



47–48 Nicholas Negroponte. Two details of *Seek*, 1970 (see Appendix)

Seek is a sensing/effecting device – a device for finding things out and doing things – controlled by a small general-purpose computer. *Seek* deals with two-inch cubes which it can stack, align and sort by means of an electromagnet roaming overhead. These cubes form the built environment, cased in glass, for a small colony of gerbils. The gerbils are incessantly bumping into the cubes and disrupting constructions.

'The result is a substantial mismatch between the three-dimensional reality and the computed remembrances which reside in the memory of *Seek*'s computer. *Seek*'s role is to deal with these inconsistencies. In the process, *Seek* exhibits inklings of a responsive behaviour inasmuch as the actions of the gerbils are not predictable and the reactions of *Seek* purposefully correct or amplify gerbil-provoked dislocations. . . .

'Even in its triviality and simplicity, *Seek* metaphorically goes beyond the real-world situation, where machines cannot respond to the unpredictable nature of people (gerbils). Today machines are

poor at handling sudden changes in context in environment. This lack of adaptability is the problem *Seek* confronts in diminutive.

'If computers are to be our friends they must understand our metaphors. If they are to be responsive to changing, unpredictable, context-dependent human needs, they will need an artificial intelligence that can cope with complex contingencies in a sophisticated manner (drawing upon these metaphors) much as *Seek* deals with elementary uncertainties in a simple-minded fashion.'

Seek seems to me valid as art, and like much other art will bear interpretations which diverge from its original creator's primary intentions. Jack Burnham, the curator of the show, saw *Seek* as a model for the idea of making art (1970): 'Art could be rearranging blocks over and over again — just as sculpture is a matter of arranging forms infinitely. New aesthetics constantly force new arrangements in the same sense that the gerbils force the computer to model new possible environments.' It would be foolish to quarrel with him.

What has to be insisted on is the difference between artistic and scientific experimentation. Expressed as a scientific experiment or illustration, *Seek* would be rather offensive. Many books in recent years making facile and tendentious comparisons between animal and human behaviour have alerted us to the deficiencies of using science in this way (for instance, Robert Ardrey's *The Social Contract*). But *Seek* is more like a joke, metaphor, or poetic conceit than it is like a scientific experiment. I imagine that the spectator identifies now with the freedom of the gerbils to consume and excrete, scurry, court and squabble, now with the responsibilities of a lumbering bureaucracy to keep the environment orderly.

In fact I understand many of the gerbils at the actual exhibition fell ill and died.

Probably the most technically ambitious computer-based artefact yet made anywhere is the *Senster*, which was officially set in motion in 1971 at the Evoluon, a permanent industrial exhibition run by Philips, the giant electrical firm, at Eindhoven in Holland. The physical context is distracting, for the Evoluon is a paean to technology in the form of a flying saucer on legs, opened in 1966