

# Round-Table Conference on Cost Accounting<sup>1</sup>

## Introduction

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THESE ARE times when one questions why one is requested to render a particular service. That was not the case when the Taylor Society was invited to organize and conduct this round-table conference on cost accounting. But we did wonder how we could with becoming modesty make the reason known to the participants in the conference. Then by a happy coincidence that problem was solved. A few weeks ago there crossed my desk an issue of the *Bulletin* of the National Association of Cost Accountants containing a sentence which, quoted, makes the explanation for us. The sentence reads as follows:

The (development stage of cost accounting) was spread over a long period of years, and may be said to have started with the announcement of the principles of scientific management by the late Dr. Taylor.

The program of this conference provides for three brief formal statements concerning the nature and methods of cost accounting as an aid to executive work in industry; one brief formal statement concerning its usefulness as an executive tool in public utilities, and then open discussion. In particular, a statement by the chairman will indicate what scientific management has brought to cost accounting as developed in industry; a statement by D. R. Anderson, Comptroller of the Kendall Company, will indicate how an industrial executive uses cost accounting as an instrument of managerial control; a statement by King Hathaway, Consulting Engineer, will refresh our minds concerning the basic elements of modern cost accounting; and as a transition to general discussion, a statement by John H. Williams, Consulting Engineer, will raise the question of its desirability and applicability in the management of public utilities.

In pre-scientific-management days managers attempted to figure costs, but there was no cost accounting in the sense in which industry is now accustomed to use the term. Frederick W. Taylor was the father of cost accounting of the modern type. Yet to him, who was not professionally an accountant, this work

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was only an element in—a natural outcome of—his development of a system of management. It was the system of management which made possible and inevitably led to modern cost accounting. It is my lot to present briefly this morning, as a background for more detailed discussions to follow, those things in his system of management that make modern cost accounting possible.

The first new basis for cost accounting which scientific management has contributed is its technique of analyzing work into functional units and their relationships. Managerial records and control are in terms of operating units, and this makes possible the keeping of cost records in terms of units of actual experience which mean something definite to executives and foremen. For instance, the total cost of repairs in 1929 compared with the total cost in 1928 may indicate an increasing cost, and possibly waste, but the totals do not tell where the waste is to be found and its nature. On the other hand, analysis of records of the cost of repairs on each machine on each type of work does tell something—a bad and wasteful condition of a machine; an unsuitable and wasteful type of machine; an improper and wasteful manipulation of a machine; or a wasteful use of a machine on a type of operation for which it is not suited. This keeping of records in terms of units of activity makes possible for cost accounting a rational analysis of direct expense, useable as a tool of management, and an analysis and distribution of overhead both to function and to product.

The second contribution of scientific management to accounting, related of course to the first, is that operations are planned and conducted by means of written documents, not by means of arbitrary verbal orders. These documents automatically make original records of each unit of activity, and become the original records of cost accounting. Let me read from an article by Henry P. Kendall, written twenty years ago when he was doing pioneer work in scientific management at the Plimpton Press:

For instance, a ticket made up in the central planning department when combined with the instruction card, serves to plan the work in advance; then it is used to control the order of work by being placed on a bulletin board; then it gives the workman his particular piece of work to do with its instructions how to do it. On this ticket (commonly called a job card) is stamped the time at which the work is begun and when

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it ends. This same ticket then serves to check off the progress of the work on the route-sheet. Then it goes to the accounting department from which the man's pay is made up. It is then redistributed and furnishes the labor cost of the particular operation on the cost-sheet of the job. From cost-sheets similar to this are summarized not only the costs on all jobs, but department expenses and charges which appear in each four-week period statement.

Materials are apportioned and moved to workplaces and jobs by similar written orders. Accounting from such original operating documents eliminates the cost of duplication of records and practically eliminates errors. This brings cost accounting into such intimate relations with operations that Taylor moved the cost-accounting work from the general accounting office into the shop planning room.

Third, this intimate relation with operations established by the fact that the same documents in a continuous flow serve both operating control and accounting, permits the cost accounts to be routinized and simultaneous with the events they record and analyze. Noon of today can see all the cost of yesterday cast up. Errors and wastes are promptly discovered in time for something to be done about them. Cost accounting information flows in a steady stream out of operations and becomes a tool of dynamic management. Except on special occasions for special purposes, post-mortems cease to be the rule.

Fourth, when for special purposes post-mortems are desirable, they can be made promptly and with accuracy, because they can be made from original unit operating data. Given original data in terms of component units of operating activity, identifying the operation, the machine, the operative, the time consumed, the wage rate, the machine rate, the materials, their costs, the class of product, even the order being processed, then the possible combinations make any kind of special summary, analysis, comparison or report practicable long after the events have occurred. If the original data were transferred to Hollerith or Powers cards, then from these cards at any time a great variety of valid special information can be extracted. And it will not be estimated information; it will be just as accurate and valid as if procured on the day the operations occurred. Daily, weekly, monthly and other analyses can be made. The standard scientific-management cost report is for four-week periods; for forty years ago, before simplification of the calendar became a movement, Taylor made four-week periods the standard interval for cost analyses and reports.

Fifth and finally, although scientific management removed cost keeping from the general accounting offices to the planning room, it more than compensated by interlocking cost accounting into general accounting. So far as we know, prior to scientific management this interlocking was not practiced. Today, however, as a consequence of the promptness with which costs are derived and expenses accurately related to men, workplaces, operations, jobs and materials, changes in inventory values, accrued unpaid wages and other essential information find their places promptly—daily, if it is desirable—in the books of general account, and in the balance sheet and income-expense statements.

These are the contributions of scientific management, as a managerial technique, which have made the cost accounting of today possible.

It should be understood that we are concerned with actual costs (some call them circumstantial costs), the costs that are currently recorded as they are incurred and in terms of the things actually done to incur them. It is costs of this kind that reveal developing situations and permit executive action in time to correct the situation if it is developing in an unfavorable manner. We are not concerned with special analyses of past situations which, because all the necessary data were not then put on record and in suitable terms, are but post-mortem estimates of past situations. We are interested in current costs as a dependable tool of management.

Actual, or circumstantial, costs are of service to executives in two principal ways:

First, in the form of functional costs, or costs classified and summarized in terms of activities performed. Variations in such costs reflect variations in the manner in which things are done, and disclose inefficiency and waste. This gives a cost basis for executive supervision, appraisal and improvement of methods. For this particular purpose it is not necessary to have an allocation of the costs to particular products or services rendered. If I keep a record and make comparisons of the cost per page of typing manuscripts in my office, I can determine whether efficiency is improving or deteriorating without ever ascertaining what the cost of typing a particular manuscript may be. Functional costs furnish data for current executive supervision and direction.

Second, in the form of product or service costs—costs allocated to the various products or services. Such costs furnish data which serve as a basis for price determinations. They enable one as executive to