B R I T I S H C O M P U T E R S O C I E T Y

All-Day Symposium: ARTIFICIAL INTELLIGENCE AND THE SIMULATION OF BEHAVIOUR
16th September, 1964 at Northampton College of Advanced Technology

Organised by Dr. M.B. Clowes, of the Medical Research Council, Psycholinguistics Research Unit, Oxford, and the British Computer Society.

Session 1 Chairman: The Rt. Hon. The Earl of Halsbury

10.00 a.m. "COMPUTER CONTROLLED SPEECH SYNTHESIS" by J.N.Holmes, I.G. Mattingly and J.N. Shearme, Joint Speech Research Unit (G.P.O.

10.30 a.m. "A COMPUTATIONAL ANALOGUE OF SOME ASPECTS OF THE VISUAL SYSTEM", by M.B. Clowes, M.R.C. Psycholinguistics Research Unit.

11.00 a.m. Discussion

11.20 a.m. Coffee

Session 2 Chairman: D.E. Broadbent, Director, M.R.C. Applied Psychology Research Unit, Cambridge.

11.40 a.m. "ASSOCIATION NETWORKS IN INTELLIGENT BEHAVIOUR", by G.R. Kiss, Department of Education, Birmingham University.

12.10 p.m. "AN APPROACH TO THE SIMULATION OF GRAMMATICAL COMPETENCE", by J.P. Thorne, Department of English Language and General Linguistics, Edinburgh University.

12.40 p.m. Discussion

1.00 p.m. Lunch

Session 3 Chairman: Dr. A.M. Uttley, Superintendent, Autonomics Division, National Physical Laboratory.

2.00 p.m. "EXPERIMENTS WITH A GENERAL GRAPH SEARCHING PROGRAM AS AN APPROACH TO MECHANISED CONCEPT FORMATION", by D. Michie, Experimental Programming Unit, Edinburgh University.

2.30 p.m. "THE SIMULATION OF SOME ILLOGICAL COMPONENTS OF PROBLEM SOLVING ACTIVITY", by A. Elithorn, Royal Free Hospital.

3.00 p.m. Discussion

3.20 p.m. Tea

3.40 p.m. "A COMPUTER STUDY OF GAME LEARNING", by E.W. Elcock, Department of Natural Philosophy, Aberdeen University.

4.10 p.m. "SOME EXPERIMENTS IN LEARNING", by B.R. Gaines, S.T.L. Ltd., and the Psychological Laboratory, Cambridge.

4.40 p.m. Discussion

5.00 p.m. Close

17th August 1964

Dr.M.B.Clowes,
National Physical Laboratory
Teddington, MIDDX.

Dear Dr.Clowes,

Thank you for sending details of the September Symposium. I enclose a synopsis of ouf proposed contribution which I hope is acceptable.

I assume that facilities for showing slides will be available. Would you please inform me whether any proceedings will be published.

Yours faithfully,

B.R.Gaines.

17th August 1964

Synopsis of Paper Proposed for Symposium on 'Artificial Intelligence and the Simulation of Behaviour' 16/9/64

Some Expts on Machine Learning in Various Environments

Work at STL on Machine-Learning has utilized the concepts of both Psychology and Automatic Control to develop a general-purpose Learning-Machine which initially knows nothing of its environment, uses a search strategy to attain 'reward' and gradually builds up paths to reward together with a model of the general structure of its environment. It utilizes these gradually to improve its solution to the problem of obtaining reward.

The Learning Machine has been extensively simulated on Computers in maze, pattern-manipulation and vehicle-steering environments. Work is proceeding on neural-nets as components of learning-machines and on adaptive computer elements to realize the machine in hardware.

by B.R.Gaines, Standard Telecommunication Laboratories, Harlow and the Psychological Laboratory, Cambridge.