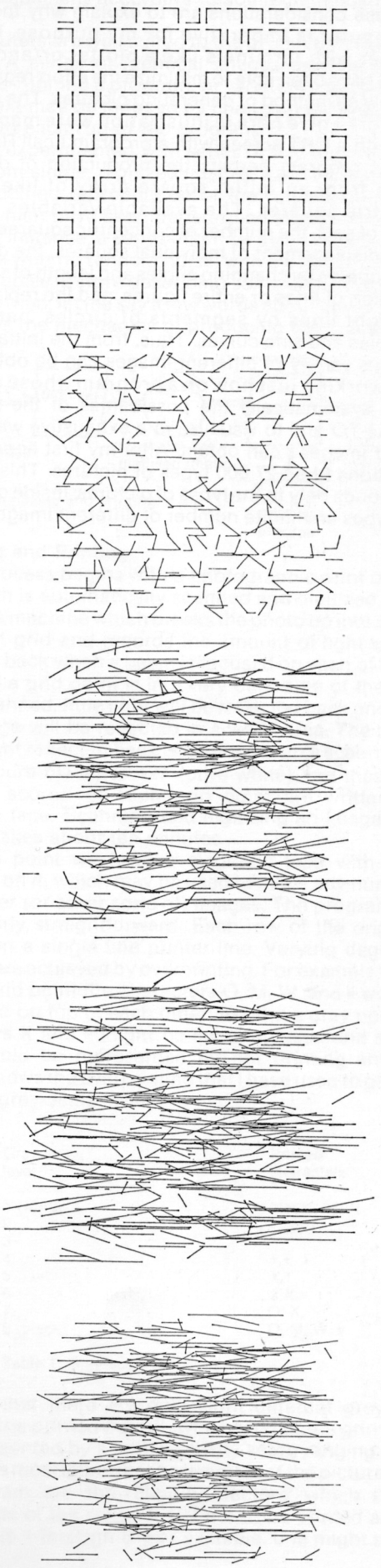
VERA MOLNAR

After an academic art school training (Beaux Arts) I began to make non-figurative images. The images I 'create' consist of a combination of simple geometric elements. I develop a picture by means of a series of small probing steps, altering the dimensions, the proportions and number of elements, their density and their form, one by one in a systematic way in order to guess what kind of formal modification challenges the change in the perception of my picture: perception being the basis of aesthetic reaction. My final aim, in common with so many painters of history, is to be able to create valuable works of art *in a conscious way*. Conscious way does not mean in my opinion the suppression of intuition, but its reinforcement by a cognitive process; it does not mean that painting becomes a matter of logic. Art at its inception is essentially intuitive, it is in its elaboration that intuition needs control and aid by cognition.

Since simple geometrical shapes are used, stepwise modifications are relatively easy to make. By comparing the successive pictures resulting from a series of modifications, I try to decide whether the trend is toward the result that I desire. What is so thrilling to experience is the transformation of an indifferent version into one that I find aesthetically appealing.

This stepwise procedure has however two important disadvantages if carried out by hand. Above all it is tedious and slow. In order to make the necessary comparisons in developing series of pictures, I must make many similar ones of the same size and with the same technique and precision. Another disadvantage is that I can make only an arbitrary choice of the modifications inside a picture that I wish to make. Since time is limited, I can consider only a few of many possible modifications. Furthermore, these choices are influenced by disparate factors such as personal whim, cultural and educational background, as well as ease of execution.



5 images out of the '196 squares series', 1975.

All these considerations are to explain why the use of the computer is imperative for my purpose. Using a computer with terminals like a plotter or/and a CRT screen, I have been able to minimize the effort required for this stepwise method of generating pictures. The samples of my work I give here in illustration were made interactively on a CRT screen with a program I call RESEAU-TO. This program permits the production of drawings starting from an initial square array of like sets of concentric squares. The available variables are: the number of sets, the number of concentric squares within a set, the displacement of individual squares, the deformation of squares by changing angles and length of sides, the elimination of lines or entire figures, and the replacement of straight lines by segments of circles, parabolas, hyperbolas and sine curves. Thus, from the initial grid an enormous variety of different images can be obtained.

I am working just now on a program whose aim is to explore systematically the possibilities of the program RESEAU-TO and to visualize in a exhaustive way all the types of images I can obtain. After my first approximate calculations I had 27,600 types of pictures. This number corresponds only to the *types* of pictures: inside of each of those types an infinite number of different images can be generated by changing the values of parameters one by one, several of them, or all at the same time.

It is obvious that this kind of work can not be done without the aid of a computer, and it is obvious also—as far as I am concerned—that my computer aided work is closely related to my former work carried out without the assistance of a computer.

This approach to the generating of pictures is not new; it had been applied long before computers were constructed. Making a series of pictures that were alike except for the variation of one parameter is not uncommon in the history of art (Haystacks and the Rouen Cathedral by Monet, for example). Just as erasing, scraping, retouching, covering parts of a picture or coming back to a preceding version were always familiar techniques used by painters. My computer-aided procedure is only a systematization of the traditional-classic approach. I believe that the use of the computer in art is an important tool for the working out of a 'science of painting,' more generally spoken of a 'science of art.' With regard to the impact the computer can have, I am in favor of the introduction of computer science in the Art School curriculum.

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