TWO OF A KIND: ELECTRONIC INTERVIEWS AND CASUAL CONVERSATIONS AMONG THEMSELVES

by Robert Edgar and Fred Truck
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Robert Edgar Interviews Fred Truck

RE: Fred, in my early 20's I came to the idea that an artist could run analysis backwards, as a synthetic technique. That is what I understood Eisenstein to be doing with dialectics and montage. Now you have a computer program, the Art Engine, that seems to follow this same lead--the creation of a synthetic image from the juxtapositioning of divers elements, both textual and graphic. How did your idea for the Art Engine develop?

FT: This idea for the Engine occurred at a time when I was thinking about several interesting ideas. In the forefront of my mind was the work of Alan Turing, who developed the concept of the Turing Machine. The Turing Machine is actually a mental plan, nothing more, for a very simple computer that can read from and write on a tape. The important thing about the Turing Machine is that Turing showed such a basic device can imitate any possible machine. I was impressed with the power of Turing's mind, and the universality of his concept. I wanted very much to find an analogy--something similar that would make art.

Another thing on my mind was Boolean logic, and how it related to binary numbers--0 is false, 1 is true. What came to me was something that has come to many different people, and that was that 0 and 1 could stand for anything, and could also be manipulated in a variety of ways. I kept thinking about this: What if false was true?

The last thing was actually in the back of my

mind, and had been there for years. Hegelian dialectics. Dialectics proposes this familiar triangle: the apparent conflict between thesis and antithesis is resolved on a higher plane by the synthesis. This form of analysis has been used in art,particularly in dramatic structure, but also in musical structure and the structure of painting, since the beginning of the 19th century.

I began to see a way that I could construct a very basic conceptual machine that could be used not only to analyze art, but to create it. Or facilitate creating it from existing elements. Thesis = 1, Antithesis = 0 and the Synthesis was a matter of joining the two.

Consequently, my Engine would "read" the thesis object (an image, for example), then "read" the Antithesis object, and finally would create (write) a new third object from the first two.

RE: Alright now Fred Truck, the folks reading this won't have played with your Engine. So, best to start out with some specific details of what its like. I sit down at a Macintosh, with your program running. I want to juxtapose a Disney drawing of Mickey Mouse, here on a napkin to my left; with an Oldenburg sculpture of "Geometric-Mouse" here in this large art history book under my DOS manual. How do I get the images into the computer?

FT: Well, I think the first thing I do is make a list of all the things that I think are interesting about the image. Such a list of Mickey-elements might be like this:

pie slice eyes
round flat ears
oval shaped nose
shorts with buttons on them
big shoes that are usually yellow

Then, I would draw the image of Mickey. Currently, to draw images for the Art Engine, you have to write small programs that tell the computer to draw circles such and such a size here, and lines from here to there. So, you might draw the circular ears for Mickey like this:

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(define (round_flat ears)
 (frame-oval 10 20 30 40)
 (frame-oval 50 60 70 80))
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This would draw two ovals that are actually circles. When you complete the image of Mickey, you also tell the Engine how big the picture is, on a scale from 1 to 5.

So, essentially, the process of getting the image into the computer is 3-fold. 1)Make a list of words describing the image, 2)write small programs for each important part of the image and 3)tell the Engine how big the image is.

RE: Good, I have one image entered: both computer instructions for drawing the graphic, and a set of textual descriptors. Now I want to enter the Oldenburg. Do I do the same thing again for it? And if I do, what do I need to pay attention to in the first image's descriptors, so that the new image's descriptors are matched/compared to them (I'm anticipating the process a bit with this question, but I think it's important to understand this in relation to the comparison of images by the Engine).

FT: Ok. The answer is that you follow the same general process, but you must be careful in the naming of the programs that actually draw the second image. Here's a list of words describing Oldenburg's Geometric-Mouse:

floppy round ears
soft ovoid nose

rectangular eyes that are sometimes
different sizes
museum containing Oldenburg's found object
collection used in moveyhouse performance

Let's look at the first item in the list, floppy round ears. If we compare this element with the list describing Mickey, we'll see quickly that Mickey's ears are also described, but as being flat and round. So we have two sets of ears, but one set is flat and round and the other set is floppy and round. Therefore, when we name the program that draws Geometric-Mouse's ears, we'll call it (floppy_round ears) following the convention set before. Otherwise, the process is the same.

RE:So the words describing the images are themselves names of routines that each draw an element of an image--say, the nose of the Mickey Mouse image?

FT: Yeah. Mickey's nose routine would be named (oval_shaped nose).

RE: You've loaded the routines for drawing each element of the drawings, and you've named each routine with an element name, and a list of attributes for that element (nose is an element name, and oval_shaped is an attribute). Are the images now loaded in the Art Engine?

FT: Well, one more thing: each image also has a routine that calls ALL of its elements: the nose, the ears, etc. The Oldenburg mouse, for instance, has a routine called Geometric-Mouse, which is a kind of bag that holds all of the parts.

RE: Now, I want to synthesize these two images. Some of these elements match up (both have ears, both have noses), and some do not (museum containing Oldenburg's found object collection). The synthesis, now, takes

place by first pairing the elements which are the same, and sorting out elements which are different...and then following some rules for visually realizing the synthesis?

FT: Right. Here are the rules.

1) The largest object is drawn first.
2) If both objects are the same size, the Thesis object is drawn first.
3) Whichever object is drawn first is subject to being covered up by elements (ears, nose etc.) of the object drawn second. This usually partial covering leads to the graphic synthesis of the two drawings.
4) Once one object is drawn, the program searches the two element lists for pairs of object types (both have noses, both have ears etc.). It redraws only those objects that are paired with an object in the first drawing, and ignores all the other objects. Thus, information about Oldenburg's found object collection is ignored for THIS synthesis, because it does not have a match.
5) There are times when the Engine will draw all elements of both objects, whether they are paired or not. But to understand the main goal of the Engine, we can ignore the exact rule for now.

RE:What I should point out now, is that, as simple as this may sound, the result of this synthesis is quite striking. In this case, Disney wears Oldenburg's geometric-mouse like a mask, prompting me to think of Picasso's statement that it didn't matter that his portrait of Gertrude Stein didn't look like her, because "it will." All the more striking, because, after all, the original is a drawing...

Do you have any plans to create an image editor, so that you can just sketch the image elements using paintbox routines, and have the computer come up with the routine to draw it? That would seem to speed up your input of

new images quite a bit, and thus speed up your development of the program.

FT: Yes, I do. I have some ideas now about how this can be done, and will be working on it soon. Additionally, I am working on ways for users to import digitized images from other sources, which could be combined with other digitized images or drawings, depending on the effect desired.

RE: Well, it's late, and I need to pull this together for now. I'd like to point out, though, in case that it is not obvious to the reader, that this art machine comes directly out of an alchemical/Duchampian strategy, and should be seen as a serious extension of conceptually-informed sculpture. This is, and will develop as, a tool for direct experimentation with the relation ship between language and the image; and combines both a mythical/categorizational approach to composition, and an algorithmic/constructivist approach to composition. The labeling of elements and their attributes, and their list-oriented comparisons, is as much from Levi-Strauss' quatralogy as it is from artificial intelligence.

By going beyond the list/comparison of elements to include a graphic generated through Boolean (and other) rules, it goes beyond structural strategies. However, it does not drop the use of categories. It uses them with the algorithmic drawing routines to produce empirical results--a strategy which in time will prove much more fertile than the last ten years of art criticism.

This is among the first examples (in the arts) of a new relationship between description and generation, and to miss understanding it will mean missing Fin-de-Siecle America.