

A Working Paper Draft

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SOCIO-ENGINEERING PROBLEMS. NO. 27-B

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THE SOCIAL RESPONSIBILITY OF ENGINEERS AND SCIENTISTS

Revisions to article on "The Social Responsibility of Engineers and Scientists" for the Progressive World.

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Revisions to article on "The Social Responsibility of Engineers and Scientists" for the Progressive World.

THE SOCIAL RESPONSIBILITY OF ENGINEERS AND SCIENTISTS

By FREDERICK B. WOOD

(From a paper delivered before the 1959 Western Joint Computer Conference, San Francisco, California, March 5, 1959. Session on Philosophy and Responsibility of Computers in Society.)

§ Note: The original article in the proceedings of the conference contained two illustrations which would require plates for reproduction. The summary at the end of the article includes the essential information from the omitted illustrations. The Proceedings of the 1959 Western Joint Computer Conference, containing the article with the complete illustrations can be ordered from the Institute of Radio Engineers, 1 East 79th St., New York 21, N.Y. at \$6.00 a copy.

p. 4; line 13:

at the end of the article. Starting with a review of the engineer's special work as the first step, and proceeding to speculate on what might result from the work results in a listing of what new knowledge or new devices may result from the engineer's work as the second step.

The next or third step is more speculative, namely the listing of "Potential Social Consequences." The fourth step "Find Expert Advice

p. 4, line 22:

delete [with boxes]

p. 5, line 4:

the required science advisors, the problem must be restated as is illustrated in step five. Then the engineer must determine how far he will go himself in taking action. In step six four different

p. 5, line 17:

devices such as the checking chart summarized at the end of the article. I have faith that the

p. 6, line 1:

A Sample Use of the Checking Chart (See Summary at End of Article)

p. 6, line 4:

in step one in the summary. A successful solution to the data communication problem might result in a universal credit system, where every store,

p. 6, line 9:

money for most transactions. This new device is entered in step two of the summary:

Then we go on to the third step, "List Potential Social Consequences," such as:

p. 7, line 10:

The fir

p. 7, line 21:

case I have placed "Yes" after the relevant categories in this

p. 8, line 1:

restatement of the problems as the fifth step.

p. 8, line 13:

engineer might take as the sixth step.

SUMMARY OF CHECKING CHART WITH EXAMPLE

1. Review engineer's special work such as the development of computer-data communication equipment and systems.
2. Anticipate what new knowledge and devices might result from the engineer's work, such as a universal credit system which replaces money.
3. Speculate as to what social consequences might result from the new technology, such as:
 - (a) No more armed robberies.
 - (b) Shorter working week in business and sales.
 - (c) Problem of underworld inventing new money system.
 - (d) Police measures instituted to suppress the underworld gangsters might interfere with groups working on important social problems, and might lead to the possible loss to society of creative minority groups.
4. Find expert advice to determine which developments need special study. The experts needed in the example considered are indicated by a "Yes" following the indicated classifications below.
 - (a) Social Science Consultants
 - (1) Historian - No.
 - (2) Lawyer - Yes.
 - (3) Philosopher - Yes.
 - (4) Political Scientist - Yes.
 - (5) Sociologist - Yes.
 - (6) Economist - Yes.

(b) Psychological Consultants

- (1) Industrial Engineer - No
- (2) Psychologist Yes.
- (3) Psychiatrist - No.

(c) Biological Consultants

- (1) Biologist - No.
- (2) Physician - No.

5. Reformulate the more important problems with the aid of the indicated science consultants.

- (a) How can we provide protection for individual freedom?
- (b) Are there simple legal means of preventing a dictator from controlling society through control of the credit system?

6. Take appropriate action. The degree of action required for this sample case is indicated by "Yes or No" following each degree.

- (a) Inform - Yes.
- (b) Discuss - Yes.
- (c) Propose - No.
- (d) Campaign - No.