

interview and the analysis of the personal record. Even a stenographer is a better employe if in an environment and business which is appropriate and interesting to her personality.

While this paper is essentially on the subject of the appraisal of personality, and the aptitudes arising from its various manifestations, it may be mentioned in passing that there is evidence that the same technique will be found useful in indicating intellectual and special aptitudes and interests, where other definite measures are not available.

You, in developing this instrument for your own purposes, may need to make adaptations. However, if your experimental work is controlled as far as possible and is evaluated by proper statistical procedure, the result should be a technique of very definite usefulness.

When by all possible means we have once found out how better to appraise men for jobs with respect not only to their intelligence, knowledge and skills, but also to their actual ambitions and motives, their proclivities and talents, their opportunity for the maximum self-realization, we shall at the same time affect quality and quantity of output, satisfaction on the job, and profits for employers.

In conclusion, our present technique is an attempt at a more exact fact-finding and fact-organizing procedure in one field of personnel work—that pertaining to personality and the aptitudes arising from it. A technique of this character is, of course, more laborious than the usual methods. If it is also more accurate, it is worth the effort many times over. The most expensive and troublesome wastes in business and industry today are those of man-power. We must have better human engineering.

Discussion

Frederick G. Atkinson.⁷ The technique Mr. Hull has presented contains an idea which eventually may be of great value in the process of selection for subexecutive positions, and perhaps for other groups of positions. It holds even greater promise, I believe, for the solution of vocational maladjustments growing out of personality difficulties. For the moment, however, there appear to me to be three major difficulties in Mr. Hull's technique.

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My first question concerns the proposed tentative list of unit personality qualities. Mr. Hull forestalls criticism by the modesty of his claims and by the readiness with which he acknowledges the possibility of improvement in terminology, but I am inclined to be pessimistic about the practicability of any such list. Mr. Hull recognizes the vagaries of these terms, and has supplied adjectives and synonyms in an effort to restrict their interpretation and use. Nevertheless, personal and individual reaction determines the definition of such terms as "fighting spirit," "self-reliance," "loyalty." While we each of us feel reasonably confident that we know what "agreeableness" is, or "gregariousness," I venture to say that if each member of the group here present were to define independently any one of Mr. Hull's unit terms, we should have almost as many different definitions as we have individuals in the group.

Psychologists have long recognized that these personality traits do not exist as faculties or entities. The extent to which an individual displays fighting spirit or orderliness varies according to the situations in which he is placed. For example, orderliness in one's personal appearance is no reliable promise of orderliness in one's writing desk.

Of course, if a list can be constructed and coupled with a method that makes its use profitable, we shall not quarrel with nuances or subtle implications of expression. Mr. Hull's list, however, is necessarily purely arbitrary, and must bring with it adequate experimental evidence of its practicability before we can feel safe in leaning very heavily upon it.

The second difficulty of the technique as outlined lies, I believe, in the means whereby Mr. Hull proposes to measure his subject in terms of the "unit qualities" he has set up. Experimental evidence, notably Hollingsworth's, indicates that, while human judgment of others is highly fallible, self-appraisal is still less reliable. And self-rating in personality traits, our terminology being as ambiguous as it is, appears to be even more dubious. Add the applicant-employer relationship wherein the job-seeker is naturally alert to any device which he feels may put him in a more favorable light and the likelihood of valid results is reduced still further.

Mr. Hull observes that psychologists have been earnestly attacking the problem of measurement of

personality traits. Reliability of results has been, as he points out, rather low. One study, recently completed, has particular bearing on the technique we are considering. Hartshorn and May, working at Teachers College of Columbia University under a three year endowment, have been endeavoring to establish a satisfactory technique for measuring one personality trait, "honesty." Their findings have been published under the title "Measurement of Deceit." I shall not go into detail concerning their studies, but should like to mention three facts which seem to bear directly on the present study. First, these two trained psychologists required three years to develop a technique for measuring just one personality trait; second, in the light of their experience, there appears to be no basis for assuming that valid measurements for other personality traits may be established by any process less patient and exacting; and third, during the administration of the tests which they devised, the subject was not permitted to know what qualities were being measured.

The third difficulty to which I would point in the technique as outlined lies in the basis for establishing the psychograph of the job, or job chart. According to Mr. Hull's plan, the line officers involved, in conference with the personnel department, reach some agreement as to the amounts of various personality qualities a given job requires. The larger the group, of course, the more difficult it would be to reach any unanimous agreement. Since our terminology is loose and opinions on these matters divergent, I am afraid that we should not only find general concurrence on any point rare but any results achieved would be of extremely doubtful scientific value. Perhaps it might be possible to establish the job chart by approaching the problem from another direction, that is, through analysis of the personality characteristics of a sufficient number of individuals whose performance on the job in question was successful according to standards, or norms, which would have to be worked out. Such a plan presupposes, of course, the development of a satisfactory technique for measuring these personality traits.

W. V. Bingham.⁸ The problem of personnel selection is difficult because the factors which must enter into a decision are so varied. In employment

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practice no less than in vocational counselling, one would like always to appraise correctly and give due weight to a person's general ability, special talent, dominant interests, physique and health, educational accomplishment, social effectiveness, and emotional balance, in relation to the opportunities and demands of the callings under consideration.

Mr. Hull is to be cordially commended for his courage and persistence in attacking one phase of this problem, that of personality traits in relation to occupational fitness. This is no easy task. Human traits are less tangible and more variable than the materials and forces which the engineer ordinarily has to measure. Yet their correct appraisal and control are no less vital to the success of engineering enterprises than is the reliable measurement of physical stresses.

Mr. Hull has not been content to leave the determination of these human traits entirely in the vague realm of impression, intuition or guess. He has sought to make use of the engineer's basic concepts: units and measurement.

As I understand Mr. Hull's argument, he holds that such traits or qualities as caution, aggressiveness, self-reliance, stability and order may be treated as unit qualities because they have, as a matter of fact, each maintained a certain consistency during the course of his analysis of employes and applicants; whereas initiative, accuracy, courtesy and the like are compound qualities because they have proved in practice to be readily reducible to these simpler units. I should like to see the analysis carried even further by use of the same techniques of specific questions and methods of evaluation which he has found helpful. Perhaps his unit qualities can be still further broken up, as the atom has been resolved by chemistry. Such, at least, is the first question which occurs to me, in looking over his list of unit qualities. Mr. Hull's reply may very properly be that he is not now seeking ultimate unanalyzable units, but is rather aiming to locate and define qualities which may profitably be thought of as unit traits of personality and aptitude during the course of an employment interview. He is not undertaking to solve all at once the mysteries of employment psychology. He is taking a next step in the direction of a clearer understanding of some of the many factors which ought to enter into the interviewer's appraisal.