

Specimen Chapter

From "Scientific Management in American Industry"

CHAPTER XVI

LABOR STANDARDS¹

THE effort to establish operating standards in the several functional departments of an organization should logically not stop until standards are set throughout the field of personnel activities. But the difficulties of deriving objective standards in this field are such that the definitions which can be made at this time are really suggestive and prospective rather than closely accurate.

The range of activities for which standards have to be found is so extensive and covers so many lines of effort in which experience has not as yet suggested a valid criterion, that a statement of what standards are needed is almost as far as one can go. The conspicuous exception to this statement lies in the field of selection where much work along this line has been done. This may well be drawn upon in order not alone to suggest how standardization is progressing there, but also to suggest the kind of attack which must and can be made toward the setting of standards in the other personnel functions. From the point of view thus set forth, it should be possible for the reader to see how in the fields of training, health and safety work and the other activities, the idea of deriving new standards can gradually be followed through.

First, however, certain general considerations should be presented as a background for the subsequent discussion.

Principles of Labor Standardization

Individuals of every type of labor seek to attain certain human satisfactions and so far as possible to obtain them with the minimum of effort. The strength of the motivating desire in a measure corresponds to the degree of effort put forth. The effectiveness of the effort appears in the products

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of that effort. Human energy not properly applied produces results poorer in quantity and quality than are produced when it is efficiently applied.

Labor loss is increased when there is a sense of dissatisfaction resulting from misapplied energy or from other causes. Proper adjustment to kinds of work, as well as skill, is thus essential in producing the best. This adjustment involves a determination of the capacities of the individual and of the types of capacities that find satisfaction in different kinds of work. The problem is complex. In its simplest form it involves analyses of the abilities of each individual and of types of work to be done. To obtain a successful combination demands not alone that the best ability of an individual, or the best individuals, be considered, but that those abilities be used which, when applied to the task, result in continuous satisfaction. A task that requires average intellectual ability will often be badly performed by one of great ability or by one of little ability. Each of these will be maladjusted and dissatisfied. The increasing use of mechanical means of production only makes more important the requirement of the right human adjustment at each job.

The fundamental principles of labor standards rest on the above considerations. That individual engaged in work who feels that results are commensurate to his efforts and who finds his satisfactions in line with his ambitions, is well placed. This condition is concretely expressed in terms of individual and group production. Questions of quantity and quality of finished product are discussed in other chapters. Yet to enable the industrial psychologist or employment executive to proceed with his work these standards must all be expressed somehow in terms of human behavior.

But human behavior is a variable. It is characteristic of man that he can exist in a wide range of conditions. This fact must be kept in mind throughout the following discussion. This particular capacity is commonly spoken of as adaptability.

In addition to being adaptable and variable within wide limits, he varies from his fellows. This fact of individual differences supplies the basis for the mental measurement efforts which have been rapidly extending in recent years.

Individual variability lies in the foreground of many problems of labor relations. The total situation in which a man works may make many changes in his attitude that are unaccounted for by the simple measurement of his individual capacities. In what follows, therefore, we shall speak of measurement and analysis of capacities, knowing that the particular individual or group has not been entirely stabilized by our best efforts to place him in the right vocation or position.

The process of establishing labor standards involves consideration of the man, his tools and his job. We are concerned here primarily with those techniques which are used to analyze the first of these—the men. The criteria of successful existence as a worker and of making a profit in money and satisfaction must be met co-ordinately with the standards dictated by the man analysis. Discussion of these will be found in the chapters on personnel planning and control, labor audits, and employer-employee relations. These other criteria thus set up become the second term in the mathematical equation which we must solve. The first term is the facts we can discover by studying the man.

Methods of Analyzing Human Capacity

Methods for analyzing human capacity are relatively new. The psychological laboratory is scarcely fifty years old. The highly complicated nature of man has thrown many difficulties in the path of the research worker in this field. Even so, it is surprising to note the rapid increase in use of laboratory methods. Attempts to apply the results of these methods are still more recent. Munsterberg began his studies in applied psychology almost forty years after Wundt established the first laboratory in 1874. The World War hastened the interest in human capacity and gave opportunity to test certain findings of the laboratories on a large scale.

1. *Capacity Tests.* The testing program from which labor standards can be derived may be conveniently presented in two major divisions. There are first those tests and analyses which seek to determine the capacities of an individual or group

of individuals. These capacities or abilities or aptitudes indicate fields in which individuals are most likely to become proficient, be successful, and be satisfied. The standards so derived will necessarily be rough standards unless the capacity called for by a job is highly specific. They are, however, important as indicators of the probable future value of the individual as an employe. These inherent ability analyses are sometimes grouped into general ability standards and special aptitudes.

The most frequently tested ability is commonly called intelligence or intellectual ability, the ability to understand, to learn, to profit generally by experience. Tests which attempt to determine the relative amount of this ability have been variously called psychological tests, intelligence tests, mental alertness tests, or simply general ability tests. Other general abilities on which attempts at analysis and measurement have been made are mechanical ability, social ability—the ability to get along with others, emotional status and temperament, and character or moral status.

The group of special capacity factors to be examined in the effort to establish standards is usually referred to as special aptitudes. Outstanding examples of these are often found in the arts, such as music, painting, sculpture. Others that may be mentioned are special memory for numbers, ability to calculate rapidly, various mechanical aptitudes. These are often found necessary for success in certain jobs or parts of jobs so that it is frequently profitable to devise tests for departments of a business or industry and for specific jobs.

2. *Proficiency Tests.* The second major division of a testing program is the measurement and building up of standards for proficiency. These are commonly grouped into educational attainment or knowledge tests, and trade tests. Each group is intended to indicate the amount of information and degree of skill available in those persons who claim previous training and experience.

3. *Construction of Tests.* The techniques for building the various tests must be thoroughly understood. Briefly, a test must contain interesting material, or the individuals tested must be properly motivated prior to and during the testing process.

The content of the test may be built out of material related to the subject's knowledge or work for the general ability tests. For the others the content of the test will more naturally bear on their inter-