Edmond Nicolau

OM, MAŞINA, CIBERNETICA

(Man, Machine, Cybernetics)

Editura Politică, Bucharest, 1978, 251 pp.

Now and again there appears a book which opens up a new world not by revealing what is strange, but by revealing what is familiar. Edmond Nicolau wrote such a book. The title (Man, Machine, Cybernetics) is sufficiently vague to be transferable to almost any situation arising in human affairs, yet precise enough to suggest a scientific content of sufficient depth to convince the uninitiated of the validity of the particular methodology being promoted. The author produced the first book, as far as I know, to attempt to cover a huge area, from technical devices, through poetry to ecstacy. Thirteen essays (Dialogue with the Future, Machine History, Man-Machine Systems, Definitions of Cybernetics, Cybernetics Viewed by Ampère, Mathematics ex Machine, Artificial Intelligence, Bionics-biocybernetics, Bioengineering, Cybernetics and Poetry, Computer Creativity, Computer graphics, Cybernetics and Ecstacy, Cybernetics and Chess) form the backbone of this book, deliberately kept small so that a first reading is feasible in an evening or two.

This text is useful as a counter-argument to those who are skeptical of the unity of the world and proof that there are reasonable theoretical, practical and economically viable ways of understanding it. It represents an attempt to share with the intelligent audiance some modern developments, in an ellegant manner.

In what way is cybernetics valuable in human society, in technology or in our understanding of the world? Is the link between cybernetics and soft sciences essential to the health of both? And what, after all, should the term "cybernetics" mean?. These are questions which the author feels should engage the interests of intelligent reader.

A condensed history of cybernetics is presented to alert the reader to the vast literature that exists on the subject and to place the topics in perspective. References pertinent to individual sections are cited, thus fulfilling the purpose with which the book was written. There is a lot of footnotes which includes many contributions by the author.

It is said that we are approaching the final transition to the real time world of an informational society. A way to make better decisions by individual and societal units. It is said also that cybernetics will give mankind a chance to better manage its limited resources.

Edmond Nicolau is an optimist.

But in what does the great progress lie?

The prevasive nature of computers must surely be apparent to all. This is but one of the challenging wrought upon us during the seventies. However, that was only the beginning. Physical control of the mind,

self regulation of internal state, *psyché* is the next taquet. Hathe yoga is viewed as cybernetics, techniques by which some way of the nervous system can be modified.

It seems that the most important field of human activity today has no accepted name. It concerns the development of character, the cultivation of the best of the complex thing called self.

Edmond Nicolau is one the first cyberneticians who recognized of the fuzzy systems approach. Each word of natural language is inherently vague. Inexact concepts are associated with undecidability generated by conflict. Dynamics of fuzzy systems model the way towards structural stability. This is a new face of homeostasis. Although the number of living control mechanisms that have been described in precise mathematical terms is still small, recent progress in fuzzy system theory has provided new instrumental techniques and this use should enable more rapid advances to be made in the understanding of the behaviour of complex systems.

Some of the recent advantages in our understanding of the real world reduce to one commun denominator the miracle of cybernetics.

There can be no doubt that Edmond Nicolau can count on attracting attention by making such a vast generalization.

I urge that everyone interested in Cybernetics should read this book carefully.

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