

who received a low score and who succeeded in the field, whereas, men with high scores failed. If you look at the lower right hand corner you will see that there are few represented there, although we have one extreme case where a man received a very high score according to our formula and then failed miserably in the field. Perhaps there is some particular fact concerning this man which would explain it, but he is clearly out of line in comparison with most of our men. The chart shows that we have developed something which has real predictive value.

In the company with which I have been connected, we have done several other pieces of sales research work, chief among which has been an attempt to set more accurate quotas for our various agencies than had previously been set. In that connection we have secured the relationship, by the mathematical method of correlation, between the sales of life insurance and other measures of wealth, such as automobiles, telephones, savings bank deposits, post office receipts, etc. We have learned that some of these measures bear a strong relationship to the sales of life insurance, whereas others appear to follow different lines. I cannot give you anything of value, however, on the quota question, for it seems to me that from Mr. Staubach's papers you have received far more valuable information in regard to possible methods than it would be within my power to give you.

There are certain other factors in territorial analysis which we are attempting to develop. One of them is the study of the purchasers of life insurance, not from the point of view of their physical make-up, which has already been studied by the doctors in great detail, but rather from the point of view of their position in the business world. The study to which I refer takes account of a man's wealth, income, amount of other insurance already carried, nationality, suburban or rural residence, etc. We have not yet reached the point where the result can be used, but what we are attempting to do is to find the significant facts in regard to the applicants who are accepted along the lines mentioned above. In other words, what significance is there from the point of view of the sales manager of the class of men to whom his salesmen are going? If there are differences among prospects from a medical point of view, certainly there may be differences from the sales point of view, and we hope before many years to be able to show some significant differences along the lines mentioned above.

All of this research work aims at one point, namely,

the better distribution of goods at decreased cost. There are many concerns which have excellent cost accounting systems and there are many concerns which have not, but there are few which today have exhausted the possibilities of securing large results from more careful studies in the field of distribution. I have discussed this afternoon only a few of the possibilities, for, in addition to those mentioned, the opportunity is at hand to study the complete organization of the central sales department as well as the organization of the branch offices scattered through the country. What measuring stick can be put against the results attained by those organizations? What methods can be substituted for those which study shows to be wasteful? In short, what can scientific investigation do to make the machine run better and at decreased cost?

Before leaving this subject of sales research, I should like to have your permission to sketch the most recent development in this work among the life insurance companies. Much of the work which I have described above resulted from the contact between the company with which I was connected and the Bureau of Personnel Research at Carnegie Institute of Technology. There have recently been brought together a group of about thirty life insurance companies who desire to study on a cooperative basis some of their sales problems. The difficulty which one meets constantly throughout such studies has been the difficulty of analyzing a sufficiently large organization so that we can rely on the results secured. It is particularly true in any small company where, in the matter of selection of salesmen, there are no records which are of value because so few men are hired that no precise results can be secured. With the idea in mind of studying the various sales problems, about thirty companies have joined together on a cooperative basis and there has been established at Carnegie Institute of Technology a Life Insurance Sales Research Bureau. At a recent conference of these companies, various questions were discussed, and it was agreed that for the time being a few main problems will be studied. First, the problem about which I have talked with you this afternoon, the selection of salesmen. In that particular, it has been agreed by these companies to pool the records which are available to the end that some scoring system or other device be secured such as I have described. It is not, as I have already indicated, with any belief that this system will eliminate the use of individual judgment, but rather with the idea that the individual judgment may be guided in many cases by the erection

of such guide posts as I have discussed above. If, instead of one hundred forty-eight cases, we had ten thousand, we would then have such accuracy as is possible in the mortality tables. Similarly, if we could secure from the companies, thousands of cases instead of a dozen in regard to certain other factors in the sales research field, we should be able to rely on the results with absolute accuracy, for the law of average is the underlying factor in all this work.

The other major problem which the Life Insurance Research Bureau is to attack is the study of the general agents. As I have said before, the life insurance business is operated largely through general agents, under whom sub-agents have been appointed. The selection of general agents is a matter of vital concern to the life insurance companies. But today relatively little careful study has been given to the job of the general agent. The greatest care has been taken in the selection of risks, the next greatest care has been taken in the selection of local or sub-agents and the least scientific care has been taken in the selection of general agents, though of course the responsibility of the latter is far greater than the responsibility of the sub-agents. As has been often proved, one of the primary requisites in personnel work is the job analysis as a basis for the proper placing of employees. This, at the moment, is claiming the attention of the Life Insurance Research

Bureau, and it is hoped that within a short time some job analysis can be given of general agents which will be of value in the final problem which is being attacked, namely, the selection of general agents.

Concluding this discussion, I should like to comment again on one fact—that the field for sales research has barely been entered, that the results so far achieved are mere indications of what may come in the future, and that stimulation of imagination is what is needed today, together with the most accurate thinking which can be secured. It was Napoleon who said that imagination rules the world. Certainly the opportunity for the use of imagination in the study of sales problems is unlimited, but a requirement in conjunction with imagination, is clear thinking. Loose methods of thinking give loose results. The Taylor Society stands for accurate results achieved through accurate thinking. It is my hope that as the years go on this Society may be constantly in the forefront of the careful thinkers on sales problems. Your discussions for years have been of great assistance to the study of interior management. May they in the future be of equally great value to the sales manager, the man whose job goes outside the four walls of his factory or his office and delves into those manifold difficulties surrounding the relations between his company and the public. For some years the sales phase of management is bound to be dominant.

SCIENTIFIC Management is a term which can no longer be used in its exclusive application to the world of industry and production. Its fundamental principles are becoming better known and more widely applied to the field of retail merchandising, particularly in the large department stores.

The time will come when the business of merchandising is looked upon as a science equal to any of the professional lines. The advancement of that day can be materially hastened by a greater amount of study and planning on how the Taylor principles can be applied to the business of retailing. Many of the principles

are directly applicable, whereas others must be somewhat modified. After careful consideration the writer believes they may be summarized as follows:

1. The careful selection and proper training of the employee.
2. The development of standards in the amount of work to be accomplished.
3. The payment of a wage sufficiently high to attract and hold the better class.
4. The recording of essential information in a systematic and efficient manner.
5. The intelligent planning for the future.

(John M. Van Voris, formerly with The Halle Brothers Company, Cleveland, in *Administration*, May, 1922.)