

PREFACE

In autumn 1979 the Second International Seminar on Systems Methodology was organized by the Institute of Economics of Light Industry from the University of Łódź.

The main purpose of those seminars is to search for utilisation of General System Theory achievements and its interfaces with theories of: economics, sociology, regulation and control process, organization and management, modelling, simulation, design and planning. For this reason main subjects being discussed during the seminar related to some theoretical but mostly to pragmatic, methodological aspects of problems being listed above.

The publication contains 8 working papers. They were selected and ordered using the criterion of scale from the most overall to specific questions. This ordering could be defined as follows:

- system concepts,
- systems structure,
- systems design,
- systems organizational and management aspects,
- systems modelling and simulation,
- systems planning.

Publication structure and content

The opening paper deals with different system concepts and is written by Dr. Jerzy Drygalski, scientific assistant from the University of Łódź. Different methods to describe a system are considered also. The attention is pointed to socio-economic class of systems. The human factors play in such a system very specific role.

The author suggests creation of such descriptive method which could allow to drop many simplification assumptions adopted by social sciences combining particular, one-side methods of systems analysis.

The next paper by Professor Vilmos Nemény from the University of Carl Marx from Budapest (Hungary) is devoted to the structure of socio-economic systems as well as the way such a system operates. Problems of hierarchy, centralization vs. decentralization and self-regulation mechanism are discussed in some details and many important conclusions are presented by this author.

Both remarks and comments lead to the methodological problem how a system should be modified or designed. The designing procedure and particular stages of that process are under consideration. Many, sometimes, contradictory ways of designing are discussed by Professor Janusz Gościński from the University of Łódź and chairman of the seminar. High attention is focused on processes of regulation and control from the point of view of system designer.

Two proceeding papers tackle the question of systems approach to organization and management. The first one by Ass. Professor Włodzimierz Bojarski from the Polish Academy of Sciences provides comments on the balance between static rules and order and dynamic actions, the flexibility to meet changing conditions and innovations. Differences between managing and steering are discussed and poliocentric structure of management is strongly stressed.

The fifth text by Dr. Wiktor Askanas from the University of Łódź takes under consideration the implementation rules and methods of management using the systems analysis. Some organizational and sociological implications are strongly enlighten by the author.

The next paper by Dr. Zsuzsa Kapitány from the Hungarian Academy of Sciences deals with dynamic stochastic simulation of systems being controlled by stock-signals. In specific, buffer stocks are considered as a way to increase the time of life of such systems. Both deterministic and stochastic models are compared and some implications for the adaptability of economic system are concluded on the base of experiments.

The last question is the planning as an instrument to obtain the required behaviour and achievement of systems goals.

The seventh paper by Professor Krzysztof Porwit from the Central School of Planning and Statistics in Warsaw considers the nature of nation planning. The theoretical and experienced aspects of system-wide planning are presented and developed on the background of the theory of economics but on the hand in view of regulation process. Many aspects and different interpretations of planning are analysed and evaluated. Finally many important and some controversial conclusions are made by the author.

The same aspects but on the level of corporation are presented by Professor Raimo Nurmi from the School of Economics and Business Administration from Turku (Finland). The structure and routines of hierarchical operational planning are discussed in terms of objectives achievement tooling. The advantage of decentralized structure is stressed. Twelve longrange planning stages are analysed carefully step by step as well as nine short-range planning process.

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Janusz Gościński