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# SELECTION OF PATROLMEN

Benjamin Holmes

Proper qualifications, careful selection, thorough police training, certain tenure of office, scientific training, or any of the desirable factors of personnel administration seem to be utter strangers in the majority of municipal police departments. While the past decade has borne witness to a certain degree of improvement in this respect, it is doubtful if many municipal police departments have utilized the selection tests in intelligence or achievement which have been developed. In most cases the departments have merely exchanged old names for new—the essential particulars for the manipulation of the appointive powers or procedures have remained the same. The consequences of such a policy have resulted in inefficient, if not corrupt police departments.

The appointment of an unfit person to the police force is always costly to the taxpayers. Assuming that the newly appointed officer commits no serious offense but is merely incompetent, it may take months or even years to discover this fact. However, we must remember that all the time this man serves on the force, up to the time of his dismissal, may be considered as time paid for without commensurate return.

Another cost, even less intangible than that just cited, is the loss of prestige the police suffer when the recruit is brought to the attention of the public by unofficer-like or incompetent conduct. The policeman who displays bad temper, grafts, or exhibits cowardice

may ruin the reputation of an otherwise highly efficient organization.

It has been said that "A carefully selected personnel is the foundation upon which successful police administration is built. When a department fails to function properly the cause frequently is found in its low entrance standards or inferior and improper selective methods. Because of the enormity of the task of policing a community it is necessary to emphasize the fact that the best human material in the country is none too good for police service."<sup>1</sup>

It is of course acknowledged that an efficient personnel will not solve all the problems in law enforcement. However, an intelligent body of men under competent leadership will do much to bring the police out of the disrepute into which they have fallen in many of our cities.

## EFFECTS OF CIVIL SERVICE REFORMS

The first step toward an improved personnel in municipal police departments goes back to the Civil Service Reform movement which originated in 1883 as a result of public antagonism toward the "spoils system." This reform was designed to employ government personnel on the basis of open competitive examinations and to insure relative tenure in office. The examinations used were originally designed to test for

<sup>1</sup> International City Managers' Association, City Managers' Yearbook (1931) 143.

certain minimum educational qualifications recognized as essential to the performance of the job in question. As a whole, they were practically useless as an instrument of prognosis, and as a rule were so weak that they did not even serve as a means of eliminating the markedly unfit. In the course of time, as experience was accumulated in modes of testing and public pressure for an improved personnel was felt, the examinations were constructed progressively more difficult and so served as a crude instrument for the elimination of the unfit.

However, the relief expected by the passage of such legislative devices as embodied in the various Civil Service Acts has fallen far short of their goal. In most instances, the civil service commission has become the stronghold for partisan politics. Every type of device has been used to maintain party control. Bruce Smith in his "Chicago Crime Problems" says:

"Civil service has been too much concerned with limiting the essential powers of the police executive, and has become in its own turn a pawn in the political game; and the appointment of weak men to the Civil Service Commission; the removal of Commissioners who displayed independent attitudes; specially designed examinations for the benefit of favorites; failure to advertise examinations; unjust removals; the reinstatement of employees who had been removed by a previous Civil Service Commission; and the frequent use of sixty-day appointments were all used to weaken and discredit the merit system."<sup>2</sup>

There is encouraging evidence, however, that the entire selective process is now going through another period of transition. Civil Service in itself has not proved a cureall for the ills of inefficient police departments. Fosdick rightly said: "Civil Service has too

often proved a bulwark for incompetence and neglect to justify oversanguine hope in its extension to this new administrative field. It has been a tool of party success rather than an instrument of public service."<sup>3</sup>

#### EARLY STEPS TOWARD PERSONNEL SELECTION

The first step toward applying sound principles of personnel selection based on modern developments in educational testing seems to have been made at San Jose, California, in 1916.<sup>4</sup> This examination was in the nature of an experiment by Lewis M. Terman and Arthur S. Otis, both of Stanford University. They assumed that general intelligence could be measured with a fair degree of success and that general intelligence regardless of how it was defined, was the most important factor apart from moral integrity, in determining fitness for a position. For the determination of general intelligence an abbreviated form of the Stanford-Binet Revision of the Binet-Simon Intelligence Scale was given.

The significance of the data obtained from this examination was not realized at the time by personnel administrators. In 1920, however, August Vollmer, then Chief of Police at Berkeley, California, wrote of the method of selection used by him as follows:

"If the army (Army Alpha test) plan were adopted by civil service examiners for selecting police candidates we would be certain that such misfits as stupid, hot-headed, sullen, cranky, slow, lazy, slovenly, unreliable, and brutal would never get into the service. Supplementing the army method of selection, special examinations should be held to determine the education, training, and experience of candidates for positions in the department."<sup>5</sup>

<sup>2</sup> Smith, Bruce, *Chicago Crime Problems* (1931) 49.

<sup>3</sup> Fosdick, R., *National Municipal Review*, 10: 287 (1922).

<sup>4</sup> Terman, L. M., "Selection of Police Patrolmen," *J. Appl. Psychol.*, 1:11 (1916).

<sup>5</sup> Vollmer, A., "A Practical Method for Selecting Policemen," *J. Crim. L. and Criminology*, 11: 571 (1921).

In 1923 E. M. Martin and Dr. Troop of Columbia University in conjunction with the Newark, New Jersey, Civil Service Commission published the results of their study on aptitude tests for police. The objectives of this study were as follows:

"To examine the present system of police selection to ascertain if the methods used were adapted to the end in view. To determine the feasibility, though on a basis of limited random sampling, of mental tests being given by the Civil Service Commissions as selection examinations for policemen."

The results of this research on typical Civil Service examinations showed conclusively that the correlation between results of the test, minus service credits, and the criterion of later actual police ability was  $-.01$ . In other words, there was no relationship whatsoever between the score of an individual on the test and his later success in actual police work.<sup>6</sup>

#### APTITUDES DESIRABLE FOR POLICE WORK

Although some experts believe that general intelligence exercises but limited influence in determining occupational scores, the combination of routine and complex duties that patrolmen perform requires considerable intelligence. To this end we should attempt to determine the minimum requirement for such an occupation keeping in mind that success in this field also depends on other characteristics.

An aptitude test is one that is designed to discover what potentialities a given person has for learning some particular vocation or acquiring some particular skill. In a narrower sense, aptitude testing does not cover abstract intelligence; it is designed to measure special aptitude and not general com-

petence. There is no test which perfectly fits this more narrow definition because all of them show something about the person's intelligence, in fact aptitude test results correlate quite closely with results of intelligence tests; therefore aptitude tests may be used as checks on intelligence tests. But the chief reason for using aptitude tests in police personnel work is to see if the candidate possesses those special traits which are necessary for effective police service.

The first stage in vocational selection is to analyze the job into broad human capacities. It is not necessary to name the exact traits; one seeks to approximate them as nearly as possible by the preliminary job analysis. The job should be analyzed in terms of concrete job processes or definite functions. The functions can be further analyzed into mental qualities or traits required for their performance. In some vocations the work conditions change, but in police work there is a fixed condition of the job. Yet police are constantly put in varying situations, so it is necessary to analyze the composite functions or the integration of the performance of the work.

From the job analysis of the Los Angeles Police Department by the California State Department of Education<sup>7</sup> it has been shown that the qualities demanded of the police are many and varied. The instant question now resolves itself into the problem of determining from the job analysis what mental traits or aptitudes are involved. A review of the Los Angeles job analysis shows that the following capacities are

<sup>6</sup> Martin, E. M., "Aptitude Tests for Policemen," *J. Crim. L. and Criminology*, 14: 376 (1923).

<sup>7</sup> California State Department of Education, Sacramento, *Job Analysis of Police Service* (1933).

desirable: accurate memory and observation, reasonability, analytical judgment, ability to follow directions, ability to organize material, mental alertness and speed of decision, judgment (common sense), determination, social intelligence (understanding human nature), and aggressiveness.

The duties vary with cities and while it is possible that we may now use the Los Angeles Police Analysis for the purpose of determining what the general duties of policemen are, and it will prove more useful than any other method hitherto pursued in ascertaining what knowledge and skills the candidate should possess before entering the service, it must be kept constantly in mind that this study was made in one city and may not have applicability to others.

#### A PROPOSED PROGRAM OF SELECTION

In the first place, there should be some definite order in the arrangement of the several steps in the selective process. The following divisions are listed in this order, there being kept in mind the general principle that whenever possible it is best to first administer tests that can be given to a group, rather than examinations that can be only individually administered, as group tests are easily given, consume little time, and consequently are of relatively small expense.

1. Personal interview.
2. Application form.
3. Intelligence tests.
4. Personality inventories tests.
5. Knowledge tests.
6. Agility and strength tests.
7. Polygraph examinations.
8. Medical examination.
9. Character investigation.
10. Medical laboratory tests.
11. Probation period.

#### *Personal Interview*

The natural procedure for an applicant to follow when seeking employment advertised, or the possibilities of an opening in the future, is to either write or call to see the person in charge of personnel. Where a department has a man in charge of personnel work, provision for the answering of questions is thus provided. Unfortunately, in many large jurisdictions where civil service prevails, the only information given about a position is the data printed on the announcement of examinations. While circumstances may be such as to make it difficult to interview all possible applicants seeking information, nevertheless, the writer feels that the position of patrolmen is of sufficient importance to warrant the making of a provision for this means of disseminating information to all who apply.

The applicant should be told the limitations of the job. He should be made acquainted with the hours required, and the possible effect of odd shifts at all times of the day upon his family life. He should be reminded of the hazards connected with police work as well as the exposure of the patrolman to all manner of weather. Then, too, he should be told of the advantages of police work. That it is essentially a job of service and that he will have the opportunity to be of value to his community.

However, all emphasis should be laid upon the discouraging features. By this means many applicants will be saved the trouble of further investigation, and time will be saved for both the man and the department.

#### *Application Form*

If the applicant survives the dreary

picture thus painted, and knows that he can pass preliminary requirements such as age, height, weight, and citizenship, he should be given an application form.

On this form he should be required to answer questions as to his past history, education, previous employment, fraternal affiliations, participation in athletics, family life and relations, and all necessary questions to give complete information about himself. There should also be space provided for three character vouchers who have known him a number of years.

The applicant should be required to have the application sworn to by a notary public and hand it in person to the personnel officer.

### *Intelligence Tests*

The first item in our battery of tests would be the elimination of the mentally unfit. The view most accepted of intelligence tests is that they measure an individual's ability at the time of testing, without telling how such ability came about or just what it is; but the important point is that the standardized test does measure something which is necessary for success in various fields of endeavor. This "something" is called abstract intelligence and the standardized intelligence test has come to be the basis of grading mental ability. It stands to reason that an armed man, performing police duties which deal with as intricate a thing as human behaviour should be at least normal in intelligence.

The intelligence tests which are most in favor with personnel workers are the Army Alpha (revised forms), the Terman group test of mental ability, and the Otis general intelligence tests. These tests measure abstract intelligence ex-

clusively, to a greater degree than do most other intelligence tests which are intended to measure to some degree at least, educational achievement. These tests have also had wider use and are better standardized. To some degree all three are unreliable, and they do not sample the elementary units of intelligence in the same way. Experience has shown that a more reliable measure of intelligence is obtained by giving all three, rather than one. The examiner then has a means of checking each test; also, personal factors are reduced to a minimum. If it is impossible to give more than one intelligence test the Army Alpha (revised form) should be used.

The Army Alpha<sup>8</sup> was devised and used by the U. S. Army during the European War of 1914-18. Its reliability was fairly well established at that time. It is especially designed for adults and norms are based upon results obtained from adults. The majority of personnel workers believe that the defects of the Army Alpha are less objectionable than those of any other intelligence test. The original tests are not used at present as several revisions are obtainable. There are five alternate forms, all standardized, which make it possible to give the test five times without repeating material. The number of items in each form is large enough to minimize the danger of vitiating the results because of unfair advantage to some men who have had access to the forms. Letter ratings are made on the Army Alpha, ranging from A (very superior) to E (very inferior). The highest possible score is 212. In its relation to police work, as a means of selecting applicants, there is common

<sup>8</sup> Yerkes, R. M., *Memoirs of the National Academy of Science* (1920).

agreement that the test has value. The disagreement, when such arises, is largely a matter of the score to be used as a minimum for entrance into the service. Berkeley, California, insists upon a minimum score of 135;<sup>9</sup> Detroit, Michigan feels that 100 is sufficient for an applicant;<sup>10</sup> Wichita, Kansas, has a minimum of 135;<sup>11</sup> while C. N. Amsden, Civil Service Examiner of Los Angeles, California, states that the lowest score acceptable for police recruits should be 120.<sup>12</sup>

The advantage of the Army Alpha, aside from the ease with which it may be administered, and its general acceptance, is the fact that it may be used as a guide to determine the degree to which a person possesses certain given traits. For example, Dr. Jau Don Ball has made the following analysis of the test.<sup>13</sup>

Part	Points	Significance
I	12	Ability to follow directions. Auditory memory. Ability to concentrate on oral instructions.
II	20	Arithmetical reasoning.
III	16	Practical judgment. Ability to weigh facts and arrive at correct conclusions.
IV	40	Vocabulary. Ability to handle languages.
V	24	Ability to recognize the relationships of easily recognizable parts to a given whole and interpret the concept. Grasp of ideas. Assembling ability. General ability to systematize work.
VI	20	Mathematical capacity. Ability to handle statistics.
VII	40	Discrimination. Adaptability. Concentration. Freedom from suggestibility. Continuity of mental effort.
VIII	40	Range of interest. Range of information. Powers of observation. Ability to acquire, retain and recall disassociated facts.

<sup>9</sup> Vollmer, A., personal communication to the writer.

<sup>10</sup> Searles, J. A. and Leonard, J. M., *Experiments in the Mental Testing of Policemen* (1936) 41.

From the above grouping it can be seen that an applicant's score can be closely scrutinized, and his weak and strong points may be determined in their relationship to each other. In the hands of a competent investigator such information will be of the utmost importance. Low scores in portions of the test would not necessarily mean that an applicant should be eliminated, but it would indicate a possible weakness that should be investigated.

The Terman group test was constructed for use in grades 7-12, for school purposes. It has been given to a great number of adults, but norms are based upon results obtained in schools. The test consists of ten parts, and there are two forms. The highest possible score is 220; the minimum score for police recruits should be about 132. Since the norms are based upon results from boys and girls and not from adults, however, they are not very satisfactory for interpretation of results, and reliance must be made upon the scores of the group as well as upon the available norms.

There are several different kinds of Otis tests. The General Intelligence Examination is probably the best of the group for police recruit testing. Its norms are based upon results from clerks and privates in the United States Army. It has a correlation of 0.84 with the Army Alpha which indicates a high reliability.

If an applicant makes at least superior scores on these tests it is fairly certain that he has sufficient intelligence

<sup>11</sup> Wilson, O. W., personal communication to the writer.

<sup>12</sup> Amsden, C. N., *City Manager Yearbook* (1931) 197.

<sup>13</sup> Ball, Dr. J. D., *Report to the Shell Oil Company* secured from August Vollmer.

to do police work. In cases where there is little correlation between a candidate's scores, more tests should be made to discover the cause.

Other tests for general intelligence that may be used for testing police recruits are as follows:<sup>14</sup>

- (a) Moss International Intelligence test.
- (b) Miller mental ability test.
- (c) Moss mental alertness test.

When used with persons of the same educational background it has a reliability of 0.91 and a correlation with the Army Alpha of 0.82.

- (d) C.A.V.D. test.

This is reported to have a correlation of 0.87 with the Otis Self Administering test; 0.94 with the Terman group test, and 0.98 with the Stanford-Binet test.

#### *Aptitude or Personal Inventory Tests*

Aptitude tests are far from being perfect measurements of the desired traits, but many have been devised, and several have proved to be very valuable in personnel work. It must be emphasized that the aptitude tests hereinafter described are not used in police selective methods thus far and may not be as valid as they are stated to be by some writers. However, there is a possibility that if these tests were used, they would be of considerable aid to the psychiatrist where one is employed to assist in the examination. The author of this paper makes no claim for the reliability of any of the suggested tests. They are offered merely as suggestive of one of the many means that might be taken to improve police personnel, with the proviso always that there should be a scientific analysis of the results obtained, mean-

ing, of course, that the results obtained on the tests will be actually checked against the individual performance of the officers who have been subjected to the test.

**Aggressiveness.** Moore and Gilliland have defined the term as that quality which contains personal force, initiative, and assurance as contrasted with an attitude of inferiority or submission.<sup>15</sup> The test devised by these workers consists of five parts: (1) eye movement distraction test; (2) starting test; (3) handwriting test; (4) word reaction test; (5) time reaction test. A perfect score is 100, and the claim is made by the authors that there is hardly one chance in twenty-five that a man weak in aggressiveness would score 85 nor that an aggressive person will score less than 70.

Another test used for measuring aggressiveness is the Allport Ascendancy-Submission test.<sup>16</sup> The authors believe that every individual has either an ascendancy or submission trait or an integration of the two and that this characteristic is statistically distributed in a normal manner. The method of the test is to present verbally certain situation of life, and to require the subject to select from a few standardized choices that type of behavior which most nearly characterizes his own usual adjustment to each of the situations. It may be either self-administered or given to a group.

The author is rather conservative in his appraisal of it, stating that "There is at present no perfect arbiter of validity; any test for personality, at least for the time being, must establish its merit

<sup>14</sup> "Measuring Abstract Intelligence in Personnel Work," Public Personnel Studies, 7 (5 and 6): (1929).

Garret, H. E. and Schneck, M. R., Psychological Tests, Methods and Results (1933) 3-62.

<sup>15</sup> Moore, H. T. and Gilliland, A. R., "The Measurement of Aggressiveness," J. App. Psychol., 5:97 (1921).

<sup>16</sup> Allport, C. W., "A Test for Ascendancy-Submission," J. Abnorm. Soc. Psychol., 23: 118 (1929).



through practical success as an aid in vocational guidance, and in the general analysis of cases in clinics and bureaus for personnel studies."<sup>17</sup> Symonds comments on the test to the effect: "The correlation with the ratings indicates that it corresponds to actual behavior characteristics which others can also observe."<sup>18</sup>

There is a Beckman Revision of the Allport Ascendancy-Submission test being used by a commercial house in selecting salesmen that is proving highly satisfactory.<sup>19</sup> Successful salesmen must be aggressive, and it is possible that a test of this nature could be applied with equally good results in testing for patrolmen, at least for determining this one characteristic.

The Bernreuter Inventory<sup>20</sup> might also be used here, for the purpose of the test as stated by the authors is to measure (1) neurotic tendencies, (2) self-sufficiency, (3) introversion, (4) extroversion, and (5) dominance-submission.

*Persistence.* The quality of persistence, which is closely associated with the trait of will power and determination is of considerable importance.

The maze test, impossible of accomplishment, devised by Morgan and Hull should be given some consideration.<sup>21</sup> The authors state that "one can rate a stranger on this scale as accurately as this same person can be judged by an intimate personal acquaintance on the basis of repeated observations." However, this is an individual test which will probably take at least one-half hour per

person. This time requirement may make the cost of administration of such a test prohibitively high.

Fernald<sup>22</sup> devised a test in which the subject is required to stand on his tip toes with the heels about one-eighth of an inch from the floor. When the subject brings his heels to the floor a record of the time spent on his toes is recorded. It was found that subjects of a normal group stood on their toes for a much longer time than those taken from a reformatory group. Due to the fact that the norm established here was fifty minutes, the test may be impracticable, but it is at least deserving of consideration for further experimentation.

*Adaptability.* The test in most general use for determining a person's adaptability appears to be Woodworth's Psychoneurotic Inventory.<sup>23</sup> Symonds claims that the questionnaire does measure adaptability and remarks: "In summary it can be said that the Woodworth Inventory and its later revisions have been found to indicate roughly the degree to which a person is making poor adjustments with irritating and difficult conditions of living." Various writers emphasize the fact that the inventory shows tendencies only and that persons with high scores should be subjected to a more thorough clinical examination.<sup>24</sup>

As noted previously, the Army Alpha Intelligence Test (part seven) determines in part one's adaptability. By analyzing this particular test it is possible to receive aid in determining an applicant's capacity to adapt himself to

<sup>17</sup> Supra, 132.

<sup>18</sup> Symonds, R. M., *Diagnosing Personality and Conduct* (1931) 207.

<sup>19</sup> Schultz, R. S., "Test Selected Salesmen are Satisfactory," *Personnel Journal*, 14: 139 (1935).

<sup>20</sup> Bernreuter, R. G., "The Personality Inventory," Stanford University Press (1931).

<sup>21</sup> Morgan, J. B. and Hull, H. L., "Measurement of Persistence," *J. Appl. Psychol.*, 10: 180 (1926).

<sup>22</sup> Fernald, G. G., "An Achievement Capacity Test," *J. Ed. Psychol.*, 3: 331 (1912).

<sup>23</sup> Franz, S. L., *Handbook of Mental Examination Methods* (1919) 171.

<sup>24</sup> Symonds, R. M., *Diagnosing Personality and Conduct* (1931) 188.

situations and to have a rough check on the Woodworth Inventory.

Dr. L. J. O'Rourke, Director of Research for the United States Civil Service Commission, has designed a test devised to examine the ability of an individual to adapt himself to new situations.<sup>25</sup> There are one hundred questions based, as far as possible, on practical knowledge. It is a test chiefly of police problem solving, involving the use of observation, judgment, memory, and the ability to analyze situations and written material.

Comparisons of test scores with efficiency on a Washington, D. C., police force showed that 80 percent of the men making the highest 25 percent of the test scores in the examination can be expected to develop efficiency above the average policeman. Of those men who were rated among the 25 percent best in the test scores, 100 percent were rated above average in the police school; of those who scored in the lowest 25 percent of the test scores, none were rated above the average.

The preceding paragraph would seem to give the impression that the O'Rourke test is invaluable in the appraisal of the adaptability of the candidate. However, the test was given to the entire police department at Berkeley, California, and 100 percent of the personnel passed the examination with a score of 95 percent or better.<sup>26</sup> The author of this paper believes that the reader may draw his own conclusions.

A person's capacity to adapt himself to a given situation, particularly if it is unusual and trying, is probably limited

to a large degree if he is at all inclined to be neurotic. Care should be used to determine any malfunction in the neurological examination as will be mentioned later.

*Leadership.* In attempting to determine leadership subject to the limitations previously mentioned, Allport's ascendance-submission test may be used. It will be recalled that this test was suggested as a means of determining aggressiveness. The qualities of leadership and aggressiveness are very closely allied, so in testing for one, the other will also be determined.

It is likely the possession of this trait will have to be determined in part by investigation of the past record of the applicant. A person's record in school, the part he played in athletics, school activities, or offices held in clubs. All are an indication of an individual's capacity to lead.

In this instance, it would appear advisable to use both the test and the investigation. Each will be an aid in evaluating the degree of leadership possessed by the applicant.

*Power of Observation.* Probably one of the tests that has had the greatest possibilities for the measurement of a person's capacity to observe and yet one upon which no standardization has been accomplished, is of the type practiced by Munsterberg as far back as 1907.<sup>27</sup> In a classroom he conducted an experiment to determine the power of observation of his students. He found that the same students failed to pass two separate experiments in observation. He summarized his conclusions in

<sup>25</sup> O'Rourke, L. J., "Personnel Problems in the Police Department," U. S. Civil Service Commission, 43 Annual Report (1926) 74.

<sup>26</sup> Vollmer, A., private communication to the writer.

<sup>27</sup> Munsterberg, H., *On the Witness Stand* (1908) 29.

stating: "they evidently did not judge at all from the optical impression . . . whatever they expect to see they do see; and if the attention is turned in one direction, they are blind and deaf and idiotic in the other."

The police school at San Jose State College, San Jose, California, uses a somewhat similar method in judging the power of observation in their students. Walks are taken about town, and upon the return of the students to the classroom, they are asked questions concerning what they were supposed to have seen while on their tour of inspection.

Two tests for observation are available that have been especially constructed for police service. One is in the "Partially Standardized Test for Patrolmen"<sup>28</sup> and the other is contained in O'Rourke's test for selecting policemen.<sup>29</sup>

For this type of test, the motion picture should offer many possibilities. A short picture could be shown after which candidates would be required to record or answer questions as to what they saw or heard. A development of this idea would be most useful. To the best of the writer's knowledge, there is no recorded use of this procedure in testing candidates for the police service.

*Freedom from Mental and Nervous Disorders.* Under this heading we may list three associated characteristics: emotional stability, freedom from distraction, and patience. In the tests to follow, no attempt will be made to segregate these associated traits, because they are so closely allied as to be considered as one.

The Woodworth Questionnaire is a valuable aid in attempting to determine neurotic tendencies, not so much for the personnel officer, but for the assistance that it may give to a competently trained psychiatrist. Its questions concern physical symptoms; adjustment to environment; fears and worries; unhappiness; unsocial moods and conduct; dreams, fantasies and sleep disturbances; reactions to drink, tobacco, drugs, and sex; mental symptoms; vacillations; compulsions, and questions about one's family. Utilized in this manner, this test has been of considerable success in Berkeley, California. A single response to a question has often offered a clue to the psychiatrist to pursue further his interrogation of the candidate which later disclosed undesirable personality characteristics.

Normal persons answer wrongly about ten questions of the total 115. Probably any individual who answers 20 of the questions wrongly should be suspected of instability.<sup>30</sup> Garret observes that the Woodworth P. D. sheet and its revision sift out, with fair accuracy, persons handicapped or liable to be handicapped by poor social and personal adjustments.<sup>31</sup>

House has a revision of the Woodworth Questionnaire, the purpose of which is to aid in the ferreting out of those students whose maladjustments are sufficiently severe or numerous either as present realities or as potentialities to invite further attention in personal follow-up conferences by psychologists or psychiatrists.<sup>32</sup>

<sup>28</sup> "Partially Standardized Test for Patrolmen," *Public Personnel Studies*, 4: 122 (1926).

<sup>29</sup> *Op. cit. supra* note 25.

<sup>30</sup> Franz, S. L., *op. cit. supra* note 23 at p. 171.

<sup>31</sup> Garret, H. E., and Schneck, M. R., *op. cit. supra* note 14 at p. 146.

<sup>32</sup> House, S. D., "Mental Hygiene Inventory," *Arch. Psychol.*, 88: 12 (1927).

Laird<sup>33</sup> devised a questionnaire based upon that of Woodworth<sup>34</sup> which is known as his personal inventory, and the subject answers a question by checking along a line. If the check falls in the neurotic section of the line, given in the key, the answer is scored unfavorable. The final score is the sum of unfavorable answers.

The "Personality Study" developed by L. L. and T. G. Thurstone,<sup>35</sup> consisting of 223 questions drawn largely from the work of Woodworth, House, Laird, Freud, and Allport<sup>36</sup> may also deserve consideration in an attempt to measure neurotic tendencies. As in the case of Laird, it was designed to measure college students, and all norms established are based upon experiments conducted with this group. Both tests report a fairly high reliability—Laird 0.88 and Thurstone 0.88—and it is possible they could be used satisfactorily in the selection of policemen, particularly where the minimum educational level of graduation from high school is required.

The Personality Inventory of Bernreuter,<sup>37</sup> suggested previously in this paper as a test for aggressiveness, is probably better designed as a test for the detection of neurotic tendencies. There is a correlation of 0.94 between it and the Thurstone Schedule, scored for neurotic traits in a group of seventy students in a class in elementary psychology.<sup>38</sup>

Most workers in this field believe that it is usually not necessary to give

more than one personality questionnaire; they overlap greatly and none of them are very reliable as quantitative measurements, but only serve to indicate tendencies. However, the Maller Association Test might be given to supplement the questionnaire. The chief value of the personality inventory is that it furnishes clues for the interview, the more important part of the psychiatrist's examination.

There is a biochemical approach which appears to have possibilities for the testing of emotional excitability. A. J. Rich has conducted experiments along this line in the measurement of acid and alkali in urine and saliva.<sup>39</sup> He found that the least excitable individuals tend to have the most acid urine and saliva, while more excitable persons tend toward neutrality or alkalinity of their fluids. Also that emotional excitability tends to bear an inverse relationship to the presence of creatine in the blood and its excretion in the urine. He mentioned that all the factors in the experiment were not carefully controlled, as the subjects were put on their honor as to diet, and although they were advised what to eat, no definite check was made.

For the purpose of emphasis it must be stressed that the primary objective of these tests is to afford the psychiatrist the opportunity to pry deeper into the inner workings of the mind of the candidate, and to observe more critically his reactions.

<sup>33</sup> Laird, D. A., "Detecting Abnormal Behavior," *J. Abnorm. Soc. Psychol.*, 2: 128 (1925).

<sup>34</sup> Symonds, P. M., *Diagnosing Personality and Conduct* (1931) 179.

<sup>35</sup> Thurstone, L. L., and Thurstone, T. G., "A Neurotic Inventory," *Soc. Psychol.*, 1: 1 (1930).

<sup>36</sup> Symonds, P. M., *op. cit. supra* note 24 at p. 183.

<sup>37</sup> *Supra*, 24.

<sup>38</sup> Garret, H. E., and Schneek, M. R., *op. cit. supra* note 14 at p. 147.

<sup>39</sup> Rich, A. J., "A Biochemical Approach to the Study of Personality," *J. Abnorm. Soc. Psychol.*, 23: 158 (1928).

Rich, A. J., "A Biochemical Aspect of Personality Traits," *Psychol. Bull.*, 24: 187 (1927).

However, the research possibilities of the personality inventory must never be overlooked. We cannot appraise their limitations or potentialities until they have been given the acid test of usefulness in the evaluation of men and then watching to see how these same men develop.

There is included in the battery of tests given applicants to the Berkeley Police Department a test known as the Distraction Test. This test is given somewhat as follows: after the men have been subjected to a series of examinations lasting well over the day and as a result are tired and wearied by their exertions, they are informed that one additional test will be given. They are told, however, that it is not obligatory to take this test, but that if they do so they will have a better chance of improving their score. The men naturally submit to the additional examination.

The test is an extremely difficult problem requiring a great deal of concentration. As soon as the men are started on the problem, various distractions are introduced to confuse and annoy the men. While this is taking place, there are officers stationed to observe the reactions of the men. Those who show signs of nervousness or inability to continue their work are disqualified.<sup>40</sup>

*Additional Necessary Characteristics and Qualities.* There are additional necessary characteristics that policemen should possess, but that have been found to be extremely difficult to measure by any formal test. Among these

are the closely related concepts of social intelligence, broadmindedness, tact, courtesy, civility, friendliness, and a disciplined temper.

Due to the fact that tests developed for these characteristics have certain limitations, not as yet overcome, and that there is a difference of opinion as to their value in the practical field of testing, they are presented not as a definite aid to be employed in selecting policemen, but rather as an indication of the possibilities in the field as further experimental work develops them to a higher degree of perfection.

The F. A. Moss test of Social Intelligence is one of these. Garrett comments: "the test suffers from the fact that it is of the paper and pencil type, and that the situations which it sets up are hypothetical instead of actual. A person may know the correct thing to do and still not act in accordance with his expressed or written decisions."<sup>41</sup>

The authors of the test believe, however, that it may be used for vocational guidance, and they have established norms for various occupations and professions.<sup>42</sup>

G. B. Watson has developed a test which he terms the Measurements of Fairmindedness. The purpose of the test is to show the extent and strength of an individual's prejudices, as exhibited in extreme opinions upon moral, religious and economic questions.<sup>43</sup> According to the author, this test has a reliability of 0.96 and Symonds comments rather favorably upon it. "Case studies tended to reveal the

<sup>40</sup> Greening, J. A., Address delivered before selected officials in the Federal Training School, U. S. Department of Justice (1935).

<sup>41</sup> Garret, H. E. and Schneck, M. R., *op. cit.* *supra* note 14 at p. 159.

<sup>42</sup> Hunt, T., "The Measurement of Social Intelligence," *J. App. Psychol.*, 12: 317 (1928).

<sup>43</sup> Watson, G. B., "The Measurement of Fairmindedness," *Teachers' College Contribution to Education*, No. 176 (1925) 97.

accuracy of the diagnosis afforded by a study of the test results. Comparison of the scores of prejudiced groups indicated that the tests substantiated popular impression."<sup>44</sup> However, he qualifies this statement by "the direct question or ballot attitude when there is no immediate and personal issue at stake may be different from actual performance."<sup>45</sup>

This last statement would lead one to doubt the advisability of using such a test where the subject had in view the procuring of a job. The natural thing to do would be to answer questions as to what was thought to be the correct reply, rather than the actual conviction of the examinee.

Because of the difficulty of finding a reasonably accurate measurement for these qualities, it would appear that the best practice to follow is that of first conducting a thorough character investigation, and if the applicant is accepted, place him under close observation in order to note characteristics, both good and bad, that he may possess.

An investigation of the applicant's past record should tell if he has been honest, it should reveal if his habits are good, if he has been a man of integrity, and if he has been ambitious and diligent. While it is true that an investigation, if carefully conducted, will bring to light an applicant's past conduct from which conclusions may be drawn as to the qualities he possesses, it is also true that he may not continue in the same view, when faced with the temptations and responsibilities that a policeman must meet.

It is difficult to determine just how a man will react to tempting offers of

bribery, when never before in that person's existence was such a temptation placed in his path. An applicant may have never displayed an outburst of temper, and yet this same man, if placed on traffic duty on a down-town corner, might very well lose all patience with people and behave in an unseemly manner. There is no way of knowing how much physical courage a person possesses until tried, and even then he may display unusual bravery upon one occasion and cowardice upon another.

We have by no means exhausted the list of possible tests that may be used. Other aptitude tests that may prove useful are as follows:

1. Troops-Printner directions test.
2. Number copying test.
3. Memory test.
4. Social Intelligence test.
5. Report writing test.
6. Rapid judgment test.
7. Downey decision test.
8. Finality of judgment test.
9. McDougall dotting test.
10. Porteuse maze test.

#### KNOWLEDGE TESTS

It is possible that there is a general field of knowledge that policemen all over the country must possess, but not until a job analysis has been made in hundreds of cities will we know if this is true or not.

There are, however, certain basic requirements that may reasonably be required of every policeman, regardless of locality. It is expected that a policeman must be able to read and write, and for this there are many standardized tests such as the New Stanford Reading Test, and the Detroit Reading Test.

It is also advantageous to apply tests in arithmetic and for that purpose there are also standard group tests which might be given and easily scored. A few of these are the New Stanford Arith-

<sup>44</sup> Symonds, P. M., *op. cit. supra* note 24 at p. 235.

<sup>45</sup> *Supra*, 237.

## PROPOSED PERSONNEL INVENTORY TESTS

DESIRED QUALITY	SUGGESTED TESTS
I. Aggressiveness	
Self Confidence	Moore and Gilliland
Self Assertiveness	The Allport Ascendance-Submission test
Self Reliance	Beckman Revision of the Allport Ascendance-Submission test
Self Direction	The Bernreuter Personality Inventory
II. Persistence	
Will Power	Morgan and Hull Maze test
Determination	Fernald—"An Achievement Capacity test"
III. Adaptability	Woodworth's Psychoneurotic test
	Army Alpha Intelligence test
IV. Leadership	The Allport Ascendance-Submission test
V. Truthfulness	Lie Detector
VI. General Intelligence	
Memory	Army Alpha Intelligence test
Precise Thinking	Terman Group test of Mental Ability
Keen Imagination	Otis Group Intelligence Scale
Alertness	Moss International Intelligence test
Reasoning and Analytical Judgment	Miller Mental Ability test
Ability to Follow Directions	Moss Mental Alertness test
Ability to Organize Material	C. A. V. D. test
Concentration	Digit Span Memory test
Wide Range of Interests	Westinghouse Electric Company test
VII. Power of Observation	Munsterberg or motion picture variation
	Partially Standardized test for Patrolmen
	O'Rourke—"Personnel Problems in the Police Department"
VIII. Motor Ability	
Agility	Brace—"Measuring Motor Ability"
Muscular Coordination	Garfiel Motor Ability test
	De Silva Braking Reaction test
IX. Physical Fitness	
Vigor	Rogers—"Physical Capacity tests"
	De Silva's Peripheral Vision test
X. Freedom from Mental and Nervous Disorders	
Emotional Stability	Biochemical Analysis
Freedom from Distraction	Berkeley Police Distraction test
Patience	Woodworth Questionnaire
	House revision of the Woodworth Questionnaire
	Laird's Personal Inventory Bz test
	Thurstone Personality Study
	Bernreuter Personality Inventory

metic Test, the Otis Arithmetic Reasoning Test, and the Stanford Achievement Arithmetic Test.

As a rule some effort is made to find out if the candidate possesses any knowledge of civics and for this pur-

pose either the Brown-Woody Civics test or the Burton Civics test may be used.

Among the general knowledge tests where it is desired to test the candidate's educational qualifications either the Thurstone Teachers' examination or the Otis Science test may be useful.

Beyond the tests cited there is no agreement as to what a police officer should know. It would appear though, that with the increasing demand upon the part of the general public for more efficient police performance, that a much more specialized knowledge of criminology will soon be demanded. The establishment of training schools in part meets this demand, but there is a question upon the part of some authorities as to the advisability of leaving the responsibility entirely upon the training school. It is argued that if possible it would be better practice to require more police knowledge of the recruit before admitting him to the police force. The training time could then be devoted to a more detailed and advanced treatment of the police function.

#### AGILITY AND STRENGTH TESTS

*Motor Ability.* This general quality, divided into agility and muscular coordination, is also of much importance in police work. It is possible that an applicant may be both physically strong and medically sound and yet lack agility and muscular coordination.

Individual tests of motor ability, such as tapping, aiming, test of steadiness, and others may be had, but the best results appear to be obtained from a

battery which will contain all of the individual tests.

A scale has been devised by Brace which consists of twenty tests of body balance.<sup>46</sup> According to the author it has a correlation of 0.30 with scores in athletic events.

The Garfiel Motor Ability Test<sup>47</sup> is made up of eight athletic events. It is reported to have a correlation of 0.77 with a criterion set for athletic ability, and on a retest had a correlation of 0.92 between the first and second test.

Of interest here is the Braking Reaction Test devised by De Silva to test a person's ability to drive an automobile.<sup>48</sup> A piece of equipment was made to duplicate exactly the controls on a Ford V8, 1934 automobile. At a given signal, the person being tested removes his foot from the accelerator and applies the brake. The time taken to do this is measured by an accurate synchronous motor, clutch type timer, calibrated in hundredths of a second.

This test could be used as an aid in the selection of policemen, not alone as a test of their ability to drive a car efficiently, but also as a measure of muscular coordination.

*Physical Fitness.* Strength, vigor and vision are the three qualities to be measured for physical fitness. Rogers has devised a test for determining strength and vigor. He states: "the physical capacity tests measure muscular strength and therefore the power to perform physical acts. The Physical Fitness Index is a quotient which indicates the amount of surplus physical power or strength of the individual as compared

<sup>46</sup> Brace, K. K., *Measuring Motor Ability* (1927) 138.

<sup>47</sup> Garfiel, E., "The Measurement of Motor Ability," *Arch. Psychol.*, No. 52 (1923).

<sup>48</sup> De Silva, H. R., "Research on Driving Skill," *Massachusetts F. E. R. A. Project X. S.-F2-U25* (1935) 5.



with others of his own age and weight."<sup>49</sup> According to the author of this test, its reliability is 0.94, and the correlation between the Athletic Index and the Strength Index is 0.81.

The peripheral vision test of De Silva in his test for automobile drivers might be applied here.<sup>50</sup> Such a limitation upon vision would seriously handicap a policeman, not only in the act of driving a car but in curtailing his capacity to properly observe activities while on duty. This test is conducted by the use of a device called a perimeter. The subject looks straight ahead at his own image in a mirror while the examiner moves a light box out from the center along a curved rod until it passes out of the subject's sight. This test could be used in conjunction with the standard test of the eyes for color blindness and visual acuity.

#### LIE DETECTOR EXAMINATION

Truthfulness is a trait very difficult to measure by means of a formal test. Hartshorne and May have conducted a series of studies in deceit, for the purpose of determining cheating, lying, and stealing.<sup>51</sup> They found that the tests were valid for particular situations, but they were not able to devise a test to measure the trait generally. In order to do this, a separate test for each situation would have to be constructed, an obviously impractical task.

In the lie detector, however, the police have at their disposal an instrument for the determination of truthfulness.

It is being used successfully by several agencies in the examination of suspects.<sup>52</sup> It would appear that the usefulness of such an instrument would be of value in the recruitment program where honesty and truthfulness are prime requisites of the job.

August Vollmer stated in one of his lectures at the University of California that if such a procedure were to be employed and a question were put to a man as to whether or not he ever committed a theft, no matter how he answered, information of value would be uncovered. Almost all boys have at some time or other stolen some small article. An answer of "no" to the question "have you ever stolen anything?" would very likely be a lie. An answer of "yes" would indicate truthfulness, but at the same time would necessitate further investigation to find out if the theft committed were of a serious nature or only a boyish indiscretion.

The same method of questioning could be used for uncovering sexual irregularities and thus bring to light possible emotional or neurotic disturbances that would require further examination by a psychiatrist.

#### MEDICAL EXAMINATION

All applicants must, of course, be submitted to a well qualified physician for a thorough medical examination (physical, neurological, and psychiatric). If a psychiatrist is employed to conduct these, he will be aided immeasurably by the findings of the Woodworth Questionnaire. There are

<sup>49</sup> Rodgers, F. R., *Physical Capacity Tests* (1931) 32.

<sup>50</sup> De Silva, H. R., *op. cit. supra* note 48 at p. 22.

<sup>51</sup> Hartshorne, H. and May, M. A., *Studies in Deceit*, 1: 94 (1938).

<sup>52</sup> Wichita, Kansas, Police Department Annual Report (1936).

Berkeley, Calif., Consolidated Deception Test Report (1934-1936).

Inbau, F. E., "The Lie Detector," *The Scientific Monthly*, 40: 81 (1935).

some physicians qualified to conduct all three examinations, and to this practice there is naturally no objection. The procedure to be followed will be determined largely by the size of the city and the facilities available.

#### CHARACTER INVESTIGATION

This step in the selection of candidates is vitally important. Wherever possible, the references should be personally interviewed by the investigator. Each reference so interviewed should in turn be asked for the names of other people who know the candidate. By this means a wider circle of acquaintances of the applicant will be contacted, and a fuller picture of his past life obtained.

Finger prints should be taken and checked with the Federal Bureau of Investigation.

#### MEDICAL LABORATORY TESTS

If the candidate is able to pass all of the foregoing examinations the last step to be taken just before appointment is the laboratory test. This should include a Wasserman, a kidney function test, blood count, blood pressure, and urinalysis. These are rather costly, but the candidates who arrive this far will be few by comparison with the original group, so whatever the cost may be it is reduced to a minimum. There are some cities that have the candidate pay for these tests. Such a practice may be open to question, as to its fairness, but each department had best decide for itself what the policy in this matter is to be.

#### PROBATION

As an added safeguard a probationary period of two years is suggested.

The applicant may have successfully concealed undesirable qualities that only can be discovered by close contact with a person. He may not have an aptitude for the work, or it may become distasteful to him. A probationary period gives the applicant, as well as the department, each a chance to get acquainted with one another, and if unforeseen developments occur that make a severance from the service desirable, this can be accomplished with no difficulty.

#### CONCLUSIONS

It is obvious that the preceding suggestions are entirely inadequate. It is a theoretical set-up at best, and how such an arrangement of tests will actually work in practice cannot be accurately foretold. Each department will have to be the judge of how a selection method works for them. A condition existing in one locality may be entirely lacking in another. Methods of expediency will vary from place to place. In some places the tests may be in too much detail, and in others it will be found that there is far too much overlapping of tests, and that it will be possible to eliminate some entirely.

Again we emphasize that these tests in other than the hands of professional psychologists and psychiatrists would not only be useless but positively harmful. They are merely mentioned here because of the necessity of ascertaining whether or not the candidates possess the traits desired, and for the further reason that the designers of the tests mentioned believe that their tests do in part at least accomplish the purpose for which they were designed. Wheth-

er they do, or do not, accomplish their purpose, especially in testing policemen, can only be determined when thousands of officers have been subjected to the tests and the results are compared with performance on the job.

The cost of applying such tests is, comparatively speaking, inexpensive. A single disqualification of one unsuited person would more than pay for the time and money expended in giving these tests during a regular examination.

There should be a more careful study of rating methods utilized in police departments to determine the qualities that the successful police officer possesses. It should be possible to develop tests that are more positive in their reactions and that will indicate to the examiner whether or not the candidate has the qualities desired. An excellent start has been made in the selective method in many departments, but they all still fall short of the desired end. Noteworthy in this connection is the fact that the knowledge tests are not based on the absolute requirements of the duties to be performed. Perhaps even more important than the reason just cited is the absence of the application of the use of methods devised to test those personal qualifications which determine whether or not the applicant can succeed in his chosen profession. It should

be said in all fairness that personal qualifications such as attitudes, dispositions, sentiments, ideals, temperments, and other inherent or acquired personal characteristics have not been subjected to critical study by police executives. However, many of these qualities are known and there are possibilities of ascertaining whether or not the candidates possess them as previously indicated in the present article.

It would be of untold value if the personnel material in large police departments could be opened for study by competent and trained men in this field of research. This paper should indicate, however, that there is much experimental work to be done, not so much in the laboratories far removed from police work, but directly in the departments themselves. It is largely a matter of improving the material we now have, giving it a thorough trial and then determining from the results obtained what to use and what to change. Only by means of careful records and honest appraisals of the work performed, can any system of selection be fairly evaluated. Through the adoption of such a procedure, a definite step forward will be taken in police work, for we must be ever mindful of the fact that no department can ever rise beyond the capacity and character of its personnel.