

The Knowledge Bank at The Ohio State University

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THE ENGINEER IN SOCIETY

By CLAUDE E. WARREN

Editor's Note: This paper was written as part of the initiation program for the Autumn Quarter initiation of Tau Beta Pi. Later it was sent to the Executive Council of Tau Beta Pi in competition with essays from all the other chapters for the National Tau Beta Pi Essay Award.

UNDENIABLY the Engineer possesses the fewest social attributes of any of the professional men who graduate from college. He does not have the advantage of the Liberal Arts education of the Lawyer or Doctor, nor does he have the opportunity to elect as many subjects in the humanities as do those who are studying the Pure Sciences. The engineer's field lying between the realm of Physics and Chemistry and the domain of the manufacturer and distributor of finished goods, makes it imperative that he be familiar with the techniques of both. So, faced with the task of acquiring a vast amount of technical knowledge, the Engineer has little time, and very frequently little inclination, to venture into a study of the subjects so essential to a broad and clear insight into Society.

Just what are the implications of this unique position which the Engineer occupies? No one will deny the importance of his technical contributions to Society. He takes the theories and laws of Physics and Chemistry and by a judicious application of business judgment and technical ability makes it possible to place on the market all the modern "Miracles of Science": Radios, Automobiles and thousands of other articles whose necessity is unquestioned. Here is tangible evidence of the Engineers' labor, but nowhere is to be found the effect of his personality or his way of thinking.

The Engineer's mind or way of thinking is indeed as distinctive as the Lawyer's, the Political Scientist's, or the Doctor's. While the effects of the latter's ways of thinking are evident in great profusion in our everyday life, it cannot be said that Society has benefited by the Engineer's way of thinking in any way except the physical consequences already mentioned. This is indeed a sad state of affairs.

The Engineer is a person fitted by training to think logically and not only to find the logically correct solution to a problem but also the solution which in consistent with the economic fabric of our society. It has been said that an Engineer is a person who can do with one dollar what any fool can do with two. So here in our midst is a group of men who might well step forward with inspiring and effective leadership in this time of economic upheaval and social unrest.

Why then does the Engineer remain a passive factor in Society? Surely one cannot be logical and say that Society is at fault. Then if Society is not at fault it must be the Engineer. However, since Engineers are not born but are Engineers by virtue of their training, the reason can be found by inquiring into the Engineering Curricula.

The Engineering Curricula leaves little to be desired in providing the Engineer with the tools with which he solves his engineering problems, but a critical examination shows that it is woefully lacking in material which leads the Engineer to apply his mind to the social problems of his time. The Electrical Engineer is well aware of the causes and effects of oscillations in electric circuits, the Chemical Engineer knows the value of catalytic agents in his chemical reactions, the Mechanical Engineer is well versed in the design of powerful machinery. But how many Engineers are fitted to cope with the problem of the oscillations in our economic system, to control the catalytic effect of Public Opinion or to design powerful and lasting plans of operation with which a more abundant life could be achieved?

The language of the Engineer is the mathematical equation, the abstruse principles and laws of Chemistry and Physics. Society is not trained to understand this language, and when Society does not understand it will not accept. So if the Engineer is to assume leadership he must speak forth his ideas in a language that Society understands. He can do this by a well conceived study of the Social Sciences, by mingling with and gaining the confidence of the present leaders. Then stepping forward with a bold, well conceived plan, based on the logic of his engineering training and worded in the language of Society. Then and only then, will the Engineer occupy a position in Society in harmony with his true worth.
