

of labor conditions with previous years within their own organizations.

Latterly, in part due to the development of modern cost accounting and in part due to the freer exchange of facts and ideas as between industries or between members of any given industry, there has arisen a deeper realization of the necessity for more accurately determining basic facts and more particularly the necessity for a correct and well defined terminology. Of what use is the standardization of any cost keeping system or any set of basic facts for the members of an industry, as has been recently attempted in a number of cases, unless the terms used are not merely identical in form but also in meaning. A loosely worded, incorrectly drawn definition of the meaning of a word covering a particular group or classification of facts may and undoubtedly will cause individual interpretations so widely at variance, as to render any comparisons worse than useless. In the main there is a fairly extended conception of the meaning of the principal items in the terminology of modern accounting and cost finding, although there is still lacking an agreement in some cases as to the word concerning which the definition is made. For instance, "Overhead," "Burden," "Indirect Expense" and "Manufacturing Expense" are variously used to indicate the same thing. There have been many arguments advanced against some, if not all of these terms. I do not believe, however, that that is a particularly important matter. The main thing is to have it understood that when you use "Burden" and I use "Overhead," we are both speaking of the same thing, and if we compare figures, our comparisons are based upon the same conclusion of facts handled in an identical manner. In other words, it is the definition and the application of the definition which counts and not the particular word which is being defined, although it is naturally true that it is better to have but one word to cover a set of facts and to select that word as one which is the best suited practically, without too much regard for its etymology.

Cost experts have, as a rule, identified the term "productive" with direct labor and "non-productive" with indirect labor, preferring in the majority of cases the use of the words "direct" and "indirect." By so doing they have simplified for themselves to a certain extent the problem of cost distribution, since they have arbitrarily determined that direct labor is that labor which may be directly allocated to a particular operation, process, or production order, and indirect labor that labor which cannot be so allocated. But even with these

definitions we find a lack of definiteness which is apt to be puzzling. For example, Franklin says (*Cost Reports for Executives*):

For cost purposes, labor divides itself into two parts: direct labor, or that which can be shown to have a direct relation to a particular article of production, and indirect labor, that which is general to the whole production. \* \* \* \* It may be somewhat difficult in certain classes of work to get the time of operatives exactly apportioned to the different articles of manufacture, but it is not difficult to divide all labor, weekly, between direct and indirect, and to divide all the direct labor over the total production.

Also Kester (*Accounting, Theory and Practice*, Volume II, Page 53):

DIRECT AND INDIRECT LABOR. \* \* \* \* In factory accounting, labor is divided into two classes, direct and indirect. These are sometimes called productive and non-productive. These are sometimes carried over from the old economics which terms doubtless carried over from the old economics which looked upon some labor as productive and some non-productive—necessary, it is true, but rather of the nature of a necessary evil. That is, it is the labor of the workmen who apply themselves directly to the manufactured product as distinguished from the labor of those employees who plan, lay out and supervise the work of others. Direct labor can be definitely allocated to specific product or jobs, because it is applied directly to them. Indirect labor cannot usually be allocated to a definite product because it is applied to all the product, not being employed long enough or definitely enough on any specific product to justify keeping track of the time and charging it to specific product. Direct labor is a prime cost; indirect a factory expense.

Bentley says (*The Science of Accounts*, Page 225) that labor may be classified as—

(a) Productive Labor.

Labor which is so applied that it can be charged directly to a particular job or process, as the case may be, is termed "Productive Labor." It is also known as "Direct Labor," to distinguish it from indirect or non-productive labor. It forms the second element of manufacturing cost.

(b) Non-Productive.

This term refers particularly to the work of persons employed in the production department whose services are of such a general nature that they cannot be identified with any particular job or process, as the case may be. A productive laborer may at times render non-productive services; e. g., if he temporarily acted as a foreman, or if he devoted time to cleaning a machine, or if he performed any work that could not be charged to a specific job or process.

That cost accountants limit direct or productive labor to that labor which can be charged to the product, would at first seem to be indicated by C. Bertrand Thompson (*How to Find Factory Costs*, Page 24), who says:

(Indirect Expense) comprises all expenditure for labor and material which does not enter directly into, nor is sold with the product.

Such a definition seems specific enough, yet we find him saying on page 51:

Expensive tools \* \* \* \* do add something to the value of the plant, although \* \* \* \* they must be heavily depreciated. This being the case, it is important that the full value of tools, patterns and models be ascertained. To do this it is necessary that they be fully charged with all items of indirect as well as direct expense involved in making them, just as though they were part of the product to be sold. This is a clear case where indirect on indirect is properly chargeable.

It is apparent that with definitions such as those I have instanced we cannot be altogether sure that even cost accountants are of one mind in the matter of direct or productive labor. Do they all make exceptions in cases such as that quoted from Thompson, and if so, how far do these exceptions extend? Is any increase in asset value in plant and equipment, where the time is directly chargeable, to be treated as direct or productive, or are there such occasions when the exception does not apply and the labor should be treated as indirect or non-productive?

From the cost accountant's standpoint, this may not appear of particular moment, since such labor is absorbed in the asset value of the tool or other assets, but from the standpoint of the manufacturer this labor definition may be of considerable moment.

The real difficulty at present with the term "productive" lies in the fact that, being used synonymously with "direct," it receives the limitations of meaning which the cost accountant has found it necessary to impose upon the latter word to enable him to properly handle his cost distribution. Undoubtedly he realizes that the meanings are not fundamentally the same, and therefore he seeks the elimination of the older word to avoid confusion, and from his standpoint such a result may be desirable.

In the process of such elimination, we have recently witnessed a still further step.

Denham (*"Cost Finding," Industrial Management*, June, 1922, Page 377), says:

One of the unfortunate outgrowths of the uncertain practices, and resultant ambiguous terminology, of traditional cost accounting is the impression, current in the minds of most manufacturers, that all expenditures for clerical effort are "non-productive."

Contrary to the common impression, the prime object of engaging in the business of operating a factory is not to make product, but is to make profits. The making of product is the means and not the end.

It follows that any effort that yields or increases profits is productive, whether that effort is expended at a bench, a machine, or at a desk.

The real test of productivity is in the answer to the question: "Does the effort yield a return in excess of the expense incurred?" If the cost of the effort equals the value of the result, the effort is unprofitable, therefore non-productive. If the cost exceeds the value of the result it creates a loss.

In our own *Bulletin of the Taylor Society* there appeared in the October, 1922 issue an article entitled "Producers and Non-Producers." This article resulted from the inquiry of a manufacturer seeking light on the meaning of the two terms. Basically the article supports and amplifies the theory expounded by Mr. Denham above quoted.

If I may apply the test of productiveness on the basis of profits to an individual or to a department, I may also apply it to a complete organization, and if I so apply it, I find that a given organization in one year was productive because it made \$1 of profits, and I find that in the next year the same organization with the same amount of sales is non-productive because it lost \$1. It seems to me that such a theory will serve no purpose other than to drive out of industrial terminology the words "productive" and "non-productive." Certainly I cannot conceive of the use of the term "non-productive" if these definitions are to be accepted. Of what practical value would be such use? If we, therefore, admit the elimination of the term "non-productive," we automatically eliminate the necessity for the term "productive."

If I produce something which I cannot sell, it may be argued that I am a non-producer because I have added nothing of practical utility to the benefit of mankind. If, on the other hand, the article which I produce is of practical utility and is purchased by the public, it seems to me that I am a producer whether or not at the end of the year my profit and loss statement shows in red or in black.

As has been indicated, the terms "productive" and "non-productive" have for many years had a certain meaning in industry, the former referring generally to physical labor and particularly to that labor which directly applies itself to the manufacture of the product, and the latter to foremen, clerks, etc. While it is true that there have been many differences of thought as to the true meaning of the words, nevertheless there has been a general conception of such meaning, and at no time until of late has the question of profits been considered as a part of such a general conception. The new theory, however, would appear to make profitability of operation or effort of any kind the true test of production or non-production.

Now, the average manufacturer is concerned with a number of things in respect to his business which are not essentially functions of cost finding and one of these is a picture of his pay roll. He may not be satisfied with having his labor hidden in cost reports in combination with other items of costs. He may desire to know how many clerks he has, how many hours they have worked, how much they have received; he may desire to know how many workers he has who have applied themselves directly to the manufacture of the product which he is marketing, or the number of workers, who, while not applying themselves directly to the