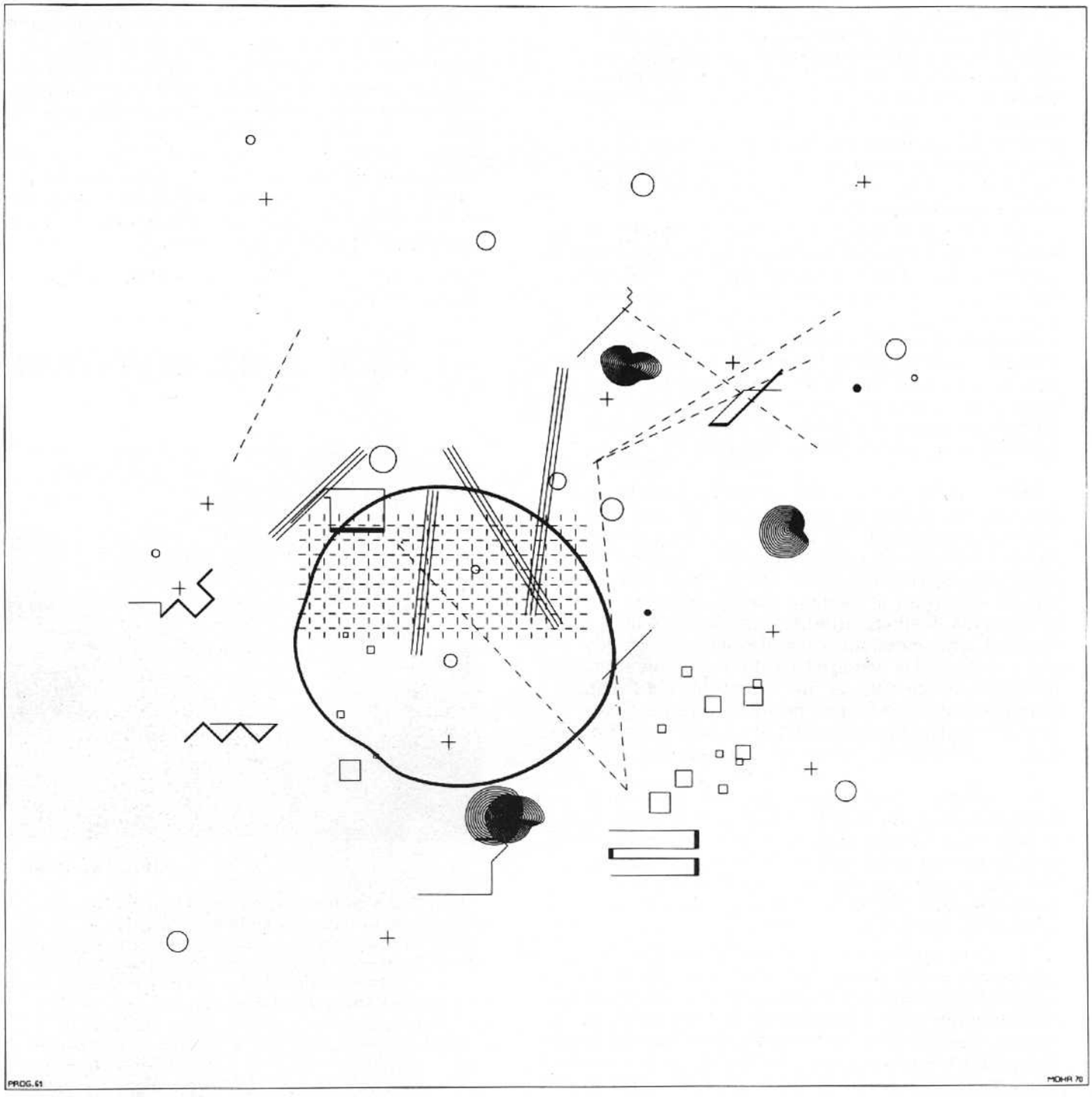

MANFRED MOHR COMPUTER GRAPHICS

Accepting that creative work is an algorithm which represents a human behavior in a given situation, it is natural to ask: how is such an algorithm built up, and which precise mathematical laws could be extracted for later use in different circumstances? If one is now curious enough to look for his own aesthetical parameters, he is ready to engage in an interesting line of research. These considerations led me to use the computer as a **PARTNER** in my work.

The first step in that direction was an extended analysis of my own paintings and drawings from the last ten years. It resulted in a surprisingly large amount of regularities, determined of course by my particular aesthetical sense, through which I was able to establish a number of basic elements that amounted to a rudimentary syntax. After representing these basic constructions through a mathematical formalism, and setting them up in an abstract combinatorial framework, I was in a position to realise all possible representations of my algorithms.

Since the most important point in applying a computer to solve aesthetical problems is the MATERIALGERECHTE ◦ use of this instrument, the research therefore should assume that old techniques of drawing and imagination are not to be imposed on the machine (although this would be possible), but should develop a priori a vocabulary which integrates the computer into the aesthetic system.

Computer graphics in general are conditioned by four basic premises:

1. A **PRECISE** idea of an aesthetical problem.
2. The need to break this idea into parts which could be reassembled as a program.
3. A steady control of the computing process to take full advantage of the **MACHINE – HUMAN** dialogue.
4. The need for the logic of the events to become perceptible.

The logic built into a program makes it possible to create a nearly infinite number of new situations. This is very important since the creation of a form is limited a priori by its author's characteristics, of which he may be consious or unconsious. It means that the exploration of a new idea leads sooner or later to a repetition which can be avoided by resorting to a computer once the basic parameters have been formulated. As it is possible to conceive the logic of a construction but not all its consequences it is nearly an imperative to rely on a computer to show this large variety of possibilities; a proce-