

"Some Services, Techniques, and Data Which  
Have Been Announced Is Available On  
Contract To Clients For Economic  
Studies."

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I have received some criticism for omitting the Institute for Cybercultural Research from the chart of organizations working in systems theory, cybernetics, and information theory.(1) I have also received an objection from an organizer of a Psycho-Cybernetic Group for omitting their work. In this note, I shall deal only with the problems of the ICR, leaving the second group for a future note.

First I shall quote what I said relative to ICR:

"There is one organization which I have omitted from this chart, because there is some confusion as to whether it is doing bona fide scientific research, or whether it is promoting specific economic reform measures without adequate testing of the hypotheses. I have omitted the Institute for Cybercultural Research, New York City, <sup>existing</sup> a determination of how well it meets the customary standards of scientific research."

Now for almost a year I have heard a number of people talk about ideas for solving the problems of automation that are developing, but I see little evidence that the promoters of "living certificates" and the promoters of a "Capital Diffusion Insurance Corporation" are making any concrete steps to test their ideas by suitable computer simulations. In my paper on Cybernetics and Public Order at the Symposium on Cybernetics and Society at Georgetown University last

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1. SEPR No. 94-4, "A Perspective Of The Functions Of The Major U.S. Organizations In Systems Theory, Cybernetics and Information Theory," (4/18/65-5/1/65), 7pp. also reprinted in Bulletin of the Bay Area Systems Group, April 1965, No. 23.

November, I made some specific suggestions on using the Leontief input-output matrices to develop simulations of some of the possible outcomes of proposals for "living certificates" or "capital diffusion."(2)

Last November the U. S. Department of Commerce released the 1958 U. S. Input-Output Tables in the November 1964 Survey of Current Business. Since then a number of organizations have converted the input-output tables to machine readable magnetic tape records. The following two references report on the work of two organizations which have been working with input-output tables, using the latest Department of Commerce values of the matrices:

"The Structure of the U.S. Economy," by Wassily W. Leontief. Scientific American, vol. 212, no. 4, April 1965, pp. 25-35.

An explanation of input-output analysis illustrated by the usual three input-output tables: coefficient table; inverse coefficient table; and dollar flow table. These matrices are 81 x 81 in size and the classifications have been regrouped more logically into sections: final non-metal, final metal, basic metal basic non-metal, energy, services, and miscellaneous.

"What if...Input-Output---Computer-Age Top Management Tool for Business and Government" by anonymous. Pamphlet issued by C-E-I-R, Inc., 1200 Jefferson Davis Highway, Arlington, Virginia 22202 (3)

This report explains the uses of the Leontief Input-Output Tables for long range planning and investment; marketing analysis; and national, regional, and local economic studies. C-E-I-R has the 86 by 86 tables of the U.S. Economy, released in Nov. 1964 by Dept. of Commerce, now on magnetic tapes for use in doing contract work for its clients. Clients can contract with C-E-I-R for studies using these tapes of input-output tables and their library of computer programs to investigate industrial and governmental economic, investment and marketing proposals. They anticipate that in a few years the tables can be expanded to a 1000 by 1000 size matrix which will enable them to provide detailed analyses for individual customers (similar to the proposal of Leontief in Nov-Dec 1964 Harvard Business Rev.).

Now what I am proposing is that any group which seriously proposes a potential solution for the problems of automation, can find the

2. SEPR No. 93-H, "Cybernetics and Public Order: Sec. VII: Conclusions and Recommendations," 11/19/64, pp. 46-52; also included in SEPR No. 93-B.
3. See Computers and Automation, March 1965, p. 51, for advertisement of "Input-Output" Booklet available from C-E-I-R.

data base of our economy already on magnetic tapes; a number of working computer programs for using the input-output tables in simulating economic problems; and the computer time is available at standard prices. What I am saying is that the tools are available for a price to the people who propose "living certificates" and "capital diffusion" to start testing their hypotheses. It is true that such simulations would require some factors to be supplied by social psychologists, because there are some human factors which we don't know enough about to be able to completely automate the models of our economic system. However computer simulations when properly guided by economists and social psychologists can go a long way toward evaluating various proposals for dealing with the problems of automation.

My suggestion is that if <sup>the</sup> Institute for Cybercultural Research wants to establish a reputation for properly testing hypotheses, that they get a price quotation from some group such as C-E-I-R for doing the simulation, and then they could approach some foundation with a more concrete plan of research. Perhaps Mr. Kelso could do likewise for his capital diffusion plan, and any others who have proposals could follow a similar plan of action.

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