

strove for excellence found in him a friend whom they almost worshipped. For Mac had a great heart, full of compassion for the unfortunate and the distressed. He involved himself deeply in the problems of others, be they his family, his colleagues, his friends, or even chance acquaintances and gave himself freely in helping to solve them. On occasion after occasion, I have seen him completely exhausted after spending hours or even

days trying to mend a life whose misfortunes had driven it almost to the breaking point.

Paraphrasing the words of Samuel Johnson, we may say of Frank McClure, he left scarcely any intellectual discipline untouched, and he touched nothing he did not enrich.

R. E. Gibson

February 1975



THE JOHN SCOTT MEDAL

*Dr. Frank T. McClure was awarded the John Scott Award for 1965 for the invention of the Satellite Doppler Navigation System. Provided for in the will of a 19th century Scotch chemist, the John Scott Awards are presented to "ingenious men and women who make inventions." They carry a premium of \$2,000 and have been administered by the city of Philadelphia or its directors of City Trusts since 1816.*

*On receiving the John Scott Award on November 16, 1965, Dr. McClure made the following response:*

## Response to the John Scott Award (1965)

Dr. Eisenhower and Gentlemen:

The only suitable response in these circumstances is one of thanks. With your permission, therefore, I offer my thanks to all those who have contributed to this occasion.

Mr. Rubel and Mr. Iliff, I would like to convey to you, and through you to the Directors of the

City Trusts of Philadelphia and to the Advisory Committee on the John Scott Award my deepest appreciation for this honor. Perhaps I should also convey my thanks to the financiers who invested Mr. Scott's remarkable legacy so wisely, and the Court who, so to speak, "raised the pot." Nor



should I forget those persons, always anonymous, who submitted my name for your consideration.

When I first received the wonderful news of your selection, I immediately acquainted myself with the background of this award. I was struck by the simplicity of the stricture that the income was to be "laid out in premiums to be distributed to ingenious men and women who make useful inventions." The stringency of these words grows as you ponder them. The key word is "useful." This, I believe, implies that someone has actually made significant use of the idea. "Invention," of course, implies novelty. Let us ask what are the prerequisites for one to meet the requirements. I submit they are as follows:

1. The individual must be in such a position as to be aware of the present, not-completely-satisfactory state of affairs in some area.
2. He must be presented with some new facts or knowledge lending feasibility to an invention.
3. He must have immediate access to an environment in which the invention will be sympathetically received and investigated to establish its credibility.
4. The society in which he lives must be willing to try something different.

I would like to suggest that these prerequisites imply three heresies.

1. The "need-to-know" concept of military, political and industrial security must fail, else how could inadequacies be appreciated by any but those committed to present methods.
2. Mismanagement is required, else how could any be free to waste time on investigating "hare-brained" schemes, most of which

will surely fall by the wayside.

3. Apprehension and insecurity must be present in the society, else why would an investment be made in developing a replacement for the "tried and true."

With these thoughts in mind, I would like to complete my acknowledgments:

1. To the Soviet Union, whose launching of Sputnik not only provided an oscillator for observation in space but created an appropriate receptiveness toward space technology in the United States.
2. To Dr. Eisenhower and Dr. Gibson, whose failure to introduce clerically perfect management in the Applied Physics Laboratory of The Johns Hopkins University left Dr. Guier and Dr. Weiffenbach free to make the clandestine observations of Sputnik which provided the essential clues; left a number of the staff who are present here free to investigate in detail the feasibility of the instrument design; and left Dr. Kershner free to commit himself to lead the development—all before any such project was authorized.
3. To the Navy, especially the Special Projects Office, and there particularly Admiral Smith, and to the Advanced Research Projects Agency of the Department of Defense, these two agencies undertaking support of the development while the negative reports of authoritative critics were continuing to be filed, the last of which being published approximately coincidentally with the declaration of the system operability.

To all these and others I say thanks.

And, in case there should be an impression left that I am against efficient management, let me clarify the point. To be against efficient management is like being against motherhood. I am for them, both in moderation.

Again, thank you.