

3. *Carrying Out the Detail Schedules*

The detail work of planning having been completed, the actual work of marketing the product is started, under the supervision and control of the General Sales Manager.

- a) Field executives, if required, are selected.
- b) With their assistance, otherwise by the sales operating department heads delegated for the duty, salesmen are selected.
- c) Instructions and supplies are issued to the training section and training begins.
- d) Assignment to territories is made at time of selection, or as the results of the training course develop.
- e) Samples, advertising matter to be carried, order and report forms and other supplies needed are issued to salesmen; and they begin work. Expense funds are established at the same time.
- f) As provided by the time schedule determined upon, instructions are sent at the proper time to the traffic and shipping department or warehouses, advising them what initial stock shipments to make or advising them to be in readiness to execute any certain predetermined plan of executing orders for stock or delivery on sales.
- g) In like manner activity is started among all operating units.

4. *Checking Results*

Results are assured only by constantly checking performance against plans—actual sales against estimated sales or quotas, costs of selling against estimated costs, etc., not only as to totals but as to each operating unit or section of territory.

- a) The reports of the work of the various operating units, and particularly of each branch, dealer and salesman are secured for reasonably short periods that can be compared with corresponding periods. These are tabulated and summarized and compared, performance against plan, and performance against previous performances, and supplied to both administrative executives and executives in charge of units concerned.
- b) Costs as shown by reports from field executives, branches and even salesmen, and figures supplied by the auditing and accounting departments are tabulated, summarized, set over against budget estimates and previous costs, worked out in actual amounts and in percentages as to sales. These and similar reports and statistics are supplied to the administrative heads of the business and to the heads of the field activities concerned.

5. *Improving Methods*

Aside from the analysis first referred to, and the checking of results, there are in many organizations provisions for the improvement of methods, such as:

- a) Investigations for improving selling technique—methods of personal salesmanship, demonstrations, preparations of selling portfolios by salesmen themselves from material and testimony secured from the consumer or dealer; methods of service to customers, etc. Even time studies of sales operations are being made.

In the Taylor System a corresponding function is that of the Order of Work Clerk, who takes the move-material and work-order slips previously prepared by the Route Clerk and issues them; i. e., starts work. He arranges the order of work and keeps a balance of work record; he arranges who shall do what, and when, in accordance with the plans.

In the Taylor System the corresponding functions are performed by the Progress Record Clerks, and the Cost Clerks, who check progress and costs as work is performed; and by the inspectors in the shop, who inspect for quality and quantity.

In the Taylor System this function is performed by specialized investigators—methods, time study and rate setting specialists.

- b) Investigations for determining rates and also methods of remuneration, especially if a commission plan, or salary and bonus, or any other form of compensation is in use or under consideration whereby the amount earned is affected by the sales performance of the individual.

## CONCLUSION AND QUERY

If it is discovered that the sequence of functions involved in selling, as developed by common practice, are analogous to the sequence of functions involved in production and recognized by scientific management technique, is it not probable that the principles of scientific management as developed for the shop in the Taylor System may be applicable in the selling department; and further, is it not probable that many of the actual *methods* of planning and control now

used in the shop may be adapted to the use of the sales department? It is to attempt to find an answer to this question that the further work of this committee is directed; and to that end the cooperation of all sales executives is essential.

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SCIENTIFIC MANAGEMENT<sup>1</sup>

BY GENERAL WILLIAM CROZIER<sup>2</sup>

GENTLEMEN: I think I ought to commence by telling you that I have no personal interest in the extension of the use of scientific management in industrial establishments, but having had some experience with it in certain Government manufactories of which I had charge, I should be very glad if any explanation I might make of the subject or any account of the results attained should be of assistance to the industries of Japan, for which country I feel a great and growing friendship. I should also state that I am not a specialist; that is, I am not an efficiency engineer; but I have had the same relations with the system which one of your number might have after having installed it in his own factory and had several years' experience with it. As Chief of Ordnance of the American Army I had naturally many duties to occupy my time. I had to look after the Officers' Schools

in my department; I had to supervise the designs of artillery and other armament for the American forces; I had to regulate the assignment of officers to the various arsenals, in accordance with their capacity and with the needs of these establishments; and I had to attend to the many other matters which naturally press on the head of a national technical department. I therefore could not attempt to master the details of scientific management; but I necessarily had to understand the principles, and I know the results of our experience.

Mr. Frederick W. Taylor, at one time president of the American Society of Mechanical Engineers, was the first person, as far as I know, to present the subject of the management of industrial establishments as a science having its own logical conclusions drawn from the study of experimental data, instead of as an unguided art to be practiced by "rule of thumb" methods. Management as practiced under his scientific system falls into two principal divisions. The first relates to the order and system which should pre-

<sup>1</sup> An address before The Osaka (Japan) Commercial Museum, Nov. 5, 1920.

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