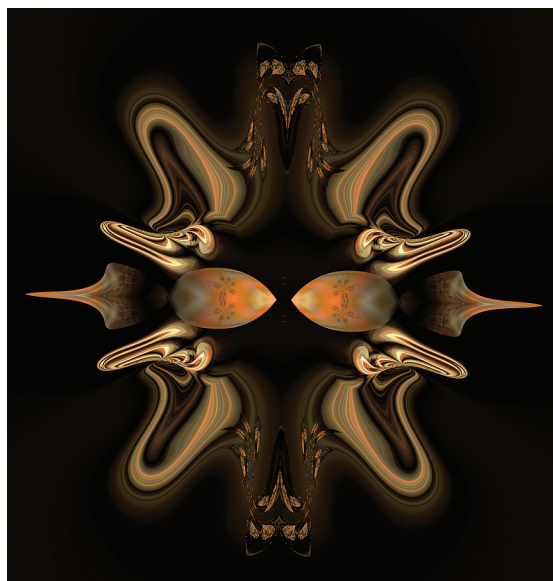


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Figure 2. *Assault by the Blues*. Although you can easily identify fractal components and elements of self-similarity, the image doesn’t seem altogether algorithmically generated.

using a digital image. I do not know if such a company exists. I believe there would be a market for my images made into rugs. If anyone knows of such a company, I would like to know about it. I am talking about rugs that are made from colored fibers, not printed on fabrics.”

That brings to mind a wealth of creative applications for computer graphics. Algorithmically generated rugs would be fantastic. I can see vast, intricate Julia sets, big-data visualizations, or even Islamic patterns on rugs, with software-controlled machines generating the textiles directly from coded algorithms. That would be loom-tastic, a grand fusion of the machine and the material world. Here’s to the future of computer art. ■



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Figure 3. *Secret Meeting*. This image exudes the symmetry often characteristic of programs such as ArtMatic, but with a more polished aesthetic.