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# THE ENGINEER AS AN EXECUTIVE

By ALLEN J. SMITH, '23, Tau Beta Pi

(This essay was written as an initiation requirement to Tau Beta Pi)

**T**HE executive is a person who can successfully float any enterprise. To attain this object a knowledge of business administration and of the engineering principles involved in the project are essential.

This naturally divides the engineer's studies into two branches, namely—business administration and engineering. Now, each branch in itself takes years of study, as well as the necessary years of practical experience for the complete mastery of its details.

Therefore if an engineer puts in enough time at engineering and then starts to study business administration,—financing in itself being a specialized undertaking,—he, then, in the meantime is neglecting his studies in engineering and his efficiency as an Engineer is falling off.

The engineer is, therefore, confronted with the proposition of sacrificing his efficiency in an endeavor to obtain a working efficiency in another specialized field. The constructive thinking, however, to which an engineer is put in the solution of his many problems, does show the characteristics of the sound fundamental reasoning which is so essential to the successful executive.

That the engineer is adequately fitted for the position of an executive is manifestly self-evident, since every problem which he undertakes is solved with the object in view of it being a profitable enterprise, hence his economical reasoning is always a controlling factor.

The engineer's position in the industrial field is of a peculiar nature, and a review of his undertakings will suffice to show that he is indispensable and is the real executive, although perhaps not the recognized executive, by the people at large.

In the undertaking of any enterprise the promoter secures the services of a competent engineer to investigate its possibilities. On the strength of the engineer's report the enterprise is undertaken and financed. After successful completion of the project, the engineer is paid for his services and dismissed, but the financier still holds to the proposition and reaps the profits of the engineer's constructive thinking for years to come.

However, after three or four years' operation, should the profits begin to decline, the engineer's services are again secured to solve the trouble which invariably he does. He again is dismissed with his fee while the profits go to the financier.

If, then, the engineer is always necessary to solve the big problems, his place is in the executive's chair, because the details of operation of any engineering project require constant watching to avoid wastefulness, and indirectly to conserve the resources of the country.

The engineer's endeavor, in the past, has always been to do his best to please his "employer," and the acute competition among engineers has helped greatly in this respect. Therefore the engineer must become alive to the fact that he is the real executive and hence should be governed accordingly, and prepare to take his real place in the industrial field. Why, then, should not the engineer learn to secure the services of competent financiers to finance his proposition, in the same manner as the financiers secure his services

to engineer their projects?

Since the successful executive in the business field is the forerunner of the country's administrators, the engineer is, therefore, in line to go right to the top in the handling of the country's activities.

Tau Beta Pi, though still comparatively young on the campus, has rapidly gained in reputation and student recognition.

The first attempt to install a chapter at Ohio State University was made in 1905. This attempt was not successful, but the idea persisted, and in 1920, the Gamma of Ohio Chapter was installed here.

The parent organization is nation wide in scope, and now numbers more than forty chapters at the leading technical schools of the country. It was founded at Lehigh University in 1885. Election of members is made twice each year. The Fall elections are made from the highest fourth of the Senior class, and those in the Spring from the highest eighth of the Junior Class. While based primarily on scholastic achievements, the selection of members takes into account the various qualities held to be requisite to a good engineer.

The first idea of its founder was to provide an honorary organization for technical men similar to Phi Beta Kappa, but Tau Beta Pi has grown to differ from Phi Beta Kappa in that it is an active fraternity, participating in any activity which concerns the welfare of the engineering students and their college.

Among the well known Alumni on the campus are Professors Magruder and Marquis of the M. E. Dept., and Ott of the Dept. of Mechanics.