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# Some Present-day Trends in Vocational Psychology

BY  
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## SOME PRESENT-DAY TRENDS IN VOCATIONAL PSYCHOLOGY.

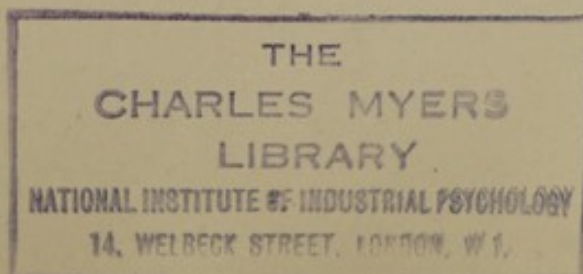
By CHARLES S. MYERS.

- I.—*Vocational guidance and vocational selection.*
- II.—*The limited value of tests.*
- III.—*Difficulties of psychological analysis.*
- IV.—*Guidance and placement.*
- V.—*Summary.*

## I.—VOCATIONAL GUIDANCE AND VOCATIONAL SELECTION.

IN earlier days vocational guidance and selection were not so clearly differentiated as they are to-day, when we distinguish rather too definitely the procedure adopted in determining the most suitable "job" for a given applicant from that adopted in determining the most suitable applicant for a given "job." Both vocational guidance and vocational selection involve a thorough study of the applicant. But the former is carried out for the immediate benefit of the applicant: an occupation has to be found in which he will be as happy and as successful as possible; whereas the latter is carried out for the immediate benefit of the employer, and unfortunately less time can be found for a thorough study of the applicant than for the study of the particular occupation for which vacancies have to be filled. In vocational selection only one occupation is under consideration; consequently the vocational psychologist has the opportunity of learning its requirements in greater detail, and of assessing them with greater precision. But in vocational guidance a knowledge of the requirements of a very large number of possible occupations must be possessed by the adviser. He cannot consequently have the full knowledge of the selector, nor can he apply all the tests, analytic and analogous, devised by the latter for different occupations. On the other hand, he has the opportunity, and indeed he is bound, to devote himself to a far closer study of the applicant.

It is noteworthy how artificial is sometimes the distinction to which I have just drawn attention between vocational guidance and vocational selection. When applicants have to be selected at the works for a given manual occupation, the procedure is far more remote from vocational





guidance than when applicants are sent to the Institute to be selected for a managerial post. Here as close a study of their intelligence, character and temperamental qualities is obviously necessary as in vocational guidance. An approach to vocational guidance also occurs when a firm examines applicants for entry to one or other of several different departments within its own works. On the other hand, vocational guidance approximates to selection when, as in a coal-mining area, or as in the Institute's experiments in Borstal institutions or in the Boys' Technical School of the War Office at Beachley, only a limited variety of occupations is available.

## II.—THE LIMITED VALUE OF TESTS.

At the National Institute of Industrial Psychology I have observed a growing inclination among the staff to place less stress on tests than they received in the earlier days of the Institute's vocational guidance work. Their value is still, of course, recognized and no expert adviser would dispense with them. But the Institute's vocational advisers realize how often even intelligence tests, the most reliable of all their tests, need interpretation, how often the scores at tests may have to be discounted owing to other considerations, and what dangerous weapons tests may consequently prove in the hands of those imperfectly trained in the methods and principles of vocational guidance. They note, therefore, with satisfaction the important qualification which H.M. Inspectors of Schools have added to their recent recommendation that intelligence tests be in future incorporated in the examination for free places in secondary schools, namely, that these tests must be devised and applied only by those properly qualified for these purposes.

Those who have had little or no experience in vocational guidance imagine too commonly that the guidance given by the adviser can be based merely on the results of test scores, and that, consequently, the value of vocational tests can be ascertained by correlating subsequent successes in different occupations with the scores at the different tests that are supposed to assess suitability for those occupations. At first sight it seems perfectly rational first to ascertain what abilities are needed for different occupations, then to devise tests for assessing these abilities and, finally, by the mere application of these tests to those seeking vocational advice, to discover that occupation for which they are most suitable.

But, in the first place, man is more than a mosaic of separate abilities, and vocational guidance is not to be achieved merely by the fitting together of such pieces in jig-saw fashion. One ability has to be judged in its relation to other abilities, general intelligence, for example (I



assume, for convenience, its existence) in relation to special abilities. It may be for this reason that the vocational advisers at the National Institute are by no means confident of the intelligence test as an infallible guide to subsequent success or failure in a university career. A whole is more than and prior to the sum of its abstracted parts. Whether we are dealing with mental abilities or with temperamental or character qualities, the effects of interrelation—conflict, facilitation, integration, etc.—and the effects of artificial abstraction have to be taken into account.

In the second place, vocational guidance cannot be compared to the fitting of "pegs" of abilities and temperament into suitable holes. Social and financial considerations, the dearth of openings in certain occupations, unwillingness to take responsibility, insufficiency of drive, interest, or emotional stability—any one of these may contra-indicate an occupation which in other respects of temperament, ability, physique and health seems suitable.

Thirdly, an applicant is seldom found to be ideally suitable for any one occupation. Vocational guidance must be nearly always a compromise, and the effectiveness of that compromise depends on the sympathy, insight and intuition of his vocational adviser. For these and other important reasons the Institute's advisers tend often to give their recommendations in somewhat general rather than in too specific terms, first indicating broadly (with reasons) those occupations for which they regard the applicant as unsuitable and then enumerating, in order of preference, the three or four broad occupations which they consider to be the most suitable.

Moreover, we have at present no adequate analysis of the psychological and physiological requirements of different occupations. Our ignorance is perhaps particularly obvious in the case of occupations taken up by elementary school-leavers. We know something (but we need to know much more) of the degrees of intelligence required for different occupations. We can class an adolescent as having a high "verbal" or a high "practical" intelligence. An examination of his temperamental and character qualities may lead us to recommend him for an occupation which brings him into intimate touch with others or for one which gives him an opportunity of enjoying his predilection for a more solitary life. On medical grounds we may recommend him for an occupation which does not involve undue exposure to the weather, or for one which is spent in the open air. We can divide the occupations which elementary and central school-leavers will adopt under the heads clerical and manual, and into skilled, semi-skilled and unskilled. We may ply them with selection tests devised for clerical, dressmaking and engineering work.



But at present we are quite unable to decide on the choice between such minutiae as metal work or woodwork, etc. The vocational adviser can only give a broad recommendation—admittedly a far wiser recommendation, as the follow-up results attest, than can be reached by the untrained person. And the same holds, *ceteris paribus*—though less strikingly because the professions each offer opportunity for such a variety of abilities and temperaments—in the case of public and secondary school and university students.

Finally, even if tests could be devised to assess suitability for every conceivable occupation, they would be so numerous as to be impracticable of application to every applicant for vocational guidance unless factorial analysis resulted in a relatively small number of common factors which could be differently weighted for different occupations. The present procedure in the Institute's guidance of elementary school-leavers is to include, when advisable, certain selection tests for some of the commonest occupations—e.g., clerical, dressmaking or engineering. (The Institute's clerical test is usually also given to applicants who have received secondary and higher education, because of the light that it throws on such character qualities as accuracy, etc.). Tests of verbal and practical intelligence, of mechanical and manual ability, of the appreciation of form relations and of literary ability are also given; but no attempt is yet made by the Institute in its vocational guidance to treat the scores at them from the standpoint of factorial analysis.

### III.—DIFFICULTIES OF PSYCHOLOGICAL ANALYSIS.

It must be remembered that factorial analysis offers only one—the apparently most helpful and reasonable—of several other possible mathematical expressions of the same data and that the psychological nature of each factor is left wholly undetermined by the mathematical analyst. The nature of *g*, for example, is quite unknown. The discovery of a single "verbal" factor, *v*, or of a single "practical" factor, *F*, in the verbal and performance tests, respectively, of intelligence, must be of little psychological value. They must each surely include a large number of different mental abilities which vary independently in different individuals and are needed in different degrees for different kinds of occupational work. The Institute's researches indicate the existence of a common manual factor, and this has been independently confirmed by simultaneous research by the Industrial Health Research Board. But the former researches indicate also that this factor is only of importance in complex manual skills, whereas in the simplest manual operations specific factors, peculiar to each, predominate.



It seems unlikely that any factor, general, group or specific, can be conceived as having independent existence. It must always be considered in connection with the other factors with which it works. Nevertheless, whatever value or conception may later be attached to such analysed factors, several of the tests devised to assess them prove of undoubted or promising value in the practice of vocational guidance. Whether *g* can exist *in vacuo*, whether psychologically it is unitary or complex, whether better tests of intelligence be subsequently devised for applicants of different type and from different environment, no expert would dispense with the existing verbal, non-verbal, and performance tests of intelligence in the conduct of his work. Whether and to what extent Cox's mechanical tests depend on form relations, on the "practical" factor in performance tests of intelligence, or on other and more elementary abilities, their promise is such that they are being adopted by the Institute for its vocational guidance work in place of the old Stenquist test of mechanical ability which is clearly complicated by manual ability. So, too, the Institute is adopting a test of *h* which appears mathematically to be highly saturated with the common factor of manual ability, as a substitute for the various simpler manual tests hitherto employed. The Institute's researches have indicated that by using the Stenquist test and the Institute's test of form relations, mechanical ability cannot be safely predicted before the age of twelve, and that similarly its previously used tests of manual ability cannot be considered reliable for early vocational guidance. But it may be necessary to revise this conclusion in regard to the newer improved tests of these two abilities.

Whether or not the factorial analysis of temperamental and character qualities on the lines attempted by Thurstone, Cattell and others will prove of practical value to the vocational psychologist, it is impossible to say. At present he is compelled to depend on the information he receives from the parents and teachers of the applicant and the results of his own observation and interview. The Institute's vocational guidance staff have come to attach some value to the applicant's own estimation of his temperamental and character qualities. He is given—not at the very outset of his examination—a printed list of such qualities and is asked to indicate whether and in what degree he regards himself as possessing each of them. This self-assessment is honestly done and is useful not only for comparison with the different assessments obtained from other sources, but also as a point of departure for subsequent conversation with the applicant as to why he regards himself as having, and how he has come to have, the particular qualities of temperament and character which he allots to himself.



The most important aims of the Institute's vocational work are to improve still further its value by practice and research and to promote the adoption of its methods by instruction. A programme of certain desirable topics for research has been recently published in *The British Journal of Psychology*<sup>1</sup> and reprinted in *The Human Factor*.<sup>2</sup> In regard to instruction, nearly 300 teachers have already received training, theoretical and practical, in the Institute's vocational guidance procedure. But at present the careers master is afforded too brief an opportunity for his vocational guidance work at school to enable him to spend much time on the application of tests, and there is always grave danger of his using tests without adequate experience and knowledge of their proper use and interpretation. Moreover, the selection of the really suitable careers master requires far greater care.

#### IV.—GUIDANCE AND PLACEMENT.

There is a unanimous opinion among the Institute's vocational guidance staff that guidance and placement should be separated and kept in different hands. An applicant for guidance cannot adopt that desired completely candid attitude towards his adviser if he knows that the latter will use the knowledge obtained from his examination to place him in, or to keep him from, some vacant or desired post. There can be no doubt that the juvenile employment departments organized by Local Education Authorities and by the Ministry of Labour tend to suffer from this combination of two functions which should be separate. In most public schools the careers master is far more concerned in placement than in guidance, although he can know little about occupational opportunities or about the abilities and qualities required for success in different occupations. It is true that placement organizations, both official and unofficial, disseminate valuable information; but no sufficiently extensive survey of occupations has yet been conducted from the aspect of their psychological requirements: a beginning has been recently made by Mr. C. A. Oakley, Director of the Institute's Scottish Division, which will be incorporated in a "Handbook of Vocational Guidance," written by him and Dr. Macrae, now in the press.

The future of vocational guidance appears to be along two different lines for those who have to seek employment on leaving school and for those who are likely to adopt occupations of the highest levels. The guidance of the former must depend both on the teacher who knows the applicant best and on the juvenile employment officer who has the best

<sup>1</sup> Vol. XXVII, pp. 119-125, July, 1936.

<sup>2</sup> Vol. IX, pp. 315-321, September, 1936.



knowledge of available occupations and their character. It will be the function of the school to consider the vocational aptitudes, qualities and attainments of the applicants and to record a very broad decision of the most suitable kinds of occupation; and it will be the function of the employment officer to arrive at a more precise decision and to help to place the applicant in the light of this knowledge. Within the public schools, and, it is to be hoped, within the universities, a somewhat similar separation of guidance and placement should be established. And, ultimately, such a body as the National Institute may well come to serve as a visiting or visited consultant for guidance cases presenting exceptional difficulty, and as a clearing house for general information and research.

#### V.—SUMMARY.

(1) Though there is a real difference of approach in vocational guidance as compared with vocational selection, the distinction made is sometimes superficial.

(2) Tests are useful in their place, but the assumption that guidance can depend solely on them is unwarranted.

(3) The relationship of certain capacities to others has to be taken into account. Also social, financial and economic factors must be taken into account.

(4) At present we have no adequate analysis of the psychological requirements for most occupations, and, if we had, the tests required would be so numerous that they could not be applied to many applicants.

(5) The difficulties of complete and confident psychological analysis are great, but progress is being made with various tests and even estimates of temperamental qualities are proving of value.

(6) The experience of the National Institute of Industrial Psychology indicates that guidance and placement should be in separate hands.

#### Résumé.

#### DES TENDANCES ACTUELLES DANS LA PSYCHOLOGIE APPLIQUÉE A L'ORIENTATION ET A LA SÉLECTION PROFESSIONNELLES.

Quoiqu'il existe une vraie différence de procédé entre l'orientation professionnelle et la sélection, la distinction que l'on tire est souvent superficielle.

Les tests sont utiles à leur place, mais l'on ne peut justifier la supposition que l'orientation professionnelle peut se fier uniquement à eux. Il faut tenir compte du rapport entre certaines aptitudes et d'autres, ainsi que de certains éléments sociaux, pécuniaires et économiques. Jusqu'ici nous ne possédons aucune analyse



valable des qualités psychologiques requises dans la plupart des travaux, et si nous l'avions, les tests nécessaires seraient si nombreux que l'on pourrait les appliquer à un nombre restreint des candidats.

Les difficultés que comporte une analyse psychologique complète et sûre sont grandes, mais on fait du progrès dans des tests divers, et même les appréciations des qualités du tempérament ont, dans l'expérience, une certaine valeur.

L'expérience du "National Institute of Industrial Psychology" suggère que l'on devrait confier à des capacités différentes l'orientation et la sélection.

#### ZUSAMMENFASSUNG.

#### EINIGE TENDENZEN IN DER HEUTIGEN BERUFSPSYCHOLOGIE.

Obgleich man sich auf sehr verschiedene Art und Weise der Berufsberatung im Vergleich zur Berufswahl nähern kann, ist der Unterschied oft oberflächlich. Am richtigen Ort sind Tests wertvoll, aber die Annahme, dass sie die einzige Basis der Beratung bilden können, ist ungerechtfertigt. Man muss das Verhältnis gewisser Fähigkeiten zu anderen in Betracht ziehen. Auch soziale, finanzielle und ökonomische Faktoren müssen berücksichtigt werden. Zur Zeit gibt es keine genügende Analyse der psychologischen Bedürfnisse für die meisten Berufe; und wenn wir sie hätten, würden so zahlreiche erforderlich sein, dass man sie nur bei wenigen Bewerbern verwenden könnte. Die Schwierigkeiten vollständiger und zuverlässiger psychologischer Analyse sind gross, aber man macht Fortschritte mit verschiedenen Tests und sogar Einschätzungen von Temperamenteigenschaften erweisen sich als nützlich. Die Erfahrung des "National Institute of Industrial Psychology" zeigt, dass Beratung und Anstellung getrennt sein sollte.







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