

Frederick Bernard Wood, Ph.D.

February 21, 1971

Please address reply to address checked:

RESIDENCE: For personal business, local community projects, religious and political action work.
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Telephone: (408) 269-9327

PHILOSOPHY PROJECT: For discussion of fundamental philosophical questions on the relationship between engineering and society.
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ENGINEERING OFFICE: For electrical engineering and computer-communication systems work. IBM Corporation
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Los Gatos, California 95030
Telephone: (408) 227-7100 Ext. 5265

Miss Jane Cahill, Secretary MRC
IBM Corporation
Armonk, New York 10504

Dear Miss Cahill:

I wish to congratulate you on your appointment to be secretary of the IBM Management Review Committee back in December.

In October 1969 I wrote you that I was deferring sending you a proposal on the use of cybernetics until I checked out the ideas with others in the field. After checking the ideas for technical validity, I ran into another problem.

The present problem is that since the structure or function of negative feedback loops in cybernetics occurs in electrical circuits, mechanical systems, biological systems, psychological systems, and social systems people are often confused as to whether a particular cybernetic systems analysis is restricted to a machine manufactured by a corporation, a general principle of philosophy, or the development of an ethical principle for a religious society. For example, William Malamud, American Journal of Psychiatry, Vol. 117, No. 1, July 1960, "Psychiatric Research: Setting and Motivation," equates Lindsay's 'Thermodynamic Imperative' with Albert Schweitzer's principle of "reverence for life." My apologies for jumping across a number of fields of science and philosophy in this paragraph, but the organization of our scientific institutions and the division of journals into separate fields makes it difficult to communicate these ideas.

with

To resolve this confusion, I am first starting/labels, for example this letterhead is designed to at least clarify that this communication relates to the philosophical principles of cybernetics as a subject separate from the design of systems by IBM Corp. Having the three function letterhead is consistent with the facts of life, namely that the application of cybernetics and information theory to philosophy and ethics occurs as a by-product of the engineering use of cybernetics and information theory. (I am considering changing this letterhead, if anyone can suggest how to better express the interdisciplinary or multidisciplinary nature of this work and at the same time provide better protection against incorrect identification of IBM Corp. as a manufacturer of philosophies.) (Perhaps I should add a note "Weekday Engineer and Weekend Sociologist-Philosopher.)

The second step is to establish a journal through which to experiment with ways to communicate these multi-disciplinary concepts from cybernetics and information theory. I have started a

This letter format is part of a one-man experiment in helping maintain democratic procedures in our complex industrial society. Studies in the period 1957-1967 at the Center for the Study of Democratic Institutions, Box 4068, Santa Barbara, Calif., have shown there is an ongoing deterioration in democratic procedures in our country. Their work is summarized in reports such as: "Politics and the Corporation," "Cybernation: The Silent Conquest," etc. The philosophy underlying this experiment is outlined in the Society for Social Responsibility in Science Pamphlet No. 6: "The Social Responsibility of Scientists," available from S. S. R. S., 1545 Winding Road, Southampton, Pennsylvania 18966.

journal called COMMUNICATION THEORY in the CAUSE of MAN to take care of this second phase of the problem. I enclose a copy of the first issue, Vol. I, No. 1-2, June-July 1970.

Now to go back to the proposal to use cybernetics that I was talking about in October 1969. The basic topic was a way to use cybernetics to develop a new bulletin board policy suitable for IBM Corp. in the Information Era. If you look at fig 1 on p. 11 of CTCM I/1-2, you will see a plot of inventions(& discoveries) per century with approximate division points between the "Force Era" and the "Power Era" and the "Information Era." IBM Corp. has provided our civilization with the computing power capabilities needed to provide the information feedback that was missing during the 1930's to understand how our economic system is functioning. However the nature of industrial organization and the development of mass electronic communication media have made much of our social, political, and religious structure from the "Power Era" ineffective in the "Information Era." I will propose in a few months from now a method by which IBM can in a neutral(politically) way experiment with enhancing human communication to assist natural human concern for the problems of our civilization to develop in constructive ways.

There are four steps involved in this proposal which may be of interest to whomever the MRC of IBM has charged with the understanding of questions of "Social Responsibility." The steps are:

- (1) Brief statement of the nature of the proposal as in this letter;
- (2) Oversimplified example of how to analyse public bulletin board space allocation;
- (3) A more general case of the study of the different ways to allocate community bulletin board space at one location of a corporation; and
- (4) A sophisticated bulletin board allocation algorithm that provides for a neutral method of allocating space on a company or community bulletin board that allocates space and readjusts space by employee feedback in accordance with an algorithm from Information Theory.

Section 1.2.4(CTCM Vol. I, No. 3-4) contains step (2), and printed copies are available. Steps (3) and (4) are scheduled to be printed in future issues of CTCM within the next few months. It is my policy to file copies of each issue completed with the Library of Congress. It is important that philosophical ideas important to the transition of our civilization from one era to another not be kept confidential or proprietary. Step (4) requires some revising, before publication.

If you want steps (3) and (4) speeded up, you could offer to subsidize the division of IBM I work for to the extent of one days work per week, with my present engineering work reduced to a level of four days per week. I do not advise reducing my engineering work to less than four days per week, because at less than that, we might be eliminating unknown future analogies from the engineering and programming concepts that would help on other social problems. This point is very important at the level of understanding we have of multidisciplinary research.

There is a potential step (5), namely a computer software package to implement step (4). I will check to see, if I should file a programming concept disclosure through local IBM channels on the potential software package that the philosophical developments may lead to, since IBM does market software packages.

To keep the appropriate local IBM managers informed, I am giving copies of this letter to the functional manager of the part of the IBM project I am currently working on, Mr. Sherman Zell, and to the personnel manager at Los Gatos, Mr. Ronald Tharp.

There are other concepts developing in the form of analogies from physics that have relevance in sociology, such as sociological analogues of "complementarity," "Uncertainty Principle," From some work on image compression, I am also developing some ideas on how to take a more rational look at political ideology. These pioneering concepts are developed by a process which I call "Technological Meditation." An introduction to this approach is included in Section 2.1.5 of CTCM I/1-2.

I am also sending a copy of this letter to Mr. Howard M. Greenwald, Managing Editor of THINK, for advance briefing.

Sincerely yours,

Frederick B. Wood

Frederick B. Wood

enc: CTCM I/1-2

The multidisciplinary research on sociological problems required for our civilization to successfully make the transition from the Power Era to the Communication Era puts strains on the traditional organization of science. It requires the development of engineers who have some understanding of several fields of the social sciences in addition to their engineering field. To experiment with possible techniques for solving these problems, I have to change 'hats' between three roles:

- (1) Professional Engineer working on computer-communication systems for a corporation;
- (2) Philosopher or 'Weekend Sociologist' operating as an independent consultant on cybernetic systems;
- (3) Citizen expressing individual feelings, political views, or religious concepts.

To indicate which is the principal role in the business of this letter, I have checked the appropriate box on the right.

Please address reply to address checked:

CITIZEN

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PHILOSOPHER: Author and publisher of:
Socio-Engineering Problems Reports, and
COMMUNICATION THEORY in the CAUSE of MAN.
P.O. Box 5095, San Jose, Calif. 95150

PROFESSIONAL ENGINEER working for CORPORATION

* Name and address of corporation omitted to avoid possible mistaken association between my philosophical ideas and the policies of the corporation. To comply with engineering code of ethics requirement of disclosure of affiliation in arguments in respect to public policy, further details are available in a 'Biographical Sketch,' copies supplied on request.

April 19, 1971

May 3 1971

Dr. Jim Brownlow
IBM Research Division
Yorktown Hts, New York

*Fred, your works provoke plenty thought but do not motivate me to action in my world.
warm regards, Jim*

Dear Jim,

I enclose CTCM Vol. I, No. 1-2 and a special Christmas 1970 issue. Do you have any comments or criticism? I have published issues up through Vol. I, No. 5-6 by now.

Sincerely yours,

Fred

enc: CTCM I/1-2, X70

YOU USE TERMS ENTROPY, CONSERVATION, COMMUNICATION FOR CLASSES OF CONCERNS THAT I CALL INTELLECTUAL SYSTEMATIC. I LEAN TOWARDS SOCIAL AND MORAL TERMS FOR CLASSES OF CONCERNS THAT ARE EMOTIONAL, MOTIVATIONAL AND SPIRITUAL, (SOMEHOW SYNTHESIS WITH RATIONAL (SCIENTIFIC) CONCERNS) SOCIAL ORDER, POWER, SKILL AT WINNING. SKILL AT BROTHERHOOD ARE RULES FOR WORK MEETING.

ENCLOSED PAPERS

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World Future Society