# AN ANALYSIS OF THE APPLICATION FORM IN THE SELECTION OF CAFETERIA WORKERS

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# AN ANALYSIS OF THE APPLICATION FORM IN THE SELECTION OF CAFETERIA WORKERS

by

MARIE AGNES BUKOVAC

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# CHAPTER I

## INTRODUCTION

It is not nearly as important to obtain a job or an employee as it is to obtain the right job or the right employee. Errors of selection result in waste, fatigue, loss of time, and general maladjustment. Such poor utilization of human and material resources sums up to gross inefficiency.

Ever since the economic organization of society began to take its present form, employers have been attempting to minimize the effects of this condition of unsatisfactory combinations of factors. Much attention has been given to this problem insofar as it may derive from the contributions of labor or the human element; the wide spread use of the personnel department in modern industry is evidence of this fact. Many criteria have been and are being used to assist in the selection of the employee whose qualifications indicate the highest probability of success on the job. Among these are the letter of application, the personal interview, the personal history application blank in its simplest to most complex form, employment tests (intelligence, job performance, personality, etc.), letters of reference, and a multitude of combinations of the above and some additional devices.

However, studies are not lacking which indicate the relative ineffectiveness of these techniques. Too often their use has contributed little or nothing toward bringing about a desirable job-person relationship. Nevertheless, there exists considerable support for the belief that

the application blank in its simple or weighted form merits attention as a tool for facilitating the hiring process. Differences of opinion on this point coupled with the writer's eight years of association with the problems of cafeteria management led to the keen realization of the seriousness of maladjustments of the worker to his work, and of the costs involved in high labor turnover, thus bringing about the undertaking of this investigation.

Purpose of Study. This study was designed to determine the relationship between the items commonly found on the application form used by cafeteria concerns and the job success of the employees thus chosen. It therefore represents an attempt to evaluate application form data with respect to their efficiency as aids in the selection of cafeteria employees.

## CHAPTER II

## CLASSIFIED REVIEW OF LITERATURE

In this necessarily limited study, it was felt that little useful purpose would be served by an attempt at an exhaustive review of available literature on these and related topics. Insofar as such a project should fail of adequacy and thoroughness, to that extent it is preferable that those interested proceed of their own accord to the original sources which may be uncovered. Indeed, the seasoned investigator will already have done so. For those less familiar with the field, it is hoped that this brief summary of leads in literature will be of value.

In Reference to Letters of Application. D. A. Laird, psychologist at the Riverside Laboratory, reports that Miss L. C. Walton at Columbia University, made a study based on 100 letters of application for bookkeeper and office assistant, in which it was concluded that employees selected primarily on their apparent merits as indicated by the letters of application were chosen scarcely more objectively than if the first five who appeared had been employed. He further states that, generally speaking, the letter of application, as ordinarily used, should not be relied upon to do more than to bring to the prospective employer the names and addresses of the interested applicants.[1]

In Reference to Letters of Recommendation. S. B. Mathewson, of the Chamber of Commerce in Springfield, Ohio, says that approximately 82% of

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[1] D. A. Laird, The Psychology of Selecting Employees, McGraw-Hill, 1937, pp. 85-87, and p. 98.

employment offices now require that the applicant provide a list of references composed of those who know something of his or her past life and work history.[2] This seems to be the usual procedure in most letters of application. However, little trust should be placed in such letters of recommendation because very few employers have the time, or will take the time, to write any more than generalized statements having very little actual significance. Also, there is the tendency to include only favorable characteristics and give no report of the unfavorable ones. J. B. Miner of the Carnegie Institute of Technology[3] found that superiors in the same department vary in their judgment of a common former employee in whose behalf they have written letters of recommendation; that the potential employer might almost as well use random selection as a basis of choice. The inquiry type of letter of recommendation developed by H. E. Burtt, Professor of Psychology, and by Bingham and Freyd of the Personnel Research Federation suggest questions having some relation to the particular job for which the applicant is being considered.[4,5] Little information is at hand with respect to their technique.

With Regard to Photograph. Experimental data show quite conclusively that there is neither consistency of judgment nor high correlation with any other criterion when the photograph is used as a basis for estimating mental ability.[6] It is the opinion of Laird that no one has yet been

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[2] S. B. Mathewson, "A Survey of Personnel Management in 195 Concerns," Personnel Journal, Vol. 10, 1931-1932, pp. 225-231.

[3] Herbert Moore, Psychology for Business and Industry, McGraw-Hill Co., 1939, p. 85.

[4] H. E. Burtt, Employment Psychology, Houghton Mifflin Co., 1926, pp. 409-441.

[5] W. V. D. Bingham and M. Freyd, Procedures in Employment Psychology, McGraw-Hill Co., 1926, pp. 150-151.

[6] Herbert Moore, op. cit., p. 87.

discovered who could consistently be 10% more effective than chance in estimating intelligence by the use of a photograph.[7] The photograph serves the purpose of identifying the owner and to bring out any facial deformity which should be avoided for certain positions demanding moderate attractiveness and charm.

With Regard to the Interview. The interview method of hiring is the most widely used in employee selection. Mathewson reports that 93% of the 195 personnel departments which he surveyed regarded the interview as the most important part of their employment procedure.[8] Even though this is the case, Hackett, psychologist in New York, states that "Interviewing is one of the arts where mediocrity can flourish indefinitely with little chance of discovery."[9] This is especially true when the interviewer is not acquainted with the job demands and their promotional possibilities. Wonderlic, Professor of Psychology at Northwestern University, suggests the use of a standardized form of questions to be asked during an interview and thinks that they should be recorded shortly afterward so as to satisfy oneself on the kind of work history this applicant has, and whether or not he is able to adjust himself to the policies and procedures of the company.[10] However, Morgan, also a psychologist, seems to disagree with Wonderlic by saying, "Any attempt to formulate a standard practice is practically useless. ... The method of procedure

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[7] D. A. Laird, op. cit., p. 109.

[8] Mathewson, op. cit., pp. 225-231.

[9] J. D. Hackett, "The Art of Interviewing Workers," Industrial Management, Vol. 60, 1920, pp. 338-340.

[10] E. F. Wonderlic, "Personnel as a Control Function," Personnel, Vol. 14, (No. 1), 1937, pp. 31-40.

depends upon conditions which no mechanically devised plan will ever be formulated to meet the problem."[11]

A much more common type of interview takes on the conversational form, in which the good interviewer is able to motivate, instruct, and secure information from the applicants. If the position to be filled, is one of supervision, then time should be spent in eliciting facts and judgments which in turn will indicate attitudes; while on the other hand, if the position is but a minor one, very few interviewers have or take time to obtain the facts which are not quite adequately covered in the application blank.[12] From such studies as the one made by W. D. Scott, Personnel Administrator, according to Laird, made on the reliability of interviews by several judges, the conclusion drawn was that there is very little agreement between any two judges.[13] For that reason many suggestions have been offered to make the interview more reliable. L. J. O'-Rourke, of the United States Civil Service Commission, suggested that candidates for the position of sales manager be given a disagreeable letter from a customer and then asked to dictate their replies. In this way, courtesy, and honesty presented in this situation allowed the applicant to show what would likely happen in similar situations if he obtained the position.[14]

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[11] E. B. Morgan, "Interviewing for Selection," Industrial Management, Vol. 61, 1921, p. 159.

[12] J. Mills, "Engineering Aptitudes," Jour. Personnel Res., Vol. 3, 1924-1925, pp. 197-207.

[13] D. A. Laird, Psychology of Selecting Men, McGraw-Hill Co., 1927, pp. 105-115.

[14] L. J. O'Rourke, "Measuring Judgment and Resourcefulness," Personnel Jour. Vol. 7, 1928-29, pp. 427-440.

With Reference to the Application Blank. It is the opinion of D. G. Craig, Personnel Administrator, that in approximately 89% of the positions available today, employers require the completion of some form of application blank.[15] The completeness of this form, according to Moore, "varies from the type which includes previous experience and training, together with a very few personal items, to the type which asks for almost everything about an applicant's past, present, and likely future--affiliations, attitudes, interests, preferences, and contacts, as well as personal and work history."[16] If the items on the application blank are a bit puzzling to the applicant, deception may be invited. In any case, applicants may deliberately give deceptive replies. In the Army the personnel department found that only 6% of those who claimed they were experienced in a given trade were really well enough acquainted with the material to perform the job satisfactorily, and over 30% were entirely inexperienced.[17]

Because of the fact that the average application blank consists of as many as 24 or more items and because some of the information asked for has no bearing on the job to be filled, it is the hope and desire of many to reduce the number of items in such a form. J. B. M. Clarke, well known personnel director, says that the only items of importance, are name, address, nationality, mental status, past experience, and health record.[18]

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[15] D. G. Craig, "Analysis of Personnel Forms," Industrial Management, Vol. 70, 1925, pp. 122-124.

[16] Herbert Moore, op. cit., p. 74.

[17] Herbert Moore, op. cit., p. 75.

[18] J. B. M. Clarke, "Concerning Application Forms," Industrial Management, Vol. 71, pp. 25-26, 1925; Vol. 72, pp. 243-244, 1926.

On the other hand, some others think that only name, address, and telephone number are important.[19] The only way to discover what these factors are is to make a study, in each organization, of those that have made for success in the past. The writer will briefly mention some of the studies in which certain factors are important in some types of work.

The Service Bulletin of the Bureau of Personnel Research reports a study of salesmen for a house to house selling firm.[20] Two factors predominated in the successful men; that is, they were married, and between the ages of 35 and 40. Even though one cannot make the general statement that to be successful, one must be married and between 35 and 40 years of age, at least the indication is that these factors might be important.

H. D. Kitson, Professor of Psychology at Columbia University, made a study of the relation between height, weight, and success among shoe salesmen and found such an insignificant correlation that he concluded that it would be absurd to ask applicants for height and weight as possible factors to their probable success in selling shoes.[21]

Dorothy Goldsmith, also a psychologist, studied the personal-history records of over 500 Guardian Life Insurance Company employees.[22] The items on which the successful men differed from the unsuccessful were given a weighted score. Thus all the items were given a definite score

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[19] A. G. Francis, Illinois Bell Telephone Co. (correspondence)

[20] Service Bulletin for June 1923, Bureau of Personnel Research.

[21] H. D. Kitson, "Height and Weight as Factors in Salesmanship," Jour. Personnel Res., Vol. 1, 1922-1923, pp. 289-294.

[22] Dorothy Goldsmith, "The Use of the Personal History Blank as a Salesmanship Test," Jour. Applied Psychology, Vol. 6, 1922, pp. 149-155.

range, the highest score being given to the more important factors. The scored applicants were then divided into three groups depending upon their scores. Each group was divided into three parts on the basis of production records. The results of this study showed that if the weighted personal-history form had been used and 4 set as the critical score, 54% of the subsequent failures would have been eliminated, and only 16% of the subsequent successes would have been lost.

A similar study was made by W. Russell and G. V. Cope in the personnel department of the Phoenix Mutual Life Insurance Company on their salesmen. They studied the records of 500 salesmen by selecting each item on the application form and compared the percentage of successes with failures, and calculated their probability. For each of the 11 items used, each applicant was given his chances of success, as his score. If such a scale had been used at the time of employment, the expense of training 31 salesmen who were failures would have been avoided. After this method of selection was in effect for but three years, a reduction of the failures from 90% to 30% seemed to justify the time spent on the research work.[23]

Another study made by M. Viteles, Professor of Psychology at the University of Pennsylvania, in 1926 in the selection of Yellow Cab drivers in Philadelphia took into consideration 80 drivers whose salaries ranged from the best to the poorest.[24] All of the 25 items found on their application blanks were analyzed but only seven of these had differential value in estimating a candidate's fitness for the position. The seven included

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[23] W. Russell and G. V. Cope, "A Method of Rating the History and Achievement of Applicants for Positions," Public Personnel Studies, Vol. 3, No. 7, 1925, pp. 202-219.

[24] Morris Viteles, The Science of Work, W. W. Norton and Co., 1933, pp. 175-195.

age, nationality, marital status, number of children, number of dependents, trade followed, and weight. This group was divided into three parts ranging from best to poor, and weights were given each item. When these weights were taken into consideration in the hiring of 188 men during the first six months of 1925, it was discovered that 57 men, or approximately 30%, would have been eliminated, over half of whom proved later to be failures.

An even more elaborate study of the important items in the application blank was made by R. S. Uhrbrock and M. W. Richardson in the interest of selecting supervisors for the Procter and Gamble Company.[25] An analysis was made of 15 items in the personal-history record, correlating with superiors' estimates of supervisor's ability in order to discover those items which conditioned success. Of the 15 items, only the following four seemed to be significant: amount of schooling, ability to read blue-prints, age, and military service and rank obtained. The method used by Uhrbrock and Richardson will be discussed in detail by the writer later since it was used in analyzing some of the data in this study.

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[25] R. S. Uhrbrock and M. W. Richardson, "Item Analysis, the Basis for Constructing a Test for Forecasting Supervisory Ability," Personnel Jour., Vol. 12, 1933, pp. 141-154.

# CHAPTER III

## SOURCE AND METHOD OF COLLECTION OF DATA

From company records on file for two hundred female cafeteria counter workers chosen at random from employees of two large and established firms in Chicago, Illinois, application blanks of the type shown in Figure 1 were completed. This application blank, with the exception of questions concerning relatives employed at the same concern, membership in fraternal organizations, and insurance, was developed after correspondence with 31 representative cafeteria supervisors (Table I) in charge of several hundred units. The application blank set up by the writer was thus modified to represent a composite of these supervisors' views as to what is usually, and what should be, included in the form.

The first concern, hereinafter referred to as Company A, contributed 59 cases; the remaining 141 cases were obtained from the second concern, Company B. These same employees were then rated independently by supervisors using the rating form reproduced in Figure 2. In Company A, two persons were concerned with the rating; the organization of Company B was such that it was necessary to use a total of forty-two raters, but only two ratings per employee.

The establishments represented in Table I have been grouped into eight different types with the manufacturing companies having the largest representation. The patrons catered to are the employees of these establishments with the exception of the schools in which students predominate.

Figure 1

Application Form Used in Study of Cafeteria Workers

Name or number:_____ Sex:_____ Score:_____
Date employed:_____ Type of work doing:_____

Date of birth:_____Where?_____ U.S. Citizen?_____
Height:_____Weight:_____ Right or left handed:_____
Any physical defects? What?_____ Wear glasses on job?_____

Religious preference:_____ Nationality:_____

Married_____ Single_____ Widowed_____ Divorced_____ Separated_____
Total number to support including yourself:_____ Ages of children_____

Education:__yrs. Grammar School____Yrs. H.S. ____yrs. College___yrs. Trade School

Previous experience?_____Yes _____No Name the last two experiences.

| Where? | Did What? | How long there? | Why did you leave? |
|---|---|---|---|
| | | | |
| | | | |

If you have had no previous experience, name two references:
1._____ 2._____

How was the applicant obtained? Agency_____, Another employee_____, Friend_____,
Own accord_____, Advertisement_____, Other_____ Any relatives working here?____

Do you belong to any clubs or fraternal organizations?_____How many?_____
Do you carry any insurance?_____Have you worked for this company before?_____

TABLE I

A DISTRIBUTION BY TYPE OF THE ESTABLISHMENTS WHOSE SUPERVISORS ASSISTED IN FORMULATION OF APPLICATION BLANK

| Type of Establishment | Number of Companies |
|---|---|
| Bank, Trust Company..... | 4 |
| Mail Order Companies..... | 2 |
| Printing..... | 3 |
| Light Construction. Industries, and Utilities..... | 3 |
| Manufacturing Concerns..... | 6 |
| Meat Processing and Food Production Industries..... | 8 |
| Chemical Laboratories..... | 3 |
| School..... | 2 |
| Total..... | 31 |

Figure 2

Rating Form Used in Study of Cafeteria Workers

Name of worker_____ Date_____

Title of her work_____ Rated by_____

INSTRUCTIONS TO READER: Please rate this individual on the actual work she has been doing. Before attempting to judge this worker it is necessary to have clearly in mind the exact qualities on which she is being rated. For this information please read the definitions very carefully. Please check (X) in the parentheses directly above the phrase which best describes the worker's standing on the quality.

1. ALERTNESS: Is this individual quick and active and at all times attentive and ready to take care of customers?

| ( 3 ) | ( 1 ) | ( 4 ) | ( 5 ) | ( 2 ) |
|---|---|---|---|---|
| Serves customer within reasonable time. | So attentive that customer's wants are anticipated. | Seldom ready to serve customers. | Tends to allow other workers to serve the customer first. | Serves customer quickly. |

2. APPEARANCE: What is the impression created on customers by this person's appearance?

| ( 1 ) | ( 4 ) | ( 5 ) | ( 2 ) | ( 3 ) |
|---|---|---|---|---|
| Appearance is a definite asset. | Careless about appearance. | Appearance a handicap. | Gives good impression. | Fair appearance. |

3. ADJUSTMENT TO CUSTOMERS: Does this worker adapt readily to different types of customers and does she try to please the hard-to-please customers?

| ( 3 ) | ( 2 ) | ( 5 ) | ( 1 ) | ( 4 ) |
|---|---|---|---|---|
| Usually adjusts well to customers. | Good, social adjustment. Tries to please customers. | Makes sarcastic remarks to difficult customers. | Successfully handles customers--even the hard-to-please. | Not tactful. Talks too much with customers. |

Figure (cont'd.)

4. WILLINGNESS TO WORK: Does this person show willingness to do as much as or more than her share of the work?

| (1) | (4) | (3) | (2) | (5) |
|---|---|---|---|---|
| Manifests eagerness to work by consistent, hard work. | Sluggish and slow to serve many customers. | Does as much work as the average worker. | Serves customers promptly. | Only wants to get by. Stands around and lets others work. |

5. MANNER: Is this person courteous and does she have a pleasant disposition?

| (3) | (5) | (2) | (4) | (1) |
|---|---|---|---|---|
| Civil and polite. Is respectful. Acts in usual conventional manner. | Grouchy, overbearing manner. Unpleasant. Does not smile or is rude. | Is considerate and pleasant to customers. | Is impolite to the difficult customer. Irritates some customers. | Forgets self and thinks only of customer's pleasure. |

6. SPEED OF MOVEMENT: Are this person's movements characterized by speed and rapidity?

| (3) | (5) | (1) | (2) | (4) |
|---|---|---|---|---|
| Speed adequate for normal work conditions. | Unsatisfactory. Very slow worker. | Extremely rapid worker. Can handle rush periods well. | Rapid worker but cannot keep up in rush periods. | Acceptable but works slowly. |

7. DEFTNESS OF MOVEMENT: Is this person so careful and adroit that she breaks few dishes and has few accidents?

| (5) | (1) | (2) | (4) | (3) |
|---|---|---|---|---|
| Breakage and accidents costly to organization. | Very careful worker. Never breaks dishes. | Movements careful and precise. Breakage negligible. | Must be constantly reminded to use more care. | Satisfactory but needs to improve. |

Figure (Cont'd.)

8. PHYSICAL CONDITION: Does this person show by her regular work that she is strong, not easily fatigued, and rarely ill?

| (1) | (4) | (2) | (5) | (3) |
|---|---|---|---|---|
| Strong, rarely ill. No evidence of fatigue even after extreme heavy day. | Can do only the lightest work. Cannot stand on feet for long periods. | Able to work for long periods. Output not affected by normal working conditions. | Loses much work because of illness. Easily fatigued. | Can take care of her share of the load. |

9. POISE: Is this person at ease and not easily flustered when serving customers?

| (3) | (4) | (5) | (1) | (2) |
|---|---|---|---|---|
| Generally well poised. | Nervous or confused when serving difficult customers. | Prone to "blow up" when dealing with irritable customers. | Very successful in serving even most difficult customers. Always sure and confident. | At ease when serving the majority of customers. |

10. CLEANLINESS AND NEATNESS IN WORK: Does this person keep her counter, table, dishes, and equipment clean and neat?

| (2) | (1) | (5) | (4) | (3) |
|---|---|---|---|---|
| Orderliness in her work is satisfactory. | Counter always neat and clean with dishes appropriately arranged and served. | Counter dirty, leaves food on sides and outsides of dishes. Poor display of dishes. | Must be told often about her lack of neatness. | Lack of cleanliness seldom need be criticised by supervisor. |

11. ABILITY TO SUGGEST ITEMS TO CUSTOMERS: Does this person make tactful and appropriate suggestions in aiding customers to choose dishes?

| (1) | (4) | (3) | (2) | (5) |
|---|---|---|---|---|
| Makes skillful, effective use of suggestions. | Not effective in making suggestions. | Fairly satisfactory in aiding customers in their choice. | Knows when and how to make suggestions. | Tactless use of suggestions. Irritates customers. |

Figure (Cont'd.)

12. PRACTICE OF ECONOMY IN HANDLING FOODS: Does this individual use economy in handling foods and equipment so that there is no unnecessary waste?

| (1) | (4) | (2) | (5) | (3) |
|---|---|---|---|---|
| Very careful. Avoids waste. Portions ingredients and food correctly. | Sometimes is careless in portioning materials. | Uses good judgment in portioning food. | Very wasteful. Carelessness causes much expense. | Little unnecessary waste of materials. |

13. OVER-ALL RATING: Please rate this person on her value to the organization by placing her in one of the five groups shown below.

| (5) | (4) | (3) | (2) | (1) |
|---|---|---|---|---|
| Little value to organization. Belongs in lowest 1/5 of group. | Of more value than lowest 1/5 but not as good as middle 1/5. | Value to organization same as middle 1/5 of co-workers. | Of less value than the highest 1/5 but better than the middle group. | Most valuable to organization. Belongs in highest 1/5 of group. |

The form represented in Figure 2 was developed by C. L. Shartle, Chief, Worker-Analysis Section, United States Employment Service, Washington, D. C.[1] In correspondence dated June 28 and July 18, 1940, and February 6, 1941, permission to use the form was granted, and the gradation from best to poorest, represented by numerical values, for the qualitative answers possible to each question was agreed upon. The order of the grades of quality does not appear in constant sequence for each item, thus avoiding a possible tendency on the part of the raters to be partial toward a certain position on the sheet.

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[1] Stead, Shartle, and Associates, Occupational Counseling Techniques, American Book Co., 1940.

## CHAPTER IV

## PRESENTATION AND ANALYSIS OF DATA

A study of the distribution of the two hundred replies to each of the questions included in the application blank, as summarized in Table II and Table III, reveals their variable nature and dominant tendencies.

### TABLE II

### SUMMARY DATA REGARDING ITEMS ON THE TWO HUNDRED APPLICATION FORMS

**A. Qualitative Factors**

| Item | | Numbers | | |
|---|---|---|---|---|
| Birthplace | U.S. | 189 | Elsewhere | 11 |
| Citizen of the United States | Yes | 190 | No | 9* |
| Nationality | American | 69 | Non-American | 131 |
| Conjugal Status | Married | 112 | Single | 33 |
| | Widowed | 36 | Divorced | 10 |
| | Separated | 9 | | |
| Previous Experience | | | | |
| a. With this company | Yes | 22 | No | 178 |
| b. Elsewhere | Yes | 125 | No | 75 |
| How Position was Obtained | Agency | 11 | Another Employee | 72 |
| | Friend | 63 | Own Accord | 47 |
| | Advertisement | 7 | Others | -- |
| Relatives Working Here | Yes | 58 | No | 142 |
| Religious Preference | Catholic | 84 | Protestant | 65 |
| | None | 51 | | |
| Right and Left Handed | Right | 188 | Left | 12 |
| Wears Glasses | Yes | 38 | No | 162 |
| Insurance | Yes | 67 | No | 133 |

*One has first papers only.

The summary of qualitative data regarding the 200 application forms in Table II has been sorted from the qualitative items. It is interesting to note the large number of non-Americans listed. This may be explained by the fact that the figure 131 includes foreign descent as well as those actually born outside of the United States. As a matter of fact only 11 employees were born in a foreign country. It is also interesting to observe that the subjects of the sample are largely mature, experienced workers of American origin without particularly striking educational qualifications.

TABLE III

SUMMARY DATA REGARDING ITEMS ON THE TWO HUNDRED APPLICATION FORMS

B. Quantitative Factors

| Factors | Arithmetic Mean | Standard Deviation About Mean |
|---|---|---|
| Age | 39.75 | 9.73 |
| Weight | 145.91 | 24.07 |
| Height | 63.58" | 2.35 |
| No. to support (including self) | 1.205 | .68 |
| No. of children | .8 | 7.30 |
| No. of years education | 9.304 | 2.34 |
| No. of years experience | | |
| a. With this company | 8.225 | 6.50 |
| b. Elsewhere | 2.355 | 3.69 |

In reference to the qualitative data given in Table III, the averages for age, weight, height, etc. are given. It is interesting to note that the average age for counter workers is 39.75 years. This figure is rather high when compared to most commercial cafeterias. It is also interesting

to observe that the average counter worker has had a little over nine years of education.

In analyzing the qualitative factors in the personal history blank further, the employees were grouped in Table IV with respect to nationality. Due to similarity in customs and languages, some nationalities such as English, Scotch, and Irish were grouped together under the one heading of British Isles. The same method was followed for the others.

TABLE IV

DISTRIBUTION OF EMPLOYEES BY NATIONALITY

| Nationality* | Company A | | Company B | | Total | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| American | 15 | 25.4 | 54 | 38.3 | 69 | 34.5 |
| German, Dutch, and Austrian | 11 | 18.6 | 19 | 13.5 | 30 | 15.0 |
| British Isles | 10 | 16.9 | 25 | 17.7 | 35 | 17.5 |
| Scandinavian Countries | 1 | 1.7 | 9 | 6.4 | 10 | 5.0 |
| Balkan Countries and Bohemian and Polish | 10 | 16.9 | 18 | 12.8 | 28 | 14.0 |
| Combination of any two nationalities | 7 | 11.9 | 8 | 5.7 | 15 | 7.5 |
| Italian | 3 | 5.1 | 7 | 5.0 | 10 | 5.0 |
| French | 2 | 3.4 | 1 | 0.7 | 3 | 1.5 |
| Total | 59 | 100 | 141 | 100 | 200 | 100 |

*This does not necessarily mean birth in the country indicated.

With respect to the reasons for leaving their previous positions, the writer grouped the data in Table V under three headings relating to the employer, employee, and the job itself. It will be observed that of the 59 cases in Company A, a total of 58 reasons were listed for leaving the previous job. Because of the fact that 19 of the present employees came

with no previous experience, it is concluded that some of the others may have had two or more previous jobs.

TABLE V

REASONS FOR LEAVING PREVIOUS POSITIONS FOR COMPANY A

| Factor | Number Reporting |
|---|---|
| **Conditions relating to employer** | |
| 1. Bankruptcy | 6 |
| 2. Out of business | 2 |
| 3. Consolidated | 1 |
| 4. Project closed | 2 |
| **Conditions relating to employee** | |
| 1. Illness of self | 1 |
| 2. Illness in family | 1 |
| 3. Moved from city | 2 |
| 4. Marriage | 6 |
| 5. Attend school | 2 |
| 6. Keep house | 3 |
| 7. Death of mother | 2 |
| **Conditions relating to job itself** | |
| 1. Too long hours | 2 |
| 2. Insufficient wages | 1 |
| 3. Night work | 1 |
| 4. Better job offered | 9 |
| 5. Slack season | 11 |
| 6. Temporary | 5 |
| 7. Part time | 1 |

With respect to the rating, it is evident that the analysis involved the evaluation of each employee as regards the thirteen factors passed upon by the judges, a summation of scores on individual factors to arrive at a total score and a complete rating, and a check on the reliability of the ratings thus obtained by means of a comparison of the ratings given each of the subjects by the two independent scorers (supervisors).[1] To facilitate the compilation of the necessarily qualitative ratings, numeri-

cal values of one through five were assigned to the possible phrasal answers to each question in such a manner that the quality rating varied inversely with the numerical value.[2] Thus the phrase which indicated the poorest quality received the highest score, the latter becoming progressively lower with improvement in quality as denoted by the terminology of the phrasing used. In other words, the highest calibre employee carried the lowest total score.[3]

As set forth above, the usual policy of obtaining two independent ratings for each employee and accepting the arithmetic mean of the two as the value most closely approximating a true rating was followed. In Company A this procedure altered the final rating but little, since the scores submitted by the first supervisor showed a highly significant correlation ($+.966 \pm .009$) with those of the second supervisor. In the case of Company B the coefficient of correlation between supervisors' scores carried a positive value of .421, with a standard error of .069, again a highly significant figure. It would seem, therefore, that a reasonable degree of reliability may be attached to the rating process.

---

[1] Assuming little noticeable change in individual worker efficiency through time, the potential bias in rating the work performances of the subjects (as the result of the operation of the personal equation of the rater) would tend to be minimized if each employee were given at least two ratings by each of the two scorers at two widely separated points in time. Since this was not possible in this study, the rating process was carried on over a period of months on the assumption that compensating error would function to some extent toward the removal of any persistent bias in subject rating for the study as a whole.

[2] This procedure for the quantification of the rating form data is substantially in accord with that used in studies of a similar nature, among which reference is made to the investigations of the Worker-Analysis Section, Unived States Employment Service, Washington, D. C.

[3] For detail as to scores assigned to the phrases under each question, see the values as filled in on the sample rating sheet, Figure 2, p. 14.

The validity of this view is not lessened by the results of additional checks, since the coefficients of correlation between the scores of item 13 (i.e., the overall rating) and total score computed by adding individual item scores with and without the 13th item, indicate highly significant relationships--as do those between total scores when item 13 is in turn included and excluded.

TABLE VI

CHECKS ON THE RELIABILITY OF RATINGS FOR COMPANY A AND COMPANY B

| Factors | Correlation Coefficient | | Significance | |
|---|---|---|---|---|
| | Company A | Company B | Company A | Company B |
| Total Score (inclusive of item 13) and item 13 score..... | +.89 | +.73 | Highly Significant | Highly Significant |
| Total Score (exclusive of item 13) and item 13 score..... | +.85 | +.65 | Highly Significant | Highly Significant |
| Total Score (inclusive of item 13) and Total Score (exclusive of item 13)..... | +.99 | +.99 | Highly Significant | Highly Significant |

The high correlation between the overall rating and the total score (1-13) suggests that the use of item 13 alone as a means of rating employees might not reduce accuracy or introduce material error, although much less detailed information would be available with respect to specific employee attributes.

The rating scores, computed by taking the simple arithmetic mean or

average of the ratings submitted by each supervisor, ranged from 15.5 to 51.5 with a mean value of 29.7 and a standard deviation of 6.37[4] for the 200 cases (Table VII).

TABLE VII

FREQUENCY DISTRIBUTION OF TOTAL SCORES

| Class interval | Frequency | | | | | |
|---|---|---|---|---|---|---|
| | Company A | | Company B | | Total | |
| | Number | Percent | Number | Percent | Number | Percent |
| 15 - 19.9..... | 5 | 8.5 | 9 | 6.4 | 14 | 14.9 |
| 20 - 24.9..... | 6 | 10.2 | 20 | 14.2 | 26 | 24.4 |
| 25 - 29.9..... | 13 | 22.1 | 60 | 42.6 | 73 | 64.7 |
| 30 - 34.9..... | 13 | 22.1 | 35 | 24.8 | 48 | 46.9 |
| 35 - 39.9..... | 11 | 18.7 | 15 | 10.6 | 26 | 29.3 |
| 40 - 44.9..... | 8 | 13.6 | 2 | 1.4 | 10 | 15.0 |
| 45 - 49.9..... | 2 | 3.1 | - | --- | 2 | 3.1 |
| 50 - 54.9..... | 1 | 1.7 | - | --- | 1 | 1.7 |
| Number..... | 59 | 100 | 141 | 100 | 200 | 100 |
| Mean..... | 32.195 | | 28.620 | | 29.675 | |
| *Standard Deviation..... | 8.079 | | 5.150 | | 6.371 | |

*Refined by Sheppard's Correction[5]

The sort by concerns revealed a skewness and inter-company difference of no sizable proportion, although a leptokurtic tendency and a slight skewness to the right was evident in the case of total and Company B data. (See Figure 3).

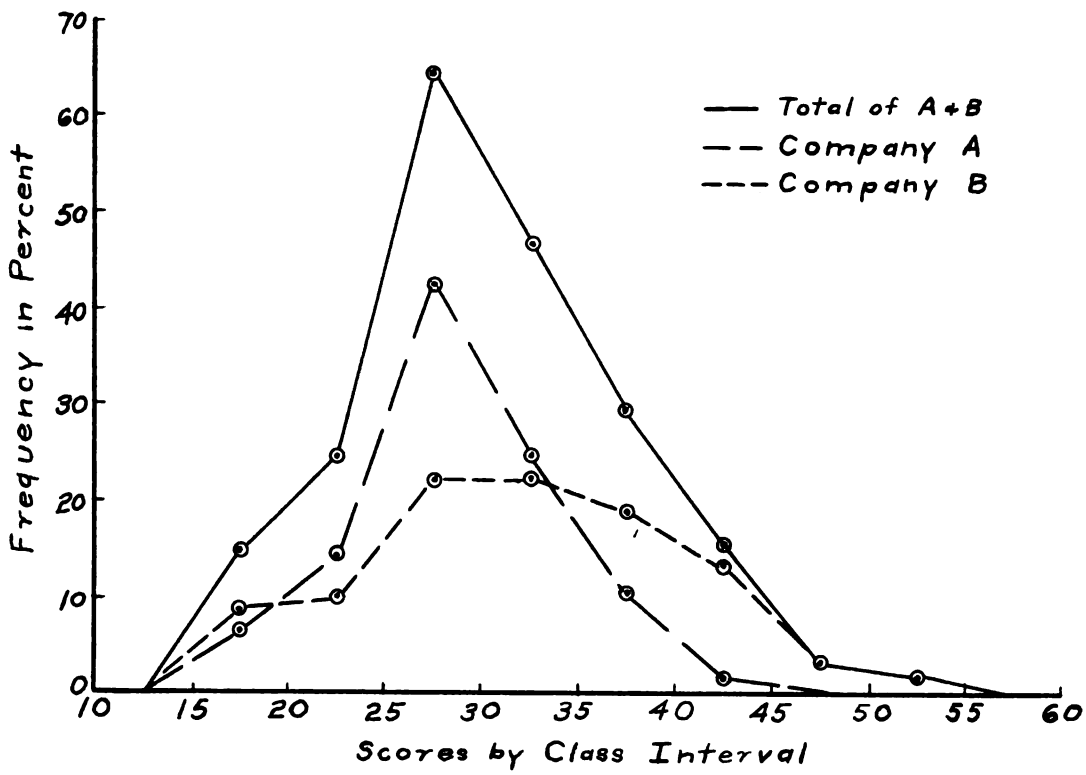
Individual scores by items varied considerably. As would be expected,

[4] Sheppard's Correction.

[5] W. D. Baten, Elementary Mathematical Statistics, McGraw-Hill Co. 1938.

Figure III

Frequency Polygon: Percentage Distribution of Total Scores by Companies and Combined



perfect scores occurred more frequently than did the poorest values. A study of the distribution of scores by supervisors, as given in Table VIII, showed the greatest variation in the 7th item in the case of each company, and no inter-company variation with respect to item 2.

TABLE VIII

DISTRIBUTION OF EMPLOYEE SCORES BY RATING SHEET ITEMS, SUPERVISORS, AND COMPANIES

Company A

| No. of item on rating sheet | Supervisor I | | | | | Supervisor II | | | | | Average Score per Question | | Deviation of second supervisors scores from first |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Employees Getting a Score of | | | | | Number of Employees Getting a Score of | | | | | Supervisor | | |
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | I | II | |
| 1 | 10 | 22 | 24 | — | 3 | 11 | 21 | 24 | 1 | 2 | 2.39 | 2.36 | -.03 |
| 2 | 9 | 16 | 24 | 3 | 7 | 9 | 16 | 24 | 3 | 7 | 2.71 | 2.71 | .00 |
| 3 | 17 | 14 | 16 | 11 | 1 | 17 | 15 | 18 | 9 | — | 2.41 | 2.32 | -.09 |
| 4 | 25 | 12 | 16 | 1 | 5 | 24 | 13 | 15 | 2 | 5 | 2.14 | 2.17 | .03 |
| 5 | 15 | 26 | 16 | 2 | — | 13 | 30 | 15 | 1 | — | 2.08 | 2.07 | -.01 |
| 6 | 25 | 1 | 20 | 12 | 1 | 26 | 1 | 19 | 12 | 1 | 2.38 | 2.34 | -.04 |
| 7 | 4 | 21 | 17 | 11 | 6 | 5 | 26 | 13 | 12 | 3 | 2.92 | 2.70 | -.22 |
| 8 | 16 | 12 | 29 | — | 2 | 17 | 12 | 28 | 1 | 1 | 2.32 | 2.27 | -.05 |
| 9 | 12 | 13 | 14 | 17 | 3 | 13 | 13 | 15 | 16 | 2 | 2.76 | 2.68 | -.08 |
| 10 | 34 | 20 | 2 | 2 | 1 | 35 | 17 | 5 | 2 | — | 1.58 | 1.56 | -.02 |
| 11 | 4 | 10 | 22 | 23 | — | 3 | 10 | 23 | 23 | — | 3.08 | 3.12 | .04 |
| 12 | 9 | 10 | 19 | 20 | 1 | 9 | 15 | 15 | 19 | 1 | 2.22 | 2.80 | .58 |
| 13 | 13 | 13 | 19 | 11 | 3 | 12 | 15 | 18 | 11 | 3 | 2.63 | 2.63 | .00 |
| | | | | | | | | | | | | | Av.*.09 |

Company B

| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | 42 | 72 | 1 | 2 | 28 | 38 | 72 | — | 3 | 2.4 | 2.38 | -.02 |
| 2 | 16 | 83 | 40 | 2 | — | 15 | 84 | 41 | 1 | — | 2.2 | 2.20 | .00 |
| 3 | 36 | 50 | 51 | 3 | 1 | 33 | 44 | 57 | 6 | 1 | 2.17 | 2.28 | .11 |
| 4 | 43 | 43 | 51 | 3 | 1 | 43 | 37 | 60 | — | 1 | 2.12 | 2.14 | .02 |
| 5 | 19 | 89 | 31 | 1 | 1 | 18 | 85 | 36 | 2 | — | 2.12 | 2.16 | .04 |
| 6 | 38 | 29 | 55 | 19 | — | 35 | 19 | 69 | 18 | — | 2.39 | 2.50 | .11 |
| 7 | 67 | 47 | 19 | 4 | 4 | 80 | 38 | 17 | 7 | — | 1.80 | 1.67 | -.13 |
| 8 | 26 | 22 | 80 | 6 | 7 | 30 | 10 | 85 | 8 | 8 | 2.62 | 2.68 | .06 |
| 9 | 27 | 26 | 71 | 13 | 4 | 22 | 28 | 71 | 18 | 2 | 2.58 | 2.65 | .07 |
| 10 | 39 | 82 | 16 | 4 | — | 37 | 84 | 13 | 6 | 1 | 1.90 | 1.93 | .03 |
| 11 | 38 | 58 | 32 | 11 | 2 | 45 | 48 | 39 | 9 | — | 2.16 | 2.08 | -.08 |
| 12 | 39 | 71 | 22 | 9 | — | 45 | 72 | 14 | 10 | — | 2.01 | 1.92 | -.09 |
| 13 | 46 | 53 | 35 | 5 | 1 | 51 | 48 | 39 | 3 | — | 2.00 | 1.96 | -.04 |
| | | | | | | | | | | | | | Av.*.06 |

*Disregarding sign.

Average scores by questions revealed differences between companies of no persistent pattern or serious magnitude, and of a type not readily explainable as shown in Table IX.

TABLE IX

AVERAGE SCORES BY QUESTIONS AND BY COMPANY

| | Number of Question | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Average Score: | | | | | | | | | | | | | |
| Company A | 2.4 | 2.7 | 2.4 | 2.2 | 2.1 | 2.4 | 2.8 | 2.3 | 2.7 | 1.6 | 3.1 | 2.8 | 2.6 |
| Company B | 2.4 | 2.2 | 2.2 | 2.1 | 2.1 | 2.4 | 1.7 | 2.6 | 2.6 | 1.8 | 2.1 | 2.0 | 2.0 |
| Combined | 2.4 | 2.4 | 2.3 | 2.1 | 2.1 | 2.2 | 2.2 | 2.4 | 2.6 | 2.7 | 2.6 | 2.4 | 2.3 |

The histogram as illustrated in Figure 4 brings out the average scores per question (Table IX) with respect to both Company A and Company B in such a manner as to point out the similarities and differences readily. The marked difference on question number seven concerning dish breakage may be explained by calling attention to the fact that the patrons in Company A have a common lunch hour during which time hundreds rush into the cafeteria at one time for service. The counter workers, in their rush to wait on the customers rapidly, might be more careless in the handling of dishes than if the feeding were staggered as is the case in Company B.

An inquiry into the relationships in Company A data between several combinations of the factors on the rating sheet, as summarized in Table X, point to significance in a sizable number of groupings. It is both interesting and difficult to explain that neither appearance nor manner

Figure IV

Comparative Average Scores of Two Industrial Cafeterias on Employees' Rating Scale

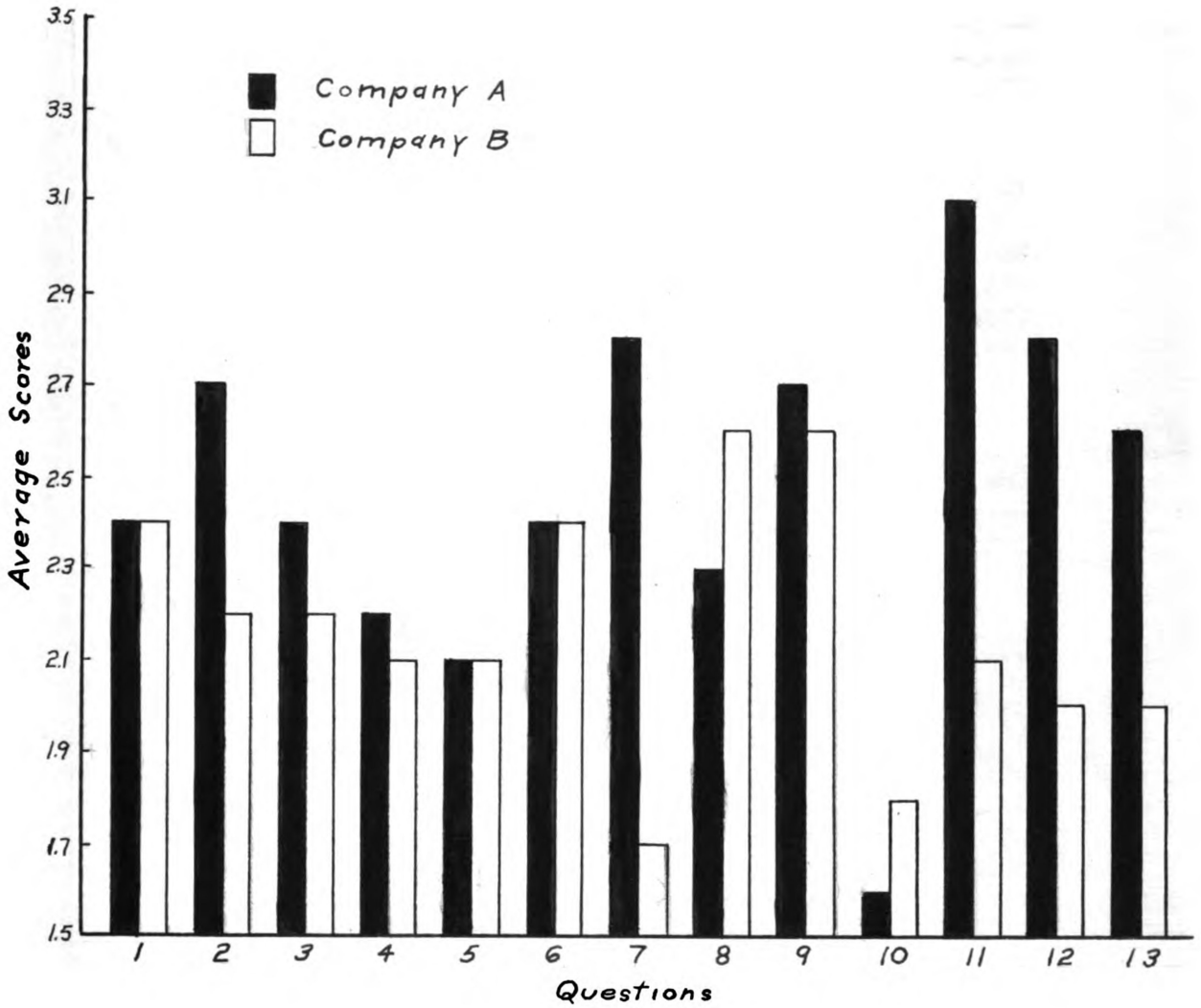


TABLE X

RELATIONSHIP BETWEEN SCORES FOR SELECTED ITEMS ON THE RATING SHEET (COMPANY A DATA)*

| Factors | Correlation Coefficient Values** |
|---|---|
| a. Appearance and: | |
| 1. Poise | .158 |
| 2. Adjustment to customers | -.024 |
| 3. Manner | -.144 |
| 4. Cleanliness and neatness in work | -.031 |
| 5. Ability to suggest items to customers | .277 |
| b. Alertness and: | |
| 1. Speed of movement | .491 |
| 2. Deftness of movement | .406 |
| 3. Ability to suggest to customers | .628 |
| 4. Physical Condition | .242 |
| 5. Ability to suggest items to customers | .627 |
| 6. Adjustment to customers | .441 |
| c. Manner and: | |
| 1. Willingness to work | .423 |
| 2. Adjustment to customers | .407 |
| 3. Poise | .384 |
| 4. Cleanliness and neatness in work | .061 |
| d. Over all and: | |
| 1. Deftness of movement | .503 |
| 2. Physical Condition | .321 |
| 3. Poise | .551 |
| 4. Cleanliness and neatness in work | .358 |
| 5. Ability to suggest items | .635 |
| 6. Appearance | .120 |
| 7. Adjustment to customers | .512 |
| 8. Willingness to work | .594 |
| 9. Manner | .237 |
| 10. Speed of movement | .723 |
| 11. Economy in handling food | .550 |
| 12. Alertness | .697 |

*The value of r at the 5% point to be significant is .25 and at 1% point is 32 for 59 cases.

**These correlation coefficients were calculated under the direction of Dr. W. D. Baten by one of his assistants.

correlate significantly with cleanliness and neatness in work. While on the other hand, the ability to suggest items to customers was a function of alertness. These indications might lead one to conclude that valid predictions as to a certain phase of an employee's job performance may be made from that employee's rating on an apparently related item; for instance, that an alert counter worker tends to adjust most readily and satisfactorily to variations in consumer attitudes. Or it might be held that to the extent that significant inter-item relationships exist, then to the same degree a modification of the rating sheet is in order.

Turning to analyses which are more basic to this study, it is exceedingly striking that very few of the items on the application blank bore even a remote relation to total score. As indicated in Table XI,

TABLE XI

CORRELATION COEFFICIENTS BETWEEN TOTAL SCORES ON RATING SHEET AND QUANTITATIVE ITEMS ON APPLICATION BLANK

| Total score against | Correlation coefficients* | | |
|---|---|---|---|
| | Company A* | Company B | Total (Company A + Company B) |
| Height..... | -0.063 | 0.084 | 0.007 |
| Weight..... | 0.031 | -0.080 | -0.039 |
| Age..... | -0.182 | -0.001 | -0.065 |
| Number of persons to support including self and children..... | 0.019 | 0.014 | 0.013 |
| Number of years of education..... | 0.011 | 0.021 | 0.013 |
| Number of years experience elsewhere..... | 0.038 | 0.047 | 0.004 |
| Number of years experience at present company..... | -0.098 | 0.046 | -0.011 |

*Value of r required for significance is .273 at 5% point and .354 at the 1% point for 59 cases.

none of the factors on the application blank lending themselves readily to numerical analysis correlated significantly with total score on the rating sheet.

An alternative and less refined method of analysis, viz., the testing for significant differences between group percentages derived from subsorts, was used for several selected determinations.[6] This procedure, the summary data for which are found in Tables XII, XIII, XIV, and XV also failed to reveal significant correlations between the variables under consideration. However, a significant difference between factor groupings sorted by scores was indicated in the case of no children and two children, but not in the case of one and three. The difficulty of accounting for this apparent inconsistency is an great as is the ease with which the fact that no relationship was revealed between marital status and total score is explainable.

TABLE XII

ANALYSIS OF RELATIONSHIPS BETWEEN MARITAL STATUS ON THE APPLICATION BLANK AND THE TOTAL SCORE*

| | Numbers | | | | | Percentages | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Married | Single | Widowed | Divorced | Separated | Married | Single | Widowed | Divorced | Separated | 100% |
| High[1] | 34 | 8 | 10 | 5 | 3 | 57 | 13 | 17 | 8 | 5 | 100 |
| Medium[2] | 40 | 14 | 19 | 3 | 4 | 50 | 17 | 24 | 4 | 5 | 100 |
| Low[3] | 38 | 11 | 7 | 2 | 2 | 64 | 18 | 12 | 3 | 3 | 100 |
| t = ** | | | | | | .784 | .0044 | .8 | .044 | .56 | |

[6] R. S. Uhrbroch and M. W. Richardson report this technique in "Item Analysis", Personnel Journal, Vol. 12, pp. 141-154.

TABLE XIII

ANALYSIS OF RELATIONSHIPS BETWEEN NUMBER OF CHILDREN ON THE APPLICATION BLANK AND THE TOTAL SCORE*

| | Numbers | | | | Percentages | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 0 | 1 | 2 | 3 | 100% |
| High[1] | 8 | 32 | 18 | 2 | 13 | 54 | 30 | 3 | 100 |
| Medium[2] | 10 | 48 | 17 | 5 | 13 | 61 | 21 | 6 | 100 |
| Low[3] | 2 | 47 | 9 | 2 | 3 | 79 | 15 | 3 | 100 |
| t = | | | | | 2.04 | 2.71 | 1.973 | -- | |

TABLE XIV

ANALYSIS OF RELATIONSHIPS BETWEEN EDUCATION ON THE APPLICATION BLANK AND THE TOTAL SCORE*

| | Numbers | | | Percentages | | | |
|---|---|---|---|---|---|---|---|
| | 8 yrs. or less | 9-12 yrs. | over 12 yrs. | 8 yrs. or less | 9-12 yrs. | over 12 yrs. | 100% |
| High[1] | 24 | 33 | 3 | 40 | 55 | 5 | 100 |
| Medium[2] | 35 | 39 | 6 | 44 | 49 | 7 | 100 |
| Low[3] | 24 | 34 | 2 | 40 | 57 | 3 | 100 |
| t = | | | | 0 | .2 | .036 | |

TABLE XV

ANALYSIS OF RELATIONSHIPS BETWEEN AGE ON THE APPLICATION BLANK AND THE TOTAL SCORE*

| | Numbers | | | Percentages | | | |
|---|---|---|---|---|---|---|---|
| | 20-24 yrs. | 25-39 yrs. | 40 yrs. or over | 20-24 yrs. | 25-39 yrs. | 40 yrs. or over | 100% |
| High[1] | 0 | 29 | 31 | 0 | 48 | 52 | 100 |
| Medium[2] | 2 | 43 | 35 | 2 | 54 | 44 | 100 |
| Low[3] | 6 | 26 | 28 | 10 | 43 | 47 | 100 |
| t = | | | | .039 | .0909 | .182 | |

*The method of determining significant differences between percentages as used herein is outlined in Mills, F. C. Statistical Methods, 1938, pp.483-485.

**Value of t for the 5% point is 1.96, and for 1% point is 2.58.

[1]60 cases (upper 30% of scores); [2]80 cases (middle 30% of scores);

[3]60 cases (lower 30% of scores).

In the processing of the data for the remaining items in the application form with respect to rating sheet values, a summary tabulation was made. A casual glance at this information as presented in Table XVI seemed to indicate that a test for significance between means was only necessary in one case, viz., the item "insurance." The completion of this test allowed this factor to be relegated to the non-significant group composed of all the remaining items classified similarly by previous observation.

Conclusion. With respect to the 200 women cafeteria counter workers studied herein, there is little or no basis for holding that statistically significant relationships of importance exist between the information asked for on the personal history application blank, and the replies thereon, to work performance or success on the job. It may thus be possible to state that, if the efficiency of the application form mechanism as regards the selection of employees is not absolutely without value, it is at least highly unsatisfactory.

TABLE XVI

FACTORS WITH RESPECT TO AVERAGE SCORES
BY COMPANIES

| Factor | No. of Employees | | | Average Score | | |
|---|---|---|---|---|---|---|
| | Company A | Company B | Total | Company A | Company B | Total |
| Birthplace | | | | | | |
| United States..... | 52 | 137 | 189 | 32.2 | 27.0 | 30.9 |
| Elsewhere..... | 7 | 4 | 11 | 33.1 | 26.8 | 29.6 |
| Citizen of U. S. | | | | | | |
| Yes..... | 57 | 133 | 190 | 32.0 | 28.4 | 29.4 |
| No..... | 7 | 2 | 9 | 31.1 | 33.2 | 32.2 |
| Nationality | | | | | | |
| American..... | 15 | 54 | 69 | 33.0 | 27.7 | 28.8 |
| Non-American..... | 44 | 87 | 131 | 32.0 | 28.6 | 29.7 |
| Previous Experience With This Company | | | | | | |
| Yes..... | 59 | 141 | 200 | 0 | 0 | 0 |
| No..... | 0 | 0 | 0 | 0 | 0 | 0 |
| Elsewhere | | | | | | |
| Yes..... | 40 | 85 | 125 | 32.1 | 28.7 | 29.8 |
| No..... | 19 | 56 | 75 | 31.9 | 27.7 | 28.8 |
| How Position Was Obtained | | | | | | |
| Agency..... | 5 | 6 | 11 | 31.1 | 29.8 | 30.4 |
| Friend..... | 24 | 39 | 63 | 32.0 | 28.1 | 29.6 |
| Advertise..... | 1 | 6 | 7 | 19.5 | 29.6 | 28.1 |
| Another Employee..... | 14 | 58 | 72 | 31.5 | 27.4 | 28.2 |
| Own Accord..... | 15 | 32 | 47 | 33.7 | 29.7 | 31.0 |
| Others..... | 0 | 0 | 0 | 0 | 0 | 0 |
| Relatives Working Here | | | | | | |
| Yes..... | 12 | 46 | 58 | 32.8 | 27.4 | 28.5 |
| No..... | 47 | 95 | 142 | 31.8 | 28.8 | 29.8 |
| Religious Preference | | | | | | |
| Catholic..... | 15 | 69 | 84 | 32.4 | 28.2 | 28.8 |
| Protestant..... | 18 | 47 | 65 | 29.8 | 28.2 | 28.6 |
| None..... | 26 | 25 | 51 | 33.4 | 28.9 | 31.2 |
| Insurance | | | | | | |
| Yes*..... | 37 | 30 | 67 | 32.6 | 22.4 | 28.0 |
| No..... | 22 | 111 | 133 | 31.2 | 29.9 | 30.1 |
| Wears Glasses | | | | | | |
| Yes..... | 17 | 21 | 38 | 34.9 | 29.1 | 31.7 |
| No..... | 42 | 120 | 162 | 30.9 | 28.2 | 28.9 |
| Handed | | | | | | |
| Left..... | 1 | 11 | 12 | 28.0 | 30.7 | 30.5 |
| Right..... | 58 | 130 | 188 | 32.1 | 28.1 | 29.4 |

*Average Scores Tested for Significance Between Groups as Indicated by R. V. Fisher, "Statistical Methods For Research Workers."

# CHAPTER V

## SUMMARY

The nature of modern industrial organization renders employee-job relations an issue of prime importance. Much has been done of late in an effort to facilitate the placing of the proper person in the proper position at the proper time. This study represents an inquiry into the efficacy of the commonly used personal history application form as an instrument leading toward this end. Two hundred female cafeteria counter workers of two large industrial firms in Chicago, Illinois, were selected at random, their application form data compiled from company records and correlated against their job performance rating as measured by the averaged scores of two independent supervisor gradings. While some inter-relationships among several of the item scores on the rating sheet were indicated by supplementary analyses, suggesting a possible simplification of the rating process, and while other facts of interest were revealed, the study as a whole failed to disclose statistically significant relationships between the items on the application form and worker accomplishment. The results of the study seem to suggest that the application form as commonly used in the selection of cafeteria workers contributes nothing to the accuracy of the selection process. There may thus exist a justified basis for a practical inference to the effect that, barring the elimination of "deadwood", little economic or social gain derives from the use of the application form as a tool for facilitating the hiring process in the interests of the immediate parties concerned as well as society as a whole.

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