Extract from

Cybernetics, Art and Ideas

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This volume of essays is the happy result of contacts and collaborations established during the three years devoted to the preparation of 'Cybernetic Serendipity'. Cybernetic Serendipity was an exhibition mounted at the Institute of Contemporary Arts in the summer of 1968, which dealt with the relationship of the computer and the arts. The exhibition, like this book, was concerned with the exploration and demonstration of connexions between creativity and technology (and cybernetics in particular), the links between scientific or mathematical approaches, intuitions, and the more irrational and oblique urges associated with the making of music, art and poetry. The title itself was intended to convey the fact that through the use of cybernetic devices we have made many fortunate discoveries for the arts.

The exhibition

Cybernetic Serendipity was mounted in a gallery of 6500 square feet, involved 325 participants and was seen by 60,000 people. The exhibits showed how man can use the computer and new technology to extend his creativity and inventiveness. These consisted of computer graphics, computer-composed and -played music, computer-animated films, computer-texts, and among other computer-generated material, the first computer sculpture. There were also cybernetic machines such as Gordon Pask's 'colloquy of mobiles', television sets converting sound into visual patterns, Peter Zinovieff's electronic music studio with a computer which improvised on tunes whistled into a microphone by the visitors; there were robots, drawing machines and numerous constructions which responded to ambient sound and light. Six IBM machines demonstrated the uses of computers, and a visual display provided information on the history of cybernetics.

Two aspects of this whole project are particularly significant. The first is that at no point was it clear to any of the visitors walking around the exhibition, which of the various drawings, objects and machines were made by artists and which were made by engineers; or, whether the photographic blow-ups of texts mounted on the walls were the work of poets or scientists. There was nothing intrinsic in the works themselves to provide information as to who made them. Among the contributors to the exhibition there were forty-three composers, artists and poets, and eighty-seven engineers, doctors, computer systems designers and philosophers. The second significant fact is that whereas new media inevitably contribute to the changing forms of the arts, it is unprecedented that a new tool should bring in its wake new people to become involved in creative activity, whether composing music, painting or writing. Graphic plotters, cathode-ray tube displays and teleprinters have enabled engineers, and others, who would never even have thought of putting pen to paper, to make images for the sheer pleasure of seeing them materialize. Many of the computer graphics made by engineers in Europe, Japan and the USA, approximate very closely to what we have learned to call art and put in our public galleries. This raises a very real question - should these computer graphics hang side by side with

drawings by artists in museums and art galleries, or should they belong to another, as yet unspecified, category of creative achievement?

There are certain classifications to which we are all assigned according to what we do. These categories which relate solely to our work, or our professional titles, inform the outside world about our way of life, our abilities and creative propensities. The deductions based on these classifications are not necessarily accurate but they suffice to colour the picture of an individual sufficiently for him to be irrevocably labelled.

These labels provide information which is accepted without question and without protest. Thus it is assumed that the electronic engineers represent a clever but an uncreative branch of society, whereas artists are exceptionally creative but it is unlikely that they should possess any technological skills. It is also widely assumed that to the engineer, scientist and mathematician, art is magic, and to the composer, painter and poet, technology is a mystery. These rough assumptions are very broadly true but not altogether true. Since the middle 1950s the relationship between art and technology has been increasingly in evidence through the advent of computer-aided creative design. Today these categorical assumptions about our various talents, functions and possibilities are less accurate than ever.

Thus Cybernetic Serendipity was not an art exhibition as such, nor a technological fun fair, nor a programmatic manifesto - it was primarily a demonstration of contemporary ideas, acts and objects, linking cybernetics and the creative process.