

The theoretical learning curve must be built with those persons and those incentives which operate continuously at their highest efficiency. At the opposite extreme is that learning curve which is made up from an average of observed practices influenced in usual but analyzable ways. Between these somewhere lies the standard practice curve. The average and standard curves are variables which are conditioned by various factors present in differing degrees in a given plant or department.

It is an experimental problem. The laboratory has furnished us a mass of data but little of it has been made available to the shop and office. We cannot even reach standards of capacity for a position, for cost of training, for cost of turnover, for methods of training, and for efficiency of supervision without a deeper insight into the meaning of the learning curve than we at present are using.

Let us look briefly at experimental possibilities in the question of turnover. I have elsewhere described what seem to be basic requirements for the analysis of turnover. To summarize these briefly; I believe we need to know much more concerning the psychological nature of jobs that people enter and much more regarding human qualities really essential to the successful doing of each task. To further this information, we need, in the second place, more thoroughgoing research resulting in description and definition of human traits. Our educational program and employment program as well have based action upon ideals and concrete demands more than upon the requirements of the individuals taught or hired. The employment department of business and industry has sought primarily to fill the particular job now vacant, rather than to find the individual, who, though able to fill the job, has in him potentialities for greater future service with the company. In the third place, both the educational program and the employment program forget that the nature of an individual is continually changing, that the person taught or hired may soon be quite different in purposes and objectives. These three things constitute in my opinion a projected program of research which will give sound principles for the employment office.

My purpose is to set out a few somewhat sketchy observations made in plants and offices with reference to a type of research necessary in business and industry in order to organize material important for developing an employment and promotion procedure. I shall not discuss here the technical methods by which

such results have been obtained. In some cases, the procedure is still that of ordinary observation; in others, we have applied all of the scientific technique at our command. In examining the nature of turnover as pointed out by various writers and as determined by your own investigations, there seem to be at least four important elements causing the shifting of individuals from one occupation to another, from one plant to another, and even from one community to another. These are (1) adolescent restlessness, (2) differences in individual capacity, (3) social status, and (4) individual interests. By these I do not mean to imply that the ordinary terminology used in turnover, such as resignations, discharges, layoffs, etc., are not valuable terms worthy of careful definition. I believe, however, that their importance rests on further analysis which can best be described in terms similar to those I use.

1. It is a matter of common observation that the greatest turnover occurs during the period just after leaving school. The Scott Company has presented figures confirming this. Kitson, in a recent article, has summarized these figures and additional ones obtained by himself. The work of employment bureaus reaffirms the point, though mainly as a result of observation and with few supporting statistics. Careful statistical observations in a company which takes on three to five hundred young men, and almost as many women, at the age of sixteen, bears out the same conclusions. The turnover of individuals from sixteen to twenty years of age is about 400 per cent. The turnover among individuals above that age drops to 40 per cent and below. This company provides afternoon and night school work equivalent to that of the ordinary high school. The class work is closely related to the work in the plant and every effort is made to relate the two. Our investigations of turnover in offices present similar data. Seventy-five per cent of the men and women have been with the companies investigated less than five years. This fact in itself might simply mean that the age factor was the essential feature. But a follow-up among those who are older indicates that relatively few, some 15 per cent of these, will be found in the office three and four years later. Continuity of service is not present.

Are we confronted with a fact? Is it necessary for us to recognize this as something which cannot be changed and inheres in the nature of human beings? We might consider it as one measure of the success of vocational guidance and employment meth-

ods if the length of service of persons on their first job can be increased. However, until we know more about the relation these first jobs bear to the job representing the longest service for any individual, we shall not be sure that our success in increasing length of service on the first job is a really desirable success. I believe this points very clearly to the need for detailed and systematically compiled work histories of many individuals.

Dr. Bills<sup>13</sup> has called to my attention observations of interest here. She suggests that ambition with or without ability may explain differences at this age. Also that other positions are easier to get and these younger men and women are burdened with less responsibility. She suggests further that of every fifty older persons, at least forty would change their occupation if the opportunity offered itself. If comments of this type can be established we have explanation for changes in rates of turnover with age, though no solution. If any one of these observations becomes established generally we are at once confronted by the knowledge that we have not been collecting the right sort of data and that much of our painstaking mathematics of wage payments is wasted effort.

2. Relating human capacities or specific ones to the multitudinous tasks of modern industrial organization is an enormous problem. Some beginning has been made in the investigation of the relation between mental alertness tests and turnover. It has been shown that on certain jobs high mental alertness scores and low ones represent two points where high turnover occurs. In other departments of the same plant, precisely the reverse phenomenon may occur. In office work where promotional facilities are good; more of the brighter individuals will be found with relatively long service records. In offices where so favorable a situation does not exist, only the duller individuals show relatively longer service. In special departments in the office, the situation in the plant described above can be duplicated. Jobs that require little learning capacity and are largely routine in nature interest the person of average intelligence and keep him occupied. Those of higher intelligence become dissatisfied and soon quit. The restless individual who is inclined to rove or inclined to tasks that require some physical exertion will, regardless of intelligence, be dissatisfied in the office. Of 46

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per cent of office workers in a company, who had been with the company more than five years, 50 per cent, or just half of them, were carrying on remunerative outside work regularly. Several others had remunerative work outside of the office which they engaged in sporadically. These tasks range from raising gold fish and chickens to auto mechanics and various sorts of outside selling.

It is not to the point here to attempt any classifications of the qualities and capacities of individuals which lead them to become dissatisfied or to be seeking continually tasks more appropriate to their abilities. I wish to emphasize rather the necessity for making such a classification and the importance it will have in determining the nature of employment and maintenance problems. We are all aware that there is much to be done in business and industry before the potentialities of individuals are really utilized there. Nevertheless, an increase of our knowledge concerning human capacity will demonstrate more than argument can the importance of allowing employees to know the lines of promotion available and the character of the jobs which are open to each individual worker.

3. A third important factor in turnover is described by the relatively vague term "social status." The contrast between the "atmosphere" of two department stores presents an immediate classification of persons who have opportunity to go into the one or into the other. We find at all levels in our study of turnover individuals leaving one job for a better one which does not always mean increase in pay. It quite frequently means a change in social status. The general desire of both parents and children to improve the social status has led to certain movements which presumably increase the number of applicants for white collar jobs and decrease those willing to go into the trades or similar tasks of assumed lower status. It has been found very difficult to hold college men in many forms of selling. Increased effort on the part of sales managers to obtain college men as salesmen has not yet produced a stable group of college men in sales. A general psychological and sociological investigation of the reasons for any particular task obtaining a definite social status is imperative.

4. Intertwined with both the capacities of individuals and their social status and the implied social status of different jobs is the problem of interests. We have been able to demonstrate that young men in