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UNITED STATES DEPARTMENT OF LABOR

FRANCES PERKINS, SECRETARY

WOMEN'S BUREAU

MARY ANDERSON, DIRECTOR

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**CHOOSING WOMEN**  
for  
**WAR-INDUSTRY JOBS**



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CHOOSING WOMEN

**LETTER OF TRANSMITTAL**

UNITED STATES DEPARTMENT OF LABOR,  
WOMEN'S BUREAU,  
*Washington, March 22, 1943.*

MADAM: Effective methods and standards for fitting women into war-industry jobs are a vital part of the war program. Haphazard selection policies result in inefficient employees, excessive absenteeism, and high labor turn-over. As a primary aid to employers newly faced with the problem of choosing a woman-labor force, the Women's Bureau here summarizes basic principles that have proved helpful in securing satisfactory service with women workers.

The research and preparation of this report are the work of Mildred P. Crowder of this Bureau's Research Division.

Respectfully submitted.

MARY ANDERSON, *Director.*

Hon. FRANCES PERKINS,  
*Secretary of Labor.*

## CHOOSING WOMEN FOR WAR-INDUSTRY JOBS

Sizing Up the Job for Women

Selecting the Woman for the Job

The application blank—The interview—

The interviewer—Employment tests

Aids in Selecting Women

Recommendations



The American war program must call more and more women for service on the industrial labor front. The number of women at work increased by nearly 20 percent in the first year of active participation in the war. Further large additions are predicted for 1943. Though many of the women needed in war production have had no factory experience, they are well suited for certain kinds of important work and are eager to give their best service. Such service is possible, however, *only if they are placed in the jobs for which they are best fitted* and are advanced as they become ready for more difficult work. Haphazard hiring policies, like unsatisfactory conditions on the job, result in inefficient employees, excessive absenteeism, and higher labor turn-over. Reports from the field show that some plants have had these difficulties. Putting the right person in the right place at the start is a long step toward maximum output. Sincere interest in the employment of women and belief in their capabilities go far in developing a good program for the use of womanpower.

### SIZING UP THE JOB FOR WOMEN

The first step in a sound placement program for women is selecting, on the basis of job analysis, the jobs suitable for them. The number of jobs that fall into this category far exceeds the number for which women customarily have been hired. Investigators from the Women's Bureau, U. S. Department of Labor, have found during the past year that many employers are

putting women on a variety of jobs formerly never thought of as suitable for them.<sup>1</sup> For example, in one of the major aircraft companies on the west coast women comprised less than 2 percent of the labor force in November 1941, but over 50 percent a year later.

Job analysis reveals not only the skills required but the physical demands of tasks in terms of strength, posture, and exposure to hazards. In the process of such analysis, engineering changes may be indicated that will lessen the physical demands of the job and increase operating efficiency. The following examples indicate how conversion not only increased the operating efficiency of the jobs but made them practicable for women.

Engineers of a middle-western company effected a saving of time and eliminated fatigue for the worker by converting a hand-operated arbor press into an air-operated machine which stakes screws in a 20 mm. shell booster. The staking machine is operated by a young woman who was on a machine for making loose-leaf binders before her employment on war work.

Another company eliminated the necessity for lifting and handling an air-operated wrench by suspending it from a counter-balanced support. A woman has replaced a man on this job. She is able to operate simultaneously two such counter-balanced air-driven wrenches instead of the one operated by her male predecessor.

### **Types of Work Women Do Best.**

Women are particularly good at fine processes requiring painstaking application. They have patience and finger dexterity and soon learn to make careful adjustments at high speed with great accuracy. They are also successful at jobs requiring the operation of large machines when the proper conveyors, automatic chucks or stops, or other mechanical aids are provided.

### **Plant Factors Adapted to Women Workers.**

Sizing up jobs for women also involves the consideration of factors in plant organization, such as degrees and types of responsibilities, attitudes of supervisors and fellow workers toward women, suitable plans for upgrading women workers, and adequate measures for protection of their health and safety.

<sup>1</sup>See for example Women's Bureau bulletins 192-1, Aircraft Assembly; 192-2, Artillery Ammunition; 192-3, Cannon and Small Arms.

## **SELECTING THE WOMAN FOR THE JOB**

Hand in hand with the importance of selecting jobs suitable for women goes the importance of selecting the right woman for the particular job. Matching the woman to the job is the real problem with which industry must concern itself. Effective plans for this go far toward securing maximum production.

Selection procedures necessarily vary from plant to plant, due to variation in types of jobs for which women are selected and physical differences in plant set-ups. In general, desirable steps in any well-rounded selection program include: (1) Making sure the application blanks are adequate; (2) planning for a series of interviews; and (3) wherever possible providing tests specifically tailored to the job. Every plant should have competent persons to conduct these hiring procedures. Good selection standards manned by competent personnel result in better adjusted and more efficient workers.

A large eastern plant engaged in vital war work has had notable success in its recruiting program. This program was initiated by selecting a man with the ideal combination of intimate knowledge both of industrial operations and of selection and testing techniques to head the personnel department. He has a keen interest in the employment of women, and the personnel policies set up under his direction are sound and have been successful in developing efficient and satisfied workers.

### **THE APPLICATION BLANK**

A carefully drawn application blank goes far in simplifying the selection procedure. It should furnish the interviewer, in a minimum of time, with valuable information concerning the applicant. Only information determined by job analysis to be relevant to the individual's suitability for the job should be asked for. The answers should be checked for accuracy.

Items most frequently included on the application blank are concerned with personal information such as name, address, telephone number; physical characteristics and disabilities; educational background; work history; and references. It may be desirable to add to or to subtract from this list of items, depending on the job or jobs for which the form will be used.

Such matters as religious affiliation should not be included; they tend to create ill will.

A good many plants have found it desirable, before the preliminary interview, to use a short application form when the applicant enters the personnel office. There is then no need for the applicant to fill out a more detailed form if the preliminary interview eliminates her as a possible employee.

### THE INTERVIEW

The interview probably is the most important of the procedures employed in personnel selection. According to Bingham and Moore,<sup>2</sup> recognized personnel authorities, it serves three basic functions: Securing information, giving information, and establishing friendly relations. These functions usually are performed in not one but a series of interviews, of which the most important general types are the preliminary, the selection, and the departmental. It cannot be too frequently emphasized that the best results can be secured only when the interviewing at every stage is done by personnel that can give the woman interviewed confidence that they believe in women's capabilities.

#### **The Preliminary Interview.**

The primary purpose of the preliminary interview is to weed out in the first stages of the selection process those individuals who do not possess the minimum requirements for the available jobs. This usually can be accomplished in the course of only a few minutes if the applicant has filled out a short application form. At this time the individual who is retained as a prospective employee is given the forms that must be filled out. Appointments are made for further interviews with the proper interviewing units and for taking tests if any are to be given at this point in the procedure. It is well if this first interviewing can be done by a personable and tactful woman who has had actual experience on the job.

#### **The Selection Interview.**

The most important interview in the series is the selection interview. It is at this time that the basic evaluation of the applicant is made, and that the individual is matched tentatively with the job.

<sup>2</sup>How to Interview, Harper, 1941.

The exact form of the interview varies from company to company, due to differences in plant set-up and types of jobs to be filled. In every instance, however, the interviewer should be familiar with all available pertinent information concerning the applicant, including scores if any tests have been given. If tests have not been given, the selection interviewer may find it desirable to have them administered before making a final decision. Information concerning working conditions and plant facilities should be given the applicant at this time, which requires that the interviewer be familiar with such information.

### **The Departmental Interview.**

The importance attached to departmental interviews varies greatly from plant to plant; in many they are eliminated altogether and in others they are merely a perfunctory endorsement of the personnel department's selection for the job. On the other hand, in a large number of cases the department head makes a final selection from a group of applicants chosen by the personnel department as qualified for the job.

It is not practicable to lay down specific rules as to the merits of the departmental interview, but usually it is important that the department head who has the responsibility for this employee's work be given at least the opportunity to accept or reject the choice made by the personnel department. In a large electrical company that pays particular attention to selection, the personnel office insists that final choice of an employee be made by the foreman of the department where she will work.

### **THE INTERVIEWER**

The success of the interview as a part of any selection program depends on the general competence of the interviewers. Recognition of this fact makes it imperative that the utmost consideration be given to the proper selection of the persons doing this work. Experience has shown that individuals most likely to succeed as interviewers possess among other characteristics a desirable combination of the following personality traits and vocational background:

Pleasing personality and cordial manner.

General knowledge of plant procedure.

- Detailed familiarity with the job analysis of the jobs to be filled.
- Objectivity: Ability to avoid allowing personal bias or prejudice to enter into decisions.
- Ability to evaluate tests and interpret test scores.
- Ability to adapt to changing conditions.
- Ability to inspire confidence in the job seeker.

#### **Some "Do's" and "Don'ts" for the Interviewer**

- Do** —determine what it is necessary to find out in the interview and pattern the interview accordingly.
- have information from application blank and test scores well in hand *before* interviewing applicant.
- gain confidence of applicant as early in interview as possible.
- be sure that the physical surroundings are private and conducive to putting applicant at ease.
- give applicant an opportunity to talk freely.
- Don't**—be unduly influenced by the physical characteristics of the applicant, unless they are particularly important for the job.
- take for granted that habits in one activity are transferable to another; a neat-looking person may not be a neat worker.
- ask questions that are answered on the application blank or attempt to check their accuracy through the interview.
- give the appearance of rushing through the interview.
- ask leading questions.
- overemphasize the age factor; it is ability on the job that counts.

#### **EMPLOYMENT TESTS**

*Tests must not be thought of as substitutes but only as aids to the procedures in a personnel-selection program.* Tests have much to offer in a recruiting, training, and upgrading program for individual workers. They must be properly tailored to the job, and administered and interpreted by competent personnel. If care is taken on these points, tests should be particularly valuable at the present time as aids in the recruitment of women workers for war production.

Though various types of tests have been used successfully by many industrial plants, they should always be employed with caution, and only under certain specified conditions.

First, all tests should be set up or selected in terms of a specific job. A thorough job analysis and classification should precede any testing program.

Second, a testing program should always be set up and placed



under the direction of someone trained and experienced in industrial testing techniques.

Third, the results should always be interpreted and used by experts only.

If a testing program is set up under these conditions, and if the program receives cooperation from the supervisors and employees, it should be a most effective aid in recruiting, training, and upgrading industrial workers.

Two of the most widely used and generally successful types of tests are the trade and aptitude tests.

### **Aptitude Tests.**

Aptitude tests are employed in an attempt to measure a person's ability to do a specific job. They usually take the form of pencil-and-paper or performance tests. Many have been tailored to test special abilities such as motor control, including steadiness and speed and accuracy of motion; finger dexterity; dual hand coordination; and visual perception. Others have been designed to test general mechanical comprehension. Those which attempt to measure general mechanical ability are somewhat discredited. This is because of the variety of skills needed for the various industrial jobs.

The O'Connor finger-dexterity test is an example of a performance test which has been used extensively in testing for many factory jobs specifically requiring dexterity of the fingers. The equipment consists of a metal plate, into which 100 holes have been drilled, and a collection of small metal pins, 310 in number. Each hole is large enough to hold three pins. The applicant is required to place the pins three at a time in the holes until all are filled. The score is one-half the total of the time taken to complete the first half of the plate plus 1.1 times the time taken to complete the second half.

### **Trade Tests.**

The trade tests have proved useful in measuring a person's familiarity with a specific job, and in indicating her knowledge of certain terms, tools, apparatus, and general job procedures. As such they are valuable in eliminating those individuals who exaggerate or overrate their abilities. In training courses they may be used as checks on the effectiveness of the course and the

progress of the individual. The United States Employment Service has found trade tests useful in its placement program. However, it is important to remember that they measure only a person's *knowledge* about a job and not her *ability to do* the job.

The following questions, designed to test an individual's knowledge of lathe operations, are typical of the questions included in the average trade test:

What are the three methods for turning and boring tapers in the lathe?

Which is the most accurate of all types of chucks?

What does the lathe carriage include?

#### **Intelligence and Temperament Tests.**

Besides aptitude and trade tests, intelligence and temperament tests sometimes are used as aids in placement procedures. Intelligence tests alone seldom prove useful in industry, but when used with aptitude and trade tests they can add valuable information. It is found that if an individual rates high in intelligence but low in mechanical ability, she is likely to become a dissatisfied worker if placed in a routine job. She may be more successful in a job requiring more abstract intelligence. The United States Employment Service uses parts of intelligence tests in its aptitude and trade tests with satisfactory results.

A few plants have used temperament tests rather extensively in their placement programs. However, relatively slight progress has been made in this realm of testing; hence it should be used with the greatest caution and only when other selection procedures fail to produce the desired results.

### **AIDS IN SELECTING WOMEN**

Large industrial plants with sufficient financial resources to hire well-trained employment personnel should encounter little difficulty in setting up personnel-selection procedures to fit their particular needs. However, many industries are not themselves equipped to follow all the desirable steps in a good personnel-selection program. For these a number of services are available.

The Women's Bureau will on request go into a plant and analyze its jobs with a view of determining their suitability for women. The Bureau has done this on a considerable scale in

the aircraft, the machine-tool, and other industries newly employing many women. The Bureau occupation experts suggest which jobs are suitable for women or can be made so with certain engineering changes. The largest service and the one most widely spread geographically is the United States Employment Service. There are also private organizations, such as the Psychological Corporation, which act as consultants in setting up testing programs and which service employers with regard to setting up personnel-selection programs.

## RECOMMENDATIONS

For successful selection of women for war-industry jobs, the Women's Bureau recommends:

1. Prior to selecting women for the jobs, a careful analysis of the plant should be made to determine:
  - a. Which jobs are suitable for women.
  - b. Which jobs can be made suitable for women.
  - c. What changes are necessary in conditions surrounding the job, as for example in height of seats or benches, in weight of machine parts or of products to be handled, in installation of mechanical lifts, and so forth.
2. The persons who are to select women should have the following qualifications:
  - a. Detailed knowledge of the jobs to be filled and of conditions in the plant.
  - b. General knowledge of the types of work for which women ordinarily are fitted.
  - c. Interest in women and belief in their capabilities.
  - d. Competence in interpreting such tests as may be used in selecting women.
  - e. Freedom from personal prejudices, and ability to inspire confidence in the job seeker.
3. The procedures for selecting women should be carefully planned in advance, and may well include:
  - a. Provision of simple and adequate application blanks.
  - b. A series of interviews, with purposes as here described.
  - c. Tests rigidly tailored to fit the specific job.

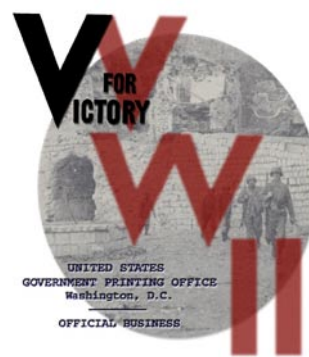
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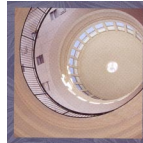
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