

budget on the basis of an assumed volume of business and then discovering you did only half, or twice, as much business? The figures are not comparable and the budget is useless. On the other hand, suppose you determine your budget on the basis of unavoidable expense, regardless of the amount of business done, plus a certain percentage of the business done; then you will have no trouble in establishing a standard for comparison with actual results no matter how much business you do.

To illustrate, suppose we want to get an estimate for printing a lot of circulars but do not know how many we want. If the printer tells us that it will cost \$100.00 to get the circular ready to print, plus \$10.00 per 1000 for as many circulars as we want, we shall have no trouble in creating a standard by which to check the bill when received, no matter how many circulars we have printed. Budgets in all departments of an industry should be made on this same basis.

Budgets should be used for three purposes:

1. Policy determination; that is, budgets should be made up on various hypothetical conditions as a means of determining policies. For example, on various methods of selling, on different volumes of sales, etc.
  2. Allocation; that is, where you have a total sum of money for a total purpose and you need to allocate it to different persons to carry out different phases of the work involved.
  3. Comparison of performance with forecasts; that is, for determining the effectiveness of the business as a whole and its various department branches.
- Do not forget that each item in the budget should in every case be made by the person responsible for

THE distinction between the political character of government and the economic character of business is becoming very much blurred. Business is becoming distinctly political, what with employees' representation, labor troubles dependent on the verdict of public opinion, and other similar developments. And government is becoming more and more economic. The political arguments and leverages and the sentimental oratory with which people strive to sway purely economic decisions of

performance; that is, the person who has an opportunity to make good the forecast. When budget costs are exceeded they should be studied in the light of what they should have been under the exact conditions that exist.

Let me add one further caution; do not permit budget figures to be based on past performances; you had as well not make the budget. Budget figures should always be based upon an estimate of what could and should be accomplished under the conditions which are expected to prevail when the work is performed. One of Taylor's greatest contributions to management was his substitution of time-studied standards for past-performance standards as a basis of judging current performance.

Where a budget is properly operated you will find very little need for reprimanding; those who do not meet its requirements almost invariably will voluntarily develop an ability to avoid their mistakes, or will voluntarily resign.

#### Conclusion

Let me suggest that no one attempt to set up top control on the lines I have outlined, without realizing fully what it means in terms of organization and expense. It is estimated that present day production methods have increased overhead costs 30 per cent at the same time that they have decreased total production costs by two or three times the amount of the increase. The same is true of the top control I have endeavored to outline. It will cost money and executive effort, and education and training all along the line; but it will be worth it.

government grow more and more anachronistic, even at the same time that business finds more and more use for the arts of propaganda and the spellbinder's gift of arousing emotional fervors. The economic functions of government bid fair to render inadequate the traditional methods of public finance and to force a new emphasis on methods more like those used by large-scale business in allocating its overhead costs and in collecting them from the public. (J. Maurice Clark, *The Economics of Overhead Costs*, p. 458.)

## Progress Towards Science in Marketing<sup>1</sup>

Application of Scientific Method in Sales Research, Organization, Budgets and Operations,  
Physical Distribution and Advertising

By W. E. FREELAND

Assistant Professor of Marketing, Massachusetts Institute of Technology<sup>2</sup>

WE have reached a point where recognition of scientific management as an essential and profitable factor in the control of production is almost universal. The fact that marketing lags, thirty years behind in the adoption of scientific method in its management is a sad but true statement. Yet here and there in business the application of scientific method in marketing management can be found, here in one phase, there in another, somewhere in virtually every one of its phases. In the scope of this paper only the briefest description of the ways in which scientific approach or scientific method is being applied to marketing problems and control of marketing operations can be outlined.

#### Marketing Research

Research in its many forms underlies scientific management, wherever it may be found. In marketing, research has made long strides, thanks largely to the leadership of the advertising fraternity. The consumer is the important factor in distribution and today intensive study is made of his buying power, habits, disposition, traditions, customs and prejudices. It does not suffice to determine the real value of a product; it is necessary to ascertain as fully as possible the psychic and social values which the product holds for the consumer.

The next step is to study the geographical and economic considerations which affect the mass of consumers which constitutes a market. In making this survey the type of product to be marketed becomes an influential factor in determining the scope and nature of the study. One must ascertain the types and geographical distribution of the consumers and the marketing agencies and channels through which they can be reached. Sometimes the object is

to find social or economic strata; again it may be to find the groupings of homogeneous populations.

The study, for certain products will lead to the selection of specific prospects, such as types of industry, or individuals of large incomes, or the followers of certain sports or hobbies. More often, however, the study will be of products of wide use which are ordinarily marketed through mercantile channels. In this case the research is to disclose the places where consumption by the public is concentrated into purchases by those engaged in the re-sale of the products. Thus, the object is to find the trading centers for a product and the trading areas commanded by those centers.

When we have reached this stage of our study of a product of wide consumption we are ready to attempt to evaluate the consumption of our market by geographical units. As the county is the unit which changes least and of which we have the most complete data of any unit smaller than the state, it is usually selected as the basic unit. In some instances it is feasible to select the trading center or the trading area of the center as the unit. The intrinsic value of the unit of product may determine which method is employed or it may be decided by the need for refinement in the market evaluation. Goods of high value which are durable and bought infrequently, or goods distinctively of the "shopping" type may be found only in stores of towns in the population group above five or ten thousand and the trading center method of analysis will give adequate results.

The county is more commonly selected because better economic data is available, and more precise and adequate evaluation is possible. The comparison over long periods of time is not affected as in the case of cities with their habits of annexation of contiguous areas.

A great variety of economic data about counties is now available and the facts disclosed by census and other reports can be weighted and combined to

<sup>1</sup>Argument of a talk before the New York Metropolitan Section of the Taylor Society, April 15, 1926.

<sup>2</sup>General Partner, Cowan, Dempsey & Dengler, Inc., Marketing Counsel, New York.