



Mom, Dad and Susan

Pastel on paper, 36" x 24", January 2003

The first successful abstract portrait was made with a Lego robot that dragged a pastel back and forth on paper as it followed a plate above it. The robot had saw blade wheels so as to not smudge the pastel.

Shown in

January 2008 at **Sitwell's Coffee House**, 324 Ludlow Ave., Cincinnati OH 45220

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Cincinnati, OH 45208, 513-871-6065

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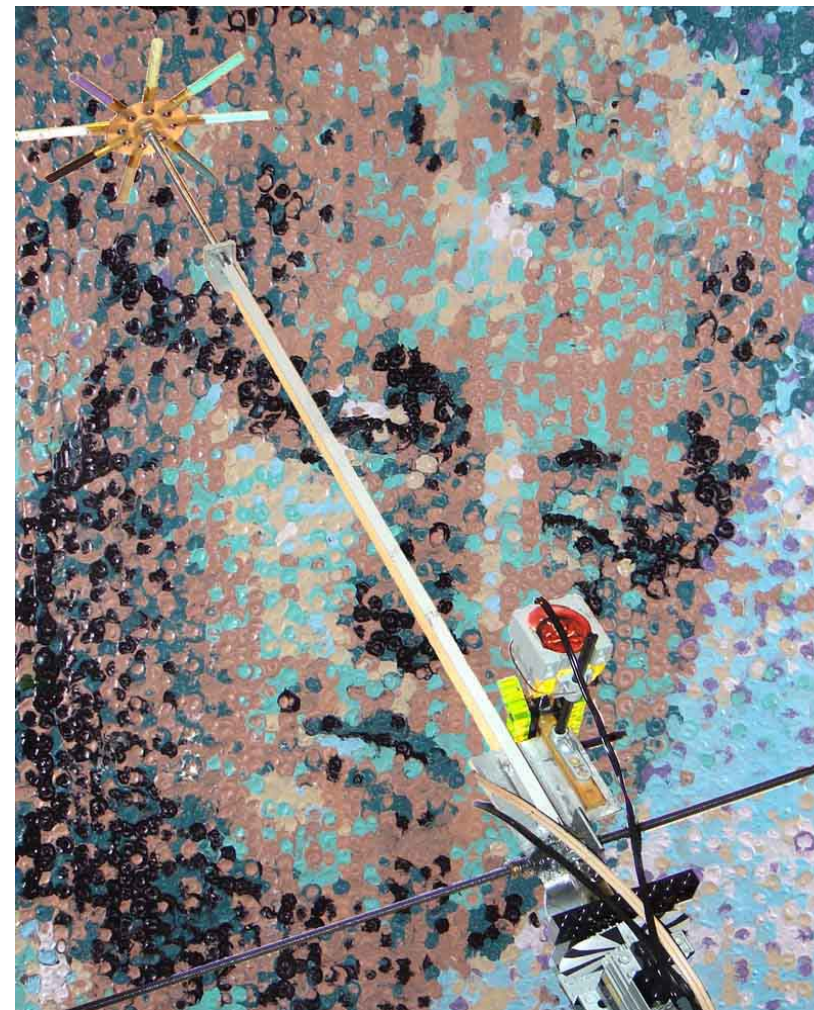
Go on-line to see the whole story: <http://tomlohre.com>

Listed in "MARQUIS WHO'S WHO IN AMERICAN ART"

All information believed correct but not guaranteed.

Prices subject to change without notice.

Call 513-236-1704 for prices.



The Lady of Cincinnati Fountain Square

16" x 20", September 2007, Wax on aluminum sheet, January 2008

The latest abstract portrait. This painting incorporates a more refined color scale from black to white.

Abstract Portraits

Having trouble busting out of your shell?

Maybe a robot can get you to move off center.

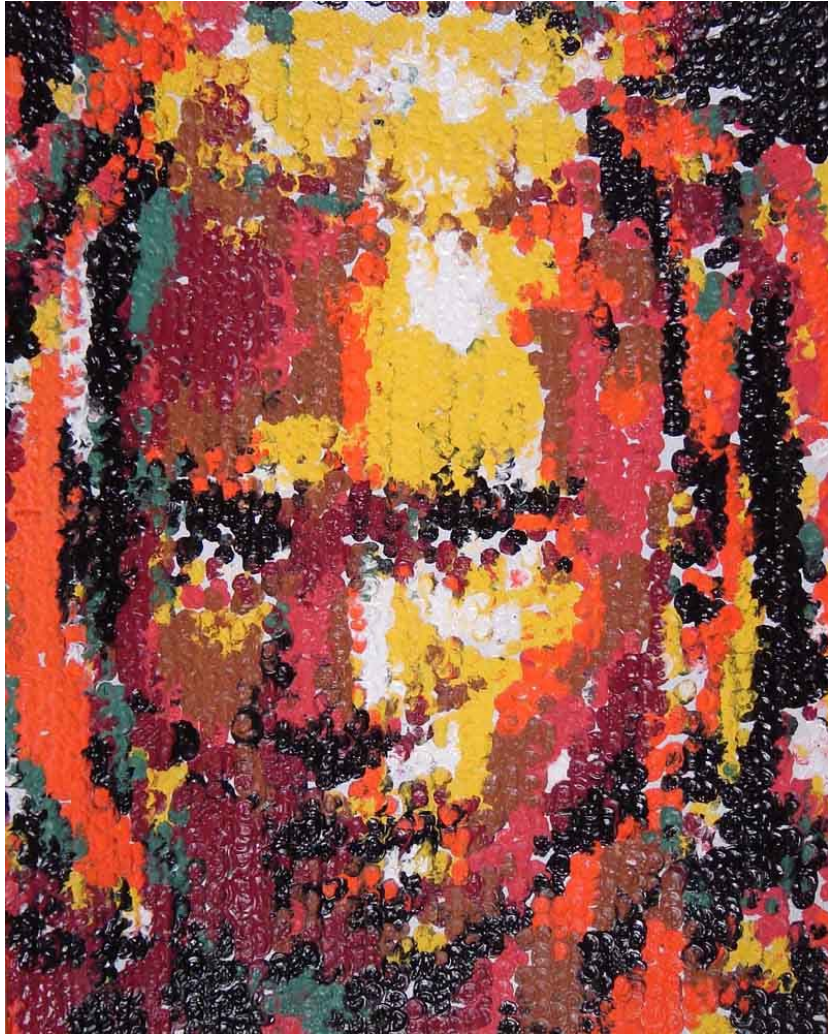
It happened to Tom Lohre, portrait & landscape artist .

Tom is a trained academic portrait painter. He studied under Ralph Wolf Cowan, royal portrait master who studied at the New Students League, New York City. Tom adopted the same tried and true manner of the old masters by living and working with his master.

Later Tom developed an air plein air manner, painting small landscapes using a portable easel.

Tom wanted to paint abstractly but had not, yet. To him, life is fine shades of grey rendered into form. He just could not make himself paint in a colorful abstract manner. After years of trying he finally hit upon the solution: Make a robot to force him to.

Just by chance Tom had been working on a robot painter since 1980. He achieved his robot goal and his abstract goal in 2003. The robot



Chad Johnson

16" x 20", Wax on aluminum sheet, September 2007

This is the second painting done with the Lego robot assistant, "Artisto." The face is a Cincinnati Bengal Football Team receiver. The face is set in the mask of a tiger. Tom used strong colors to accent the eight colors available in the robot assisted process.

Painted in a fantastic new impressionistic manner. The robot used eight bold colors with limited ability to direct its mark creating an extraordinary new type of abstraction.

Tom is using the new manner to paint portraits. When you look at the work up close it is abstract. Get away forty feet and you

see an image of a face.

The paintings are modern impressionism with a seminal twist. The large dots of bold color covering the canvases in a regular manner are reminiscent of Seurat and Van Gogh. It's only when you get back about fifty feet you realize the vibrant arrangement of dots is a face. Each painting has only eight colors but that does not diminish the astonishing effect.

Tom purposefully paints faces with the robot because the technique is of very low resolution. You have to get back at least forty feet to see the face.

The colors for each painting are bright and across the spectrum. They work with each other to create the illusion of gray. Bright reds can be seen next to dull greens as well as bright purples against brown. Each painting has

that occurred with pastel. The third system was a computer controlled printer where one of eight colors is chosen to be applied to 4163 spots on a 16" X 20" aluminum canvas.

In the past year, Tom has learned that "Artisto", the name Tom has given to the new robot, is like a classical assistant. Artisto lays one of eight colors in generally the correct spot and Tom manipulates it to refine its placement. Tom initially creates an image in the computer that Artisto follows. The painting process takes 18 hours for a 16" x 20" having 4163 dots. Tom can turn "Artisto" off while working on a painting so the painting does not have to be done all at one time. All the paintings are close ups of faces because the low resolution has to rely on the viewer to fill in the blanks.



Helen

16" x 20", Wax on canvas, December 2003

The robot that made this painting used a sweeping motion as it followed a plate beneath the tracing end of a pantograph.

On the drawing table is a similar robot using state-of-the-art vision software provided as part of RoboLab, the graphic programming computer language that drives Lego's MindStorm Invention System's motors and sensors. It is the same vision software used to analyze medical images and automate industrial assembly. The new robot will use frequency and spatial filtering, quantitative analysis, morphology and pattern matching to look at a subject in real time and deliver color and placement information to canvas.



Hatfield Coal
20" x 16", Wax on canvas, April 4, 2004

The Artisto Family of Art Machines

Work started in 1980 using a Radio Shack Color Computer to address individual pixels to create computer art. Later Tom purchased a stepper motor controller using the Radio Shack Color Computer in 1989 and created a metering and dispensing oil paint device using screw driven plungers.

Tom's simplest painting device was a palette he screwed four oil paint tubes into the base and squeezed out the paint, as he needed it. Tom used the simple palette for three years as he studied color mixing. A derivative of this was adapted caulking gun where the plunger drove angled treaded rods that squeezed out various quantities of oil paint determined by the angle created. Following this device, Tom developed an air pressure palette where oil paint was dispensed according to various air pressure applied to oil paint in syringes.

Next, Tom started to create small windup devices that made strokes on paper with watercolor dispensed through a brush from a syringe. He elaborated on this idea by adapting a remote controlled car into a painting robot. Tom laid off small robot art ma-

chines for a year because they started to seem menacing. Instead he created three man powered art machines, a push-cart, flying bicycle and a sculpture making exercise machine. But it was not until 2004 when Tom was confronted with the conundrum, "The brush cannot be the ultimate painting device." He set afresh on making a robot that painted. He purchased several Lego MindStorm Invention System Kits and quickly prototyped three robot printers. One was a large format pastel printer that followed a same size paper plate suspended above the robot as it copied the plate below it in pastel. The second printer used a pantograph system to follow a smaller size plate. This system used an advanced method of applying color, wax sticks on a hot surface. It allowed quick application instead of the laborious going over

a carefully selected range of colors that act as eight steps from black to white.

Although the paintings stand alone as seminal modern impressionism there is the other side of the story: A Lego robot helped in the making.

The Robot Story:

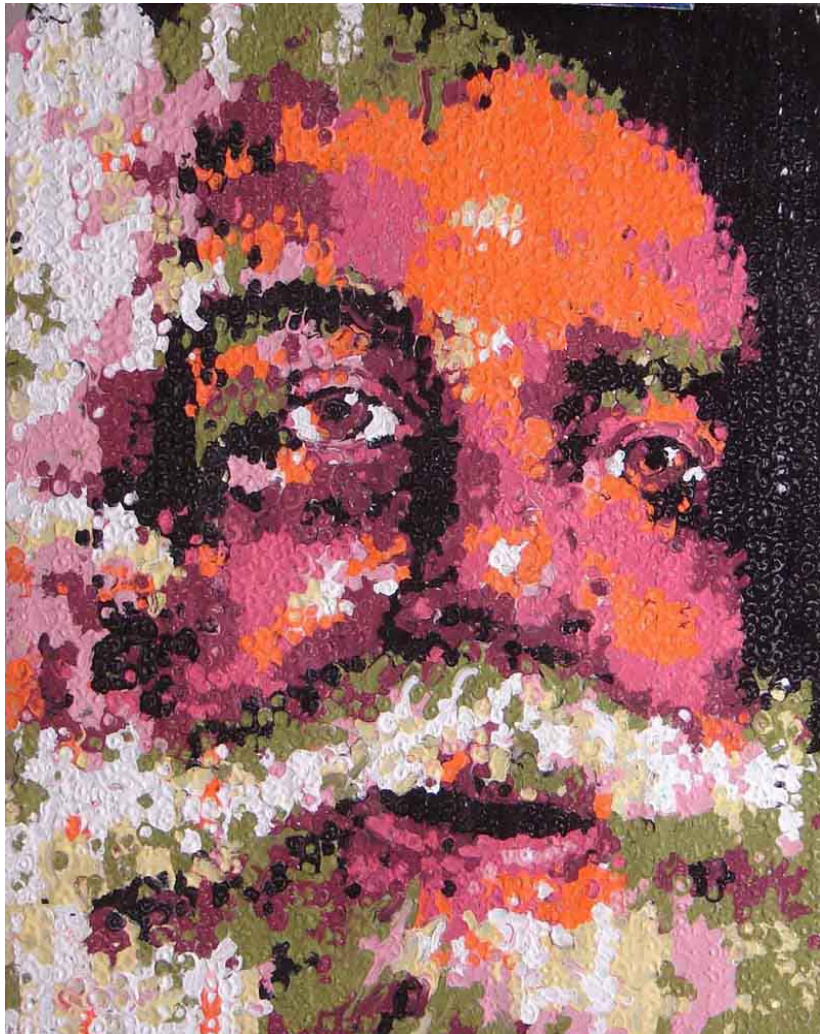
Since 1980 Tom has been working on the robot and finally has a solid body of work done with its assistance. Every year he would spend one month developing a painting method that satisfied the robots mechanism and Tom's aesthetic manner. Now that the robot is producing amazing results. Tom will work year round with the robot as well as paint his formal portraits and scenes from around the world.

It was Tom's scenic painting that prompted him to embark on such a



Helen XIII
16" x 20", Wax on aluminum sheet, September 2007
This portrait plays a trick on the eyes. When the lightest color needed to be yellow, Tom made it the opposite violet. Strangely it seems appropriate. Tom also learned that he had to keep the colors a good bit lighter after black to have noticeable contrast.

long journey to make a robot that painted. Spending long hours placing thousands of dots of color on his canvases made him think about how to have a machine do it. At first he used a simple palette with tubes of color screwed in from underneath. He would just squeeze color out as he worked. Then he made a mechanical oil paint mixer that looked like a gun. He would set various angles



The Artist as Santa

Wax on aluminum sheet, 16" x 20", December 19, 2007

This Lego robot assisted painting has several new inventions. Tom started painting while the robot laid down the color. He made an outline on the metal of the final painting and used it to guide his stroke. Tom reduced the size of the wax stick to 1/4" and kept the number of stroke to 4163. The Santa is the artist. Tom always wanted to paint a Santa in the manner of the Coke Santa, Haddon H. Sundblom.

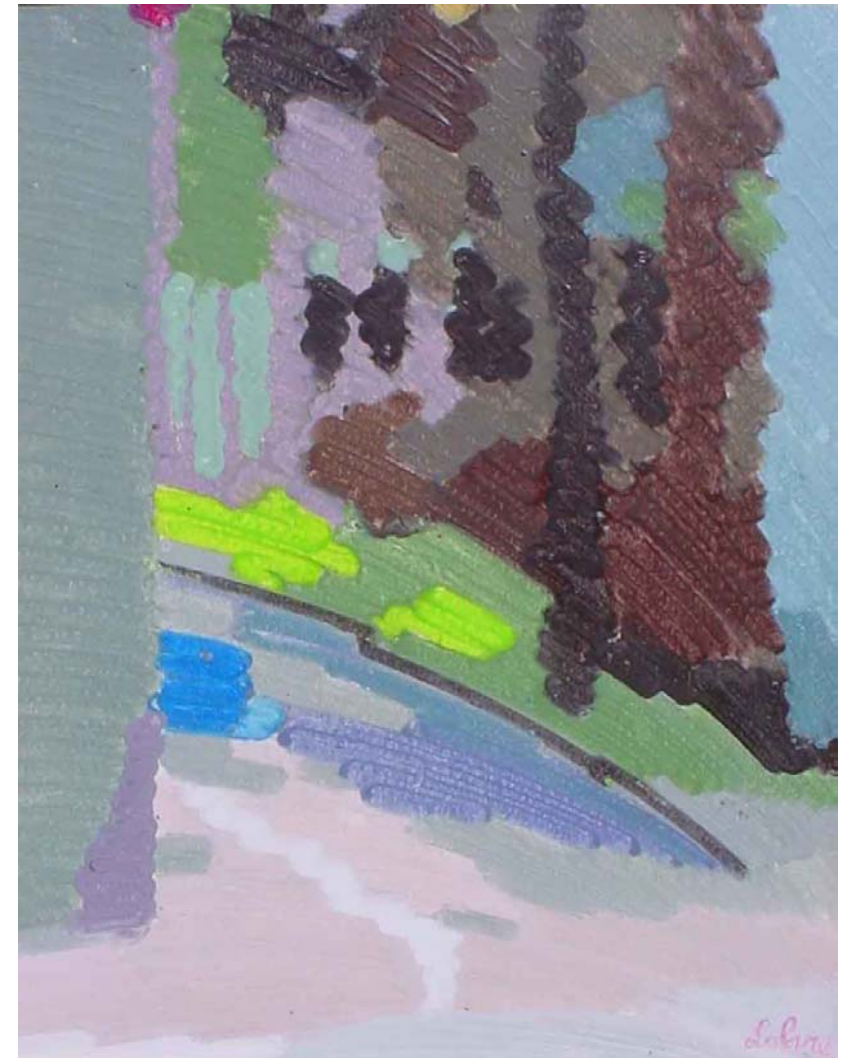
for each color and when he pulled the trigger a certain color would come out. But these methods were too unpredictable. It was only when he discovered Lego's MindStorm Invention system that he had the tools needed to affordably create a painting robot. Tom's first Lego robot used pastels. The robot would roll around the paper on wheels made of saw blades scraping color as it went. Following a printing plate suspended above it, it would eventually complete an image. Later Tom changed to using oil pastels that were carefully applied to a hot surface.

Why would anyone want use a robot to paint with? What is wrong with painting with a brush and palette? The human feeling in a brush stroke seems to have a little bit of the artists' soul in every stroke. Tom could not come to

believe that paint and brush is the end of all artistic tools? Before there were oil paints there was egg tempera. Before egg tempera there was plaster fresco. When you look into the future what do you see artists working with? Maybe there will be a chip inside the artists' head that allows a robot to do the painting while the artist lays in bed thinking about doing it.

In fact there is something similar is being done today with a monkey and a robot. Scientists have been able to make a monkey think about having a robot walk and have that robot walk. They are hoping that someday electrodes placed into a humans brain will allow them to use a robot to carry out tasks.

Tom is obsessed with working with and creating machines that paint is because it is his fu-



The Alley

16" x 20", Wax on canvas, December 2007

ture. By creating a machine that imitates his painting process Tom discovered aspects of him otherwise not revealed. A case in point is that Tom always wanted to work abstractly with brilliant color schemes but never could do it. It was his robot that taught him to use strong color effectively in a semi abstract way and still not to appear to be forced color effects. Eventually Tom's robots will be able to see, paint and talk at the same time. Imitation is the sincerest form of flattery. Creating a robot that paints like you is to distill your essence not into a bottle but onto a canvas.