

A HISTORY OF THE CYBERNETICS SOCIETY

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THE FIRST FIVE YEARS (1968-1973)

I became interested in the promotion of Cybernetics as an academic and artistic discipline of greatest value to the future of mankind as a result of a Symposium on Human Nature, organised at Imperial College, London, 13th-17th July 1964, by Lord Jackson of Burnley, DSc., FRS., and Professor Arnold Tustin, FIEE. I began to share many of the views expressed by Norbert Wiener, Dennis Gabor, A.N. Kolmogorov and others on the subject. Soon after the symposium I developed an extensive correspondence on this subject not only with my thesis supervisor and Ph.D. examiner, Professor Dennis Gabor, DSc., FRS., Nobel Laureate 1971, but also with many eminent scientists of our times in particular, Sir Cyril Hinshelwood, FRS., and Sir Hans Krebs, FRS., at Oxford University, Lord Adrian, FRS., at Cambridge University, Professor Abdus Salam, FRS., Nobel Laureate, 1979, Professor Max Born, FRS, Professor Werner Heisenberg, FRS., Professor Gilbert Ryle, Professor Colin Cherry, DSc., FIEE. In this correspondence I found a great deal of moral support particularly from Sir Cyril and Lord Adrian, for my thesis that a fresh approach to human psychology be made on the notion that it is only the human mind which can resolve the conflicts between itself and its material creations, such as "intelligent" machines.

Thus in 1968 when Professor Eric Houldin, Head of the Department of Electronics, Chelsea College, London, allowed my request to establish a Cybernetics Research Group, and start postgraduate studies for the advancement of Cybernetics, I resolved to find friends for the promotion of a Cybernetics Society in the United Kingdom. I was soon joined amongst others by Mr. R.W. Young (now at Imperial Cancer Research Fund, London), Mr. A.P. Nicholas (now at North London Polytechnic), Dr. D. Hayes and Dr. K. Clifton (both Trustees of the Society), Mr. C.D. Harris (now at Lloyds Bank, London) and Dr. A.M. Hill (now at British Telecom Research, Ipswich). The contributors to our first meeting were largely members of the Cybernetics Research Group but after the first year our meetings were extended to anyone interested in the promotion of Cybernetics. Our meetings were usually held on Tuesday evenings at Chelsea College, Manresa Road, at 6.30p.m. to allow people from other colleges and industry to take part. In 1973 Dr. D. Hayes took the initiative to incorporate the Society for the purposes of registration with the Registrar of Friendly Societies. This led me to draft the first memorandum of the aims and objectives of the Society and formal rules for its operation which were approved by a meeting organised by Dr. Hayes in September 1973 at Chelsea College.

During this month we made contact with Dr. Brian Warburton (School of Pharmacy, University of London) and Mr. Harry Moore (Brunel University) who actively supported our move for incorporation and became the founder members of the Society. It was at this meeting that I was elected Chairman of the Society for the first time with Dr. Warburton as Vice-Chairman Dr. Hayes, Honorary Secretary, Mr. Harris, Honorary Treasurer, Dr. Clifton, Deputy Secretary, with Dr. Hill, Mr. Moore, Mr. Caruana, and Mr. Watson, as members of the governing body.

During this time the members of Society contributed profusely to the advancement of Cybernetics. In 1969 we led a delegation to the First International Congress of Cybernetics, held at Imperial College, London, under the chairmanship of Professor Stafford Beer and the Patronage of Lord Jackson of Burnley, FRS. Mr. S. Rahman and I made a contribution in the session of Cybernetics and Natural Sciences, "On the Foundations of Ternary Logic and Cybernetics" published in Progress in Cybernetics, Vol.3., pp1003-11, Gordon and Breach, London. In 1970 the members of the Society led two delegations to international conferences.

The first delegation consisted of Mr. R.W. Young, Mr.A.P. Nicholas, Mr. R.F. Muftuoglu, and I myself. The International Congress on Cybernetics was organized by Professor Boulenger and Professor Ross Ashby at Namur, Belgium. The members presented five papers at this Congress:

- 1 H.A. Fatmi and R.W. Young, "The Nature of Stochastic Method in Cybernetics" published in Progress in Cybernetics, Namur, Belgium, 6, 328-33.
- 2 H.A. Fatmi and R.W. Young, "Cybernetics and Law: Hierarchical Interactions Between Man and Machines" *ibid* pp.802-11.
- 3 A.P. Nicholas, "Cybernetic Model of Plasma", *ibid*.
- 4 R.F. Muftuoglu, "A Cybernetic Model of a Hydrological System", *ibid*.
- 5 S. Rahman, "Theory of Cybermata", *ibid*.

Our second delegation was to the International Symposium on Biocybernetics organised by Professor Hans Drieschel at Professor Pavlov's famous laboratories at the Karl-Marx University, Leipzig, from the 22th-26th September 1969. We made two contributions at this meeting:

- 1 H.A. Fatmi, "An Approach Towards Understanding the Psycho-Physiological Mechanism of Perception and Awareness", published in Biokybernetik, Leipzig, III (1970) pp.90-96.
- 2 D.B. James, "Computers and Medicine", *ibid* 88-90.

After this symposium the Society made contact with Dr. James who made eminent contributions to the advancement of Cybernetics and the Cybernetics Society particularly towards the development of the first MSc course in Cybernetics at the University of London.

From 1970 onwards the Society became much more formally organised and the members began to contribute written papers at the meetings. At the end of 1970 the journal "Nature" began to publish material connected with the research of the members of the Society particularly on "The definition of Intelligence". Thus during 1970-71 six such comments were published:

- 1 H.A. Fatmi and R.W. Young, "A Definition of Intelligence", Nature, London, 228, 97.
- 2 Gordon Hyde, "Comment on Fatmi and Young's Definition of Intelligence from the Point of View of the Infinite Phrase-Structure Grammar." *ibid* 228, 589.
- 3 H.A. Cook, "Comment on Fatmi and Young's Definition of Intelligence from the Point of View of Quantification, *ibid* 228, 1008.
- 4 Professor P.M. Muller, Jet Propulsion Laboratory, California Institute of technology, Pasadena, California, USA, "Comments on Fatmi and Young's Definition of Intelligence From the Point of View of Logic and Computation", *ibid* 228, 1008.
- 5 Professor E.B. Barlow, FRS, Kenneth Craik Laboratory, Cambridge, and University of California, Berkley, "Comments on Fatmi and Young's Definition From the Point of View of Measurement and Uniqueness, *ibid* 228, 1008.
- 6 Gordon Hyde, "Comments an Fatmi and Young's Definition of Intelligence from the Point of View of the Godel Theorem and Automata Theory", *ibid* 229, 143.

During 1971-2 four written contributions were made by the members of the Society. Unfortunately they were not published. Miss Isaaq and Mr Schwarz left the country and Mr Nicholas's research interests moved to Mathematics. However their work is available as part of the University of London theses and dissertations:

- 1 Miss N. Isaaq, "Holographic Spectroscopy of Plasma Ion Sources", Ph.D Thesis, London, 1971.
- 2 Mr. A.P. Nicholas, "A Cybernetic Model of The Relativistic Effects in Plasma". MPhil Thesis, London, 1971.
- 3 Mr. P. Schwarz, "Gestalt and Universals", MSc Dissertation, London, 1971 (Cybernetics Research Group, Chelsea College)

- 4 Mr. C. SABET, "Cybernetic Techniques in Automation"
MSc Dissertation, London, 1971 (Cybernetics Research
Group, Chelsea College).

The year 1973 was extremely fruitful, members made several contributions to international meetings. In addition Dr. David Hayes and the Founding Trustee's of the Society took the initiative towards formal incorporation as a registered society.

Dr. Hayes, Dr. Clifton, Dr. Hill and I attended the Seventh International Congress at Namur, Belgium where the following papers were presented:

- 1 H.A. Fatmi, "Cybernetics of Legal Systems", published in Progress in Cybernetics, 7.pp775-8.
- 2 A.M. Hill and H.A. Fatmi, "Possible Holographic Techniques for the Realisation of Artificial Intelligence", *ibid* 7,249-258
- 3 H.A. Fatmi and D. Hayes, "Principles of Discrimination in Pattern Recognition", *ibid* 7,67-70.
- 4 K. Clifton and H.A. Fatmi, "A Non-Probabilistic Theory of Messages Based on Information Optics", *ibid* 201-204.

The second delegation consisting of Dr. Hayes, Dr. Clifton and I attended the Fifth International Symposium on Biokybernetics at Professor Pavlov's laboratory at Leipzig. Two papers were presented:

- 1 H.A. Fatmi and D. Hayes, "Discrimination in Pattern Recognition", published in Biokybernetic, Leipzig, 5, pp 281-287.
- 2 H. A. Fatmi and K. Clifton, "A Non-Probabilistic Theory of Messages". *ibid*

The third delegation consisting of Mr. C.D. Harris and I attended the Sixth International Congress on Cybernetic Medicine in Naples Italy and presented a paper on "An Electronic Theory of Brain Functions Based on Gabor-Kolmogorov Polynomials", published in Progress in Cybernetic Medicine, 6,3(2)pp1.11.

During 1968 to 1973 the Society was unregistered and I acted as the Chairman of its organising committee.