

Typical Women's Jobs

in the

telephone industry

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Women's Bureau



FOREWORD

This report supplements "The Woman Telephone Worker," Bulletin No. 207, which is a general report of women's employment in the telephone industry, with special emphasis on the telephone operator's job, her working conditions, hours of work, wage rates, and progression schedules. The present report gives detailed descriptions of the typical jobs for women in the traffic, accounting, and commercial departments—the principal woman-employing departments of the industry.

LETTER OF TRANSMITTAL

UNITED STATES DEPARTMENT OF LABOR,
WOMEN'S BUREAU,
Washington, March 4, 1947.

SIR: I have the honor to submit a report which presents detailed descriptions of the typical jobs for women in the principal woman-employing departments of the telephone industry. The report supplements "The Woman Telephone Worker," issued in 1946. Both reports are the outcome of a study made at the request of the Traffic Panel of the National Federation of Telephone Workers.

The field work was directed and the report written by Ethel Erickson. She was assisted in the field work by Frances E. P. Harnish and Ruth Turner.

Respectfully submitted.

FRIEDA S. MILLER, *Director.*

HON. L. B. SCHWELLENBACH,
Secretary of Labor.

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TYPICAL WOMEN'S JOBS IN THE TELEPHONE INDUSTRY

WOMEN'S JOBS IN THE TRAFFIC DEPARTMENT— CENTRAL OFFICES

OPERATORS

LOCAL OPERATOR

Local operating equipment is either manual or dial. The number of operators in a manual office, of course, is relatively much greater than in a dial office where the bulk of local calls are completed by the dial mechanism without the aid of an operator. A Women's Bureau study, "The Change from Manual to Dial Operation in the Telephone Industry," reported that one central office had had 534 manual operators, and 6 months later, after the installation of dial equipment, 249 operators, less than one-half as many. Dial conversion was retarded during the war period, and there are still many manual offices. At the time of the present survey, the key cities of three areas, Atlanta, Baltimore, and Chicago, had both manual and dial central offices, whereas Denver and Kansas City had all dial offices for local service. The Lexington company had manual switchboards. Localities outside of the key cities in Colorado and Maryland had manual equipment, and in the Georgia, Illinois, Kansas, and Missouri localities covered, there were both dial and manual offices.

The types of operating positions, whether equipment is dial or manual, vary with the number of subscribers and the age and models of equipment. Both manual and dial offices have A and B, tandem, information, intercept and other auxiliary positions.

MANUAL OPERATOR—A BOARD

The A operator in a manual office keeps her eyes glued to the board, watching pilot lights and signals. The customer lifts his receiver or hand piece off its stand and reaches the A operator. She answers a light by plugging into the signaling answering jack, opening the corresponding listening key, acknowledging the call and taking the customer's oral order. If a local call is ordered, the A operator is responsible for seeing the call through to its destination. If the customer is calling a number in the same office and if the operator has a multiple board before her, she locates the jack for the called number and tests for busy signal; if the line is full, she plugs in the connecting cord, and if there is not automatic ringing, manipulates the ringing keys, watching the signal lights for the called party's answer. If the customer is calling a number in another office, or if the B board is separate, the operator tests a straight forward trunk to the called office, plugs in, and passes the number to a B operator who puts up the connection in the called office. An intermediate step—securing a connecting trunk through a tandem board operator—may be necessary.

The A operator is responsible for monitoring the call, for watching the signals to see that the called party answers, and for seeing that the connection is established. When the called party answers, signal lights go out; when they light again, the parties have completed their conversation, and the A operator takes down the pair of cords used, watching first for any recall signals for cut-offs or other service requests. If measured service is involved, the operator writes a ticket. If the customer's order is for information, time, weather report, long distance, repair service, etc., the operator trunks the connection to the proper switchboard for completion.

In a small office, the A operator may handle all types of toll calls in addition to local service, and in most she handles, on a station-to-station basis, suburban calls and long distance calls to nearby and frequently called places to which direct connections are available. These calls require tickets, timing, and, on request, quoting rates and time to the customer.

Calls originating from pay-stations, hotels, PBX boards, and rural lines require some variations in procedures. Collecting money from customers at pay-stations require special attention, especially when calls outside of the local area are involved, as customers must be notified of amounts to be deposited and the denominations of coins deposited must be listed on the back of the ticket. Also, the operator must be alert to recall customers if the correct amounts have not been deposited and must handle altercations over coins with dispatch and courtesy.

Operating duties become habitual and are performed almost instinctively. No single act is difficult in itself, but when all 17 sets of cords are in use (and some occasionally borrowed from the next position) causing overlap on putting up calls, monitoring, timing, ticketing, and disconnecting on different types of service, then the intricacies and attention demanded by the job are marked. While a customer is waiting for an answer, an operator may have worked on a half dozen other calls. If a pilot light burns more than 10 seconds without attention, it may be noted by a supervisor, central office instructor, or service observer as a slow answer and as such a demerit either on the performance of the operator or the service index of the office. The load of calls handled hourly by an operator naturally varies with the rate at which customers' calls come in and the types of services required. Operators when working only with calls completed in the local area report handling 200 to 300 or more an hour, but when many of the calls are suburban and toll calls, the number handled may be less than one-half as many.

The local A board operator must be alert and able to give close application to her board at all times. Manual dexterity in handling equipment is required.

MANUAL OPERATOR—B BOARD

In all but single-area manual offices having complete multiple A boards, where all connections in the locality are within reach of a single position, there are B boards for the reception of incoming calls. On the B board, incoming trunks (lines) terminate in a single row of cards on the keyshelf, and the B operator has a honeycombed formation of the complete multiple of subscribers' jacks within her reach. The B board operator puts up connections for customers being called,

receiving her orders from A operators who are handling the call for the calling party. A pilot light announces an incoming call. The B operator presses a button, listens for a "zip" tone indicating that she is connected with the A operator who passes her the called number, orally, and the B operator then jacks the connection in the subscribers' multiple. In putting up calls, she first checks that the number asked for is a current "working" number, then tests the subscriber's jack—touching the opening of the jack with her plug to make sure that the line is not busy. If she finds a plugged jack or non-working number, she connects the call with an intercept position; if the line is busy, she connects with a special jack, the "busy-back," which sends the busy signal to the A operator for her customer report. Some B positions have special equipment and duties for collecting money for long distance calls placed "collect" to a pay station.

In cities having both manual and dial equipment, there must be a mechanism for working the two systems together. To complete calls from dial to manual equipment, the B positions in the manual office have call-indicator equipment. When signals come in from dial offices, the B operator presses an indicator key, and the called number is displayed on a lighted glass plate instead of being passed orally by an operator.

The B operator has no direct customer contacts to monitor, but she must work faster than the A operator. While she is putting up one call, she is usually pressing the button or key on her shelf which brings in the next call, or pulling disconnects. The B operator must know her multiple forward and backward and up and down. She must be quick, as she often has 50 or more connections jacked on her board. (B board operators reported handling 800 to 1,000 calls an hour at busy times.) Her job requires considerable arm motion and reaching strains where the multiple is high and wide. She must be careful, in pulling cords that are stretched in a network over her board, not to pull too vigorously and so strike herself or another operator with the dangling cord and plug.

DIAL OPERATOR—A BOARD

Dial equipment was reported as of three types—step-by-step, panel, and cross-bar—but the duties of the operator do not vary appreciably. Ordinarily, a local call correctly dialed from one dial phone to another dial phone is entirely automatic. Some subscribers, however, cannot or will not dial their calls, and there are calls involving toll or inter-zone charges, information, intercepting, verifying, reporting trouble, and emergency services for which an operator is needed in serving customers.

When a customer dials "0" an operator is reached at the dial A board. Some cities have lists of privileged customers who because of some physical infirmity are unable to dial and are given special assistance in putting through their calls, or who may have a manual phone tied in with an A board in the dial office. When anyone on such a list reaches the operator and is identified, the operator connects the party calling with a dial trunk and sets up the connection by dialing or key-pulsing (depressing numbered keys) the called number. Other customers requesting assistance in dialing—unless they report physical inability to dial—usually are given instruction in dialing of the num-

ber called for. The operator often hesitates a moment to see if the customer hangs up to try his efforts at dialing; if he does not, she may dial for him. Some customers abuse this privilege. Children and persons unfamiliar with the use of the telephone and frequently difficult to understand come in most frequently on the "0" and require special attention and direction.

Most dial A board operators' calls are interzone or toll calls to places to which there are direct circuits and for which the telephone directory instructs customers to dial "0" or a special code. Such calls are handled in the same manner by dial and manual operators. They require ticketing, timing, monitoring; and special attention must be given to collections and to monitoring calls originating in pay stations. As most of the calls coming to the dial A board require more time than the bulk of calls to the local manual A operator, the number of calls handled is usually very much less. Auxiliary service, such as information, intercepting, and verifying are handled in much the same manner in both dial and manual offices.

CORDLESS B BOARD OPERATOR

B operators in a dial-equipped office receive incoming calls from manual and long distance offices and pass the call on to the dial mechanism by key-pulsing (depressing numbered keys) the called numbers. The B operators sit at low cordless boards equipped with a row or rows of numbered keys, suffix keys for party lines, and keys re-ordering numbers and re-setting orders. The operator receives a zip tone, is given the number, plays up the keys for the number ordered, and the mechanism clears itself and brings in the next waiting call. If calls pile up faster than can be handled, the signal lights give warning, operators try to speed up, and extra operators are added to overflow positions.

This is the simplest of operating positions. There is no talking except to re-order a number, no overlapping, ticketing, timing, or dealing with customers. At busy times, the calls come in a continuous and fast stream, but operators at the board generally reported that they preferred working rapidly, as otherwise the monotony of the job almost lulled them to sleep. Close concentration is required, but little else except accuracy in playing up the numbers. Because of the monotony, operators usually are rotated from A board or other positions at intervals of 2 or 3 hours, or at the end of a half day at most. A few operators interviewed preferred to spend all their time at this position.

TANDEM OPERATOR

A central switching or tandem board for distributing circuits is an economy for making available a maximum number of circuits from one office to another in a large city and its nearby suburban area. Central offices usually have a number of direct or straightforward circuits to frequently called places on their A boards; but, in other offices that have fewer circuits, or when all direct circuits are in use for frequently called places, the A board operator plugs into a tandem trunk and requests the designated central office. In rapidity and simplicity the work of a tandem operator is very similar to that of a B board operator.

The tandem operator works only with other operators, has no ticketing or special monitoring duties, but must be fast. New operators are rarely trained for tandem board until they have become man-

ually dextrous in handling cords, and in putting up calls and pulling disconnects with speed.

In Chicago a special type of cordless tandem board, somewhat similar but more involved than the cordless B board, is used to connect all local and suburban offices within an area of 40 or 50 miles. Numerical codes have been established for all central offices, and the operator must be familiar with all these. Calls come in and are distributed automatically to a free operator; she hears first the zip tone, then office and number ordered and sets them up on the multiple bank of keys before her—similar to the bank of keys on an adding machine. As soon



Information operators.

as she depresses the start key or suffix key for party lines, the call is on its way and another may be coming up for her, preceded by the zip tone. Calls from this tandem board may terminate in a dial office where connections are made automatically by the tandem board key-pulsing, on an illuminated call indicator plate in a manual office, or as a call announcer (mechanical voice) in manual offices not having call indicator equipment.

INFORMATION OPERATOR

Information operators serve in an auxiliary capacity and not as direct links in making connections. They service customers' and long-distance operators' requests for telephone numbers, by referring to books, bulletins, and rotary or other files which list subscribers by name and by address, and are revised and supplemented daily. Some offices have only directories listing subscribers by name; but many have both and some, on being given a telephone number, will furnish the corresponding name and address except when customers have requested that such information be withheld.

Information operators' switchboards are both of cord and cordless types and differ somewhat in other respects, but operating procedures on all are simple. The operator has a memo pad on which she jots down the number and information requested. Directories usually are conveniently placed and have index tabs to expedite searching for information. Normally only one call is handled at a time, as a customer is waiting for a report and the objective is accurate and rapid service. In small offices calls for information are trunked to one of the A board positions, whose operator takes regular calls, too, but gives precedence to information signals.

The work of the information operator is trying. Constant reference to directories results in eyestrain. In large cities especially, directories become massive; to reduce the bulk, four or more columns may be printed on every page, and the print is extremely fine. Eyestrain and irritable customers were the two strains most frequently reported by information operators.

Some subscribers habitually call the operator rather than look up numbers in the directory. In an attempt to reduce the misuse of the information service, operators have been instructed to refer customers to their directories for regularly listed numbers instead of supplying the requested information. If the customer, however, claims to have lost his directory or his glasses, or reports other physical handicaps, the number is furnished without question. Subscribers often are irritated when referred to their directories and vent their impatience on the operator. Customers with only vague ideas of the pronunciation, spelling, initials, address, etc., of the party they are trying to reach, tax the operator's ingenuity. She must have a good and ready knowledge of the spelling of names and the way in which businesses, organizations, government offices, and other agencies are listed. Information operators reported many special emergencies in which they had followed up any clue to find numbers and to assist subscribers in reaching their parties or in getting the assistance needed. A sincere desire to be helpful to subscribers seemed to be an almost universal characteristic of information operators.

In some offices "time of day" and "weather" calls are handled by information operators, usually at special positions equipped with recording devices for making records of the weather reports received hourly from the Weather Bureau. Operators with especially good voices are selected for giving time and making weather recordings.

INTERCEPT OPERATOR

When "What number are you calling?" challenges the telephone customer, usually an intercept operator is on the line. Calls involving changes in telephone numbers, disconnects, temporary switching of calls to other stations, errors in dialing, and calls which come in on nonworking lines are trunked or switched automatically to intercept operators. On being given the number on which a call is intercepted, she checks the intercept books or visible files which list all numbers that are not working and reports to the customers changes in number or termination in service. If a customer has made an error in dialing, a good intercept operator often is able to recognize the error and instruct the customer on correct dialing, or, if she suspects line trouble, will report the number to the trouble position. If a new number has been issued, the intercept operator in some manual offices can loop the

call back to the A board and order the right number for the customer; usually she gives him the new number and requests him to hang up and re-order.

An intercept operator handles one call at a time and does not have any ticketing. She must be accurate and fast at looking up numbers and handling books; when intercepting is handled for several offices there is considerable book lifting; and she must be able to deal tactfully with the public. Operators are not assigned to intercept positions until they have a working knowledge of A and B boards; usually, except in large cities, they work on other calls at an A board, giving first attention to intercept signals.

In the small-community office, there is no need for special intercept operators, as every operator at the A board has available at her position all necessary information about the working status of all lines.

VERIFYING OPERATOR

Checking on "busy" and "don't answer" reports when requested by the customer is usually a part of the duties of one or more of the A board positions. Verifying is often combined with intercepting or is handled at the same position as "trouble" operating. The verifying operator has special cords and trunks for listening in on lines for conversation, ringing and indications of trouble. If she goes in on a line and gets a busy signal but hears no conversation, she may turn the call over to her supervisor or the trouble operator for further follow-up. On the direction of the supervisor or chief operator, she may interrupt conversation for emergencies. The verifying operator reports the conditions she finds on the line and, if mechanical trouble is indicated, reports it to the proper position.

TROUBLE AND SENDER-MONITOR OPERATORS

Trouble operators are found in manual offices and sender-monitor operators in dial offices; their duties are connected with mechanical trouble and with customer irregularities in dialing and misuse of equipment. Except in large offices, the volume of trouble is not sufficient to keep an operator busy all the time, so that she usually has additional duties such as checking and filing tickets, verifying, intercept, or taking regular calls at the A board.

All calls and connections on which mechanical trouble is indicated are, in a manual office, referred to the trouble operator. When signals stay permanently lighted on the board, they are reported to the trouble operator and she follows through. She tries to attract the attention of a customer who has not replaced the receiver on its stand by using a special ringing attachment on the line known as the "howler." She puts up trouble cords which take signals off the board and throws an out-of-order tone to the number affected on the B board. She reports the affected number to the repair service, follows the orders repair men give her for testing, and leaves trouble connections on her board until repair service reports that the difficulty has been corrected. She may receive repair or trouble calls if the plant department does not have its own service for such reports, especially during evening and night hours.

In a dial office, when the sender-monitor mechanism does not receive the correct impulses from dialing because of a customer's errors—not waiting for the dial tone, dialing too many or too few numbers, dial-

ing too fast or too slowly, not depositing coins at the proper time, etc.—a signal from the station where the trouble is occurring comes automatically to the sender-monitor position. If the result of faulty dialing, the operator instructs the customer on correct procedures; if mechanical trouble, she signals repair service and works with them in a manner similar to that followed by a trouble operator in a manual office.

Trouble and sender-monitor operators keep a log of all trouble reports, showing time of occurrence, nature of trouble, and time that service is restored. In some offices, trouble operators keep records of credits for calls on which bad service is claimed by customers who have measured service and customers who call from coin stations. Credits are allowed for bad service and records are kept to check on abuse of such credits.

OFFICIAL-BOARD OPERATOR

Another auxiliary service to which an operator is assigned either full time or intermittently is as operator on the official board, the telephone company's own PBX, through which connections are made with all the offices of the company in the locality. The duties are those of a PBX operator at any large private switchboard. Since the company always aims to maintain the highest quality of service at its own PBX, operators at the office board are imbued with a feeling of responsibility in representing the company and must be familiar with the organization of the company, names of key employees, and activities of departments, and must know whether to refer a customer to his service representative or to other offices. The operators employed at the official board are relatively few and, in small offices, handling official calls is part of the duties of one position at the A board. Operators on this position who were interviewed said they found the work interesting and preferable to that on most of the other boards.

PAY-STATION ATTENDANT

In large cities, the telephone company often maintains a public desk, in addition to the pay-station booths, at railroad and bus stations, large hotels, headquarters for conventions, Army and Navy centers, etc.—places frequented by strangers and large numbers of persons—to assist customers and expedite service. The relative number of pay-station attendants is small and was only about 65 in the largest city covered in the survey. Their numbers increased during the war in Army and Navy camps and in places such as railroad stations where servicemen tend to congregate.

Duties and equipment vary, but a pay-station attendant usually operates a switchboard which has connections for booths associated with the public desk. She changes and collects money and assigns booths for all kinds of local and long distance service. She assists customers in finding numbers in directories and in obtaining numbers from information operators, takes orders for long-distance calls and places them directly with long-distance operators, issues receipts for charges when requested, assigns individuals who are hard of hearing to specially equipped booths, etc. She serves as a source of information on hotels, local transportation, hospitals, community resources and

services when no one else is available for such information. She keeps daily reports of activities, of calls placed, and of collections.

The pay-station attendant must be an experienced operator who understands the handling of local, interzone, and long-distance calls. She must be familiar with the numbers and addresses of places frequently called by strangers and have enough orientation in the community to give simple directions and suggestions. She should have a pleasing personality in dealing with customers. She usually works with little supervision, is responsible for moneys collected, and must keep certain clerical records and balance her calls and receipts.

Pay-station attendants in some localities have a slightly higher basic wage schedule than regular operators; in others the work is assigned to experienced operators who are considered adapted for the duties without an increase in pay.

NIGHT OPERATOR

Night operators are a group apart from other operators. The number on duty after midnight is only a fraction of the day force. In the early morning hours, calls fall to a minimum and switchboards require only intermittent service in all but the large offices. Much of the operator's time is spent on clerical and special night chores. The day's accumulation of tickets—local, suburban, and toll—are counted, checked, sorted in innumerable ways, and tallies made of completed and cancelled calls, for regular and special reports. Registers are read for daily totals. Peg-count data are tabulated. Intercept books are checked and changes incorporated. Boards are cleaned and re-marked, cords are tested and checked for repairs, headsets are checked and straps and parts replaced, and other operating room chores done which can be carried on more expeditiously when operating is at low ebb, although some of these duties are also carried on during the day. The night operator must be able to handle all types of calls and work at various positions, but rarely has the strain of feeling as pushed as the day operator to keep up with signals and service demands. Also, supervision and discipline are relaxed at night, and though night operators reported that they were kept busy at all times, some preferred night work because of the more varied duties and less general commotion in the operating room. The general complaint of all night workers that their schedule of sleeping hours was upside down and that normal social life with family and friends was impossible was expressed especially by the younger operators.

Night operators usually come to work at 10 p. m. and work until 7 a. m., and have rest periods and lunch hour similar to those of the day force. Where only one operator is on duty at night, she works an over-all period of 8 hours, has no time definitely allocated for lunch or rest periods, but is allowed to take time for such periods as they fit in with the duties of the job. In such small offices, the night calling rate tends to be low, so that time can be taken from other duties and chores.

LONG-DISTANCE OPERATORS

The number of long-distance operators increased materially during the war period owing to communication demands of war industries, Government agencies, and service men and their families and friends. Long-distance calling has become common for many who

rarely if ever used the service a few years ago. In localities where local traffic is handled by dial equipment, the number of toll or long-distance operators tends to exceed those classed as local operators. In large cities long-distance and local operating are separate units with their own chief operators, supervisors, and clerical staffs. Many long-distance operators have never been local operators and vice versa. Training periods are longer for long-distance operators, but requirements are the same. The techniques of handling equipment and



Rate and route operators. Long-distance operators in background. Supervisor standing.

answering signals are much the same for both, but ticketing, timing, follow-up procedures, and knowledge of circuits and practices related to long-distance calls are more involved. In small localities long-distance operators are all around operators, carrying out all duties or shifting from one position to the other as needed, whereas in large cities they usually specialize as *CLR*, *TX* or *Point-to-Point*, *Inward*, *RX* or *Through*, *Rate and Route*, *Ticket Distributing*, *Toll-Tandem* or *Tandem*, and *TWX operators*. In the largest cities, there is often even greater specialization. However, since it is desirable that operators be flexible in their ability to work at several positions, most are trained and have experience at several, if not all, positions.

CLR AND TX OPERATORS

"CLR" indicates combined line and recording duties. Years ago, one group of operators took the customers' orders and made out the ticket while another followed through on the line connections. The

usual present procedure is that the first outward operator, the CLR who answers the customer, attempts to put through the call at once, sometimes beginning to put up her call before she has completed recording her ticket. Her job is to keep current toll calls moving and to dispose of all that can be put through on the first attempt or with only short delay. When circuits are unavailable or parties cannot be reached within a few minutes, she passes the tickets to the TX, or delayed-traffic operator, for follow-up. During busy periods in war centers, available circuits carried capacity loads, and, in order to handle calls in order, separate recording positions were set up to take the customer's order, determine the route, and prepare the ticket for the line operators.

The CLR and TX operators work at the same type of switchboard. They are both outward operators. Their boards consist of an arrangement of recording trunks, circuit multiple trunks, and tandem trunks; rate and route, information, and other auxiliary trunks; and switching multiples to the boards of offices which are served as a toll center. In all but the largest toll offices, circuits and recording signals are repeated at every position so that any operator, if she is free, can pick up an incoming call. Several operators may reach to answer the same signal; the first one plugging in takes the call.

When a CLR operator answers a recording signal, she has her ticket and pencil ready to take down in telephone symbols or shorthand all data which is pertinent to reaching the called party, to billing the calling party, and to following through on the call if delays are encountered. Information on the ticket must be legible and correct as it serves not only as direction for making the connection but also as billing voucher and source of statistical data.

If the destination of the call is a place for which there are no direct circuit connections, or for which routes are not given on the operator's key-shelf bulletin of frequently called places, she takes another cord and connects with the rate and route operator for information on places through which the call must be routed and, if the customer requests it, the rate. She may have an intermediate step to take—ordering the calling party's connection switched from a recording trunk to a B-board connection, or checking the origin of the call in a checking multiple. Almost simultaneously she plugs into an outgoing circuit and establishes connection through any intermediate points on the route.

When the outward operator reaches the inward operator of the called city, and the latter makes the local connection with the number or called party, conversation starts; the CLR or TX operator listens long enough to make certain that conversation has started; stamps her ticket in a calculagraph, or records the time from the clock on her board; cuts out; files the ticket between the keys associated with the cords used; and places clips on the cords, or sleeves on the keys, as reminders of any special procedures to be followed up, such as reporting time or ringing to clear circuits when the call is disconnected. She then is free to begin on another call.

When the signal associated with the switching trunk on which the calling customer is talking lights to show a disconnect, the operator stamps the ticket or records the time to show elapsed time; pulls the cords; and clears the circuit to the distant city by ringing or oral

clearance, depending on the number of intermediate points. Any special instructions or notations are recorded on the back of the ticket. After final stamping, the ticket is dispatched to the ticket desk by a carrier system or messenger pick-up.

If the calling party is unable to provide the telephone number, the outward operator usually must obtain it from the information operator when she reaches the called city. In going in on a long-distance circuit, an operator may meet another operator also trying to get through to the next point on the same circuit; operators must be familiar with all the regulations of precedence and priority which must be followed in claiming precedence or abandoning the circuit. If the call has two or more intermediate points, the operator may be held up at any of these. When she reaches the called city, the line may be busy, the person called for not available, or other interferences may occur to keep the call from going through to its destination. The operator must be ready to leave "call orders" for circuits and to "leave word" for the called party with the inward operator in the distant city.

Before the war, once a long-distance call was placed, it was difficult to dissuade a zealous operator from pursuing a called party from pillar to post until finally corralled at some phone and connected with the calling party, even though it might be hours later. Even during the war, there was considerable effort to complete every call.

The CLR operator who takes the call will try repeatedly for at least 10 minutes or sometimes more if there seems to be a possibility of completing the call within a short time, reporting back to the customer and getting his instruction for further attempts. If circuits are not available, the called party cannot be reached until later, and the customer wishes to continue efforts to get through, the ticket is dispatched to TX or point-to-point operators who specialize in handling delayed traffic.

The TX operator like the CLR is an outward operator and in smaller offices may handle TX work for certain localities and also take original calls. In large centers, TX or delayed positions are assigned by cities. TX positions are numbered, and delayed traffic within the office and with distant operators is routed by the number of the position. The TX operator keeps her tickets filed in spirals or other special clips on her board and tries to complete them in accordance with their precedence or specially designated times. She times and completes a ticket and follows the same procedures as does a CLR operator in circuit work. In addition she has circuit call orders, "leave word" memos, and WH ("we have located," or "we have ready") memos filed at her position which must be available when called or calling parties are reached on delayed calls. She must also cooperate with distant operators in looking up tickets, sharing circuits, and doing anything which through team work will expedite long-distance service. During periods when the calling rate is at peak tempo, circuits to the most frequently called places often are tied up continuously at designated TX positions, sometimes called special-methods positions. All calls to, through, and from these places are switched or completed by the operators assigned during the rush period. Only skilled and resourceful operators are assigned to work at these positions where circuits are used to their top capacity.

TX operators always reported that they had had training and experience as CLR operators and, usually, in addition, coaching and training in the special duties of handling delayed calls.

RATE AND ROUTE OPERATOR

Rate and route operators are auxiliary employees whose duties are to accelerate or expedite the work of the outward operators by providing them with information on routes and rates. When an outward operator receives a call for a point to which there are no direct circuits, for which routes are not posted on her bulletin, she connects with the rate and route unit and requests the needed information. The rate and route operator is a specialist in looking up routes and determining rates; she is skilled in handling the guides, mileage, and special block books which are the reference tools of the job but too bulky and space-consuming to be made available to all operators in a large city. In small long-distance units, one operator is usually assigned to carry on the rate and route work together with other duties.

The rate and route operator works with other operators, she must be fast and accurate, and able to train her memory to retain block numbers and mileage information as she progresses from one reference book to another. Block books are heavy and the print is small. Lifting the books and reading the fine print were reported as tiring by operators interviewed. Rate and route operators generally have been trained on outward operating and sometimes work both at the board and at rate and route work.

TICKET-DISTRIBUTING OPERATOR

Mechanical conveyors, pneumatic tubes, or *messengers* distribute tickets from one switchboard position to another. If, for example, a CLR operator wishes to send a ticket to a TX position, she inserts it in a tube slot, on a carrier, or in a ticket holder back of her chair to be picked up by a messenger. It is carried to the ticket desk, where the ticket distributor dispatches it to the proper position. All the tickets in transit or completed come to the ticket desk for dispatching and for sorting when completed. The ticket operators sort tickets alphabetically by terminating points so that they can be easily located and questions answered if calls for charges or further requests for information and follow-up come in during the day. Interspersed with their other duties, ticket operators sometimes check and compute the charges on as many tickets as possible. Tickets are usually held till midnight, when the night operators take over further sorting and processing. Ticket-distributing operators are classed as regular operators and may take turns at regular operating positions. In some offices, operators whose hearing had become slightly impaired or who had other physical disabilities were assigned to the ticket-distributing desk.

INWARD, THROUGH, AND TOLL-TANDEM OPERATORS

Inward, through, and tandem operators serve at positions which are direct links in the calling sequence of a long-distance communication. The numbers employed at these boards are fewer than on the outward boards, and the work is simpler, less interesting, and much faster. Operators mentioned frequently the speed and monotony of these jobs.

The *inward operator* answers signals from distant operators who are calling in or asking to be switched through to another point. She makes through connections except where there are specialized, through, or RX operators, connects distant operators with the information

operator, with central offices through which the called parties can be reached, with TX operators, and, if requested, with other auxiliary services. In small offices she may make the customer connections directly on the multiple or may dial the called number. She monitors her connections until she gets a signal that the next operator has been reached or that a customer connection has been made and watches for signals from distant operators for additional service, "leave word," etc. If local lines called for are busy, she holds the connection with the distant operator for prescribed time limits. She makes out call order and leave-word tickets which are passed on to the TX positions for follow-up. The work of the inward long-distance operator is similar to that of the B-board operator in a local office although she does not handle as many calls and must exercise greater attention in monitoring her connections and in watching for recalls and orders. In most offices she also serves as a through operator for distant operators who are handling built-up connections and she must follow procedures in holding calls when no circuits are available.

To speed service in large cities that have a heavy load of through-switching from one city to another, special positions are set aside to handle through-work. Through-calls reach the inward operator first, who, when she gets the order for another city, informs the distant operator that she is being switched to an RX position and pulls a key which switches the call to the RX board. Here the *through operator* (*RX operator*) makes the requested connections or takes the call order. RX work is exceedingly fast; operators interviewed reported that their chief strain was physical weariness from continuous plugging in at the board.

Toll-tandem boards are found only in the largest cities. In the cities where there are too many circuits for all to be available at every long distance position, there is a central toll tandem, similar to that of a local tandem for switching local and suburban calls from one central office to another in the locality. All long-distance circuits used for inter-city communications are tied in with the toll-tandem board; when an operator does not find the needed circuit free or available on her board, she trunks to the tandem board and requests her circuit wherever it may be available. *Toll-tandem operators*, like the inward and through operators, are intermediaries and do not come in contact with customers. Their work is fast and often physically strenuous, requiring much arm movement and long reaches. There are not many positions of this kind and usually an operator spends only a part of the day at this position.

LONG-DISTANCE MECHANIZATION

Although plans for increased use of automatic communicating systems are in the offing, mechanization of long-distance telephoning has not as yet been extensively effected. Intercity dialing by long distance operators between cities such as Baltimore and Philadelphia has been in operation for some time. An adaptation of cross-bar dial equipment began functioning in August 1943 with Philadelphia as a try-out center.¹ The customer still places her order orally, but intermediate operators at through and inward positions are eliminated. Certain cities using Philadelphia as a switching center have been equipped for long-distance dialing.

¹ A Dial Switching System for Toll Calls, by Howard L. Hosford. Bell Telephone Magazine 22: 229-236, Winter 1943-44.

The *CLR operator* takes the order, makes out the ticket, determines the route, times and reports to the customer as usual but, instead of passing the number to a distant operator, dials or key-pulses codes for the city and the number. Switching through Philadelphia is wholly mechanical, and an operator in Salisbury, Md., may reach Los Angeles without passing any oral information to operators enroute. If the call cannot get through, lamps and signals indicate trouble, and an intermediary operator in Philadelphia takes over. Speed, and eventually reduced pay-roll costs, are objectives of the new system. Automatic ticketing for interzone dialing is being used in the Los Angeles metropolitan area. The equipment automatically times and prints on a ticket numbers which give all the information needed for charging calls.² Further mechanization undoubtedly will change the job opportunities and nature of the work of a toll operator.

TWX OPERATOR

Teletypewriter connections are one of the long-distance network services offered to a limited number of customers who are equipped for reception and transmission of typed messages. The job of the TWX operator who makes teletype connections differs from that of the regular long-distance operator in that typing takes the place of oral communications. Operating practices are similar to regular long-distance service practices. Customers and their teletype numbers are listed in directories. A subscriber to the service can reach other subscribers just as by telephone. There are established rates for rent of equipment and for timed message service. Since the number of subscribers to this service is relatively small, only the larger offices are equipped for handling this service. The switchboard and equipment is similar to that used by an outward long-distance operator, except that a typewriter with automatic paper feeding devices is connected to the key-shelf board. The TWX operator answers light signals, plugs in, acknowledges in typing that she is ready to receive the customer's order. Routing, ticketing, timing, and problems of no circuits, "busy," and "don't answer" are involved, just as in oral work. Some subscribers contract for regular periods of service, and the operator must see that connections are put up at the stipulated time. Teletypewriter conferences, for which several stations are connected to receive messages at the same time, are arranged and these are handled in the same way as are long-distance telephone conferences.

Student operators are sometimes trained for TWX service, but usually it is a long-distance operator, who has had experience on outward boards, who develops into a TWX operator. She must have a knowledge of typewriting, but she does not have to be a fast typist as the machines at present are not of a high speed variety. Except

² Automatic ticketing is the special feature of a direct dialing system established at Culver City, a part of the extensive Los Angeles area. The automatic ticketing system permits extension of direct dialing service, without an operator's intervention, to an area for which there is a toll charge or a charge for more than one message unit. The new equipment automatically prints on a ticket a single line of numbers which give all the information required for a charge call. The progress of the call is controlled by devices called "senders." As soon as the ticketing circuit is open, the sender connected to it begins to record the digits dialed by the subscriber. Another device, called an "identifier," determines the office code and the caller's number. The sender, having received this information, proceeds to transmit the call over the trunk and to record the day, hour, and numbers of the caller and called party on the automatic ticketer. When the called number answers, apparatus forming part of the ticketing circuit starts to time the call. When the call is terminated, the chargeable time is printed automatically on the ticket. O. A. Friend, "Automatic Ticketing," Bell Laboratories Record 22: 445-450, July 1944.

in large cities such as New York, Chicago, Detroit, etc., the TWX operator functions as outward, delayed, through and inward operator at the same position. In this respect the TWX operator is like the long-distance operator in a small office and must know all types of operating procedure. She does her own rate and route work. TWX supervisors check tickets, supervise, and assist, as in telephone operating.

OTHER CENTRAL-OFFICE JOBS

Supervisor-instructor, junior supervisor, senior operator, central-office instructor, and central-office clerk rank higher than operator and represent promotional possibilities within the central office. These jobs are below the management level and are covered by collective bargaining. Supervising and instructing usually carry the same classification, that of *supervisor*.

SUPERVISOR-INSTRUCTOR, JUNIOR SUPERVISOR, SENIOR OPERATOR

Supervisors comprise, next to operators, the most numerous occupational group. Operating forces are divided into groups of 6 to 15 operators, with a supervisor in charge of each. The duties of a supervisor are those of a work supervisor, as she does not have responsibility for hiring, discharging, or assigning workers. She is a group leader responsible for maintaining efficient service, for coaching, and for assisting her operators by taking any emergency and special calls which the operators do not feel able or do not have the time to follow through. She must be an experienced operator with a thorough knowledge of operating practices and with ability to instruct, to work harmoniously with her group, and to give satisfactory service to customers with special problems.

The supervisor patrols her section of the board most of the day, watching the answering of signals, handling of equipment, speed and dexterity in overlapping on several operations and calls, handling of customers, teamwork with other operators, and all special operating procedures which may be the practice at the different boards. She handles emergency and special priority calls, criticisms and complaints of service or operators, and special requests from other central offices. She goes to the assistance of an operator whenever the supervisor's signal lamp lights at any position. She checks tickets and makes adjustments and corrections. She keeps operators in her section supplied with tickets, pencils, clips, sleeves, and other key-shelf supplies; adjusts chains and headsets; pushes in chairs to seat the operator at the proper board position; adjusts ventilation and generally looks after the order and physical make-up of her section. She checks the operators for arrival time, relief periods, lunch periods, and leaving time; calls the attention of her group to the daily program for improving service; shifts and substitutes workers in her own and other sections as instructed by the chief operator.

From time to time, in most offices, supervisors are relieved from their board duties to coach operators in new practices or to conduct special reviews and give training for development on the job. Some supervisors spend much of their time as instructors of student operators. As an instructor, the supervisor usually has two though sometimes three or four students with whom she works constantly from two to five or more weeks, depending on whether the initial training

is for local or long-distance service. Following a training manual which provides a course of study, the instructor teaches the fundamentals of most common calls, conducts multiple drills, teaches codes, suggests phrases to be used for frequently occurring calls, and works with her students at practice and operating boards. She gives individual instruction, drills, and reviews, adapting the work to individual needs.

In most of the large offices, supervisors make formal observations or appraisals of the operators assigned to them. Sometimes observations are scheduled by the chief operator. The supervisor plugs in with an operator and listens and observes her work from all aspects—voice, handling of equipment, overlapping, teamwork, promptness in answering signals, manner in dealing with customers, etc. A record of the appraisal is kept in the supervisor's note book or on other special forms such as that known as "proficiency analysis," and after each appraisal, or sometimes after every fourth, the supervisor discusses her observation with the operator, pointing out weaknesses and suggesting ways of improving service and also commending the operator for her good points.

Follow-up analyses of weak points are made between complete appraisals. The purpose of analyses is to provide a basis, not primarily for merit-rating operators, but for instructional development and improving service. In small central offices supervisors and chief operators work so intimately with the operators under their supervision that formal observations often are not required by management. In the large cities, however, supervisors are scheduled to average one or more observations a day. Inexperienced operators are observed every week or two for the first few months, whereas an experienced operator with years of service may have only a few formal observations a year. During the war period, appraisals were relaxed, for supervisors were so busy training new operators and working at the board that time for other duties was unavailable. Also, according to the operators, observations are disliked by many of the operators and, to keep up the morale during a tight labor market, relaxations had been allowed in many practices.

Junior supervisor and *senior operator* are classifications that were found only in some of the central offices surveyed. In some of the central offices which are considered too small to have regular supervisors, senior operators have supervisory duties in the absence of the chief and assistant operators who normally do all overseeing. In other offices, the titles "senior operator" and "junior supervisor" are used as classifications for operators who are considered in training for supervisory positions and who spend part of their time at the board as regular operators and part relieving and substituting for supervisors or who are assigned as instructors to train new operators.

Some of the women scheduled had worked intermittently as operator and supervisor for several years. Some complained of this practice, while others reported that they preferred working as operator because, on becoming a regular supervisor, they would lose their seniority in hours which had been attained as an operator and would have to go to the bottom of the list in selection of tours. Many also felt that the extra responsibility, the strains of standing work, and supervisory tasks more than offset the extra compensation.

CENTRAL-OFFICE INSTRUCTOR

Most of the offices visited had abolished the title of "central-office instructor." Those scheduled were in a few of the local manual offices. Central-office instructors do not instruct new operators but observe and coach experienced operators. From remote listening stations the central-office instructor listens-in to a number of calls and checks the operator's performance. Whenever weaknesses in performance of duties are noted, the instructor discusses them with the individual operator and instructs or drills her to improve her work. The instructor keeps records of operators' ratings and discusses them with the chief operator. Since emphasis on the *supervisor's* observations and appraisals has increased, her work and that of a central-office instructor overlap, and the job of the latter has usually been eliminated. In some offices the central-office instructor is assigned operators whose performance has not reached the required standard for special observation and coaching in addition to that given by the regular supervisor, but the position seemed to be on the way out. Central-office instructors were usually classified above the supervisor and the job was filled as a promotion from the ranks of supervisors.

CENTRAL-OFFICE CLERKS

Clerks in central offices generally are recruited from the operating force. Most clerks have a differential above the rate paid operators, but in some offices the rates are the same. On the pay rolls, the titles designating those doing clerical work in the central offices vary. Most often they are called simply central-office clerks, but also appear as *schedule and force-assignment clerk, pay-roll clerk, personnel-records clerk, service-order clerk, peg-count-records clerk, chief-operator's clerk, service observer, junior ticket clerk, intercept clerk, line-assignment clerk, facilities clerk, combination clerk, desk clerk*, and even as *operator* and as *supervisor*. In small offices the chief operator, assisted by operators from the board, does all the clerical work. As the size of the office increases, the number of clerical titles and specialization in duties increases.

Clerks are developed on the job—usually being taken off the operating board to assist a regular clerk and then promoted to full clerical duties as vacancies occur. Regular training programs for central-office clerks are unusual. Their duties are concerned with scheduling and force assignment, pay-roll and personnel records, service order processing, line assignment, peg count, and miscellaneous clerical duties for the chief operator.

Schedule and force-assignment clerk.—Several times a year master work schedules are prepared in the traffic supervisor's office. The master schedule has been developed from a study of the rate at which calls are made, the type of equipment in use, operators' average experience, seasonal demands, etc., and gives the number of operators who are to be employed, by tours and by days of the week. The *chief operator* makes minor adjustments to meet changing conditions and is permitted a number of supplementary tricks. The master schedule is the basic skeleton and has to be filled in and rounded out with the names of operators and assignments to board positions. Methods of scheduling and assigning are well defined in company practice, but there is a mass of detail involved in the work—consulting seniority

records and operators' preferences; scheduling and assigning rest periods, lunch hours, days off, etc.; making up separately, of necessity, Sunday, Saturday, and holiday schedules. Positions at the board must be assigned with consideration of the operator's training and ability. Changes in personnel and absences require that schedules be constantly adjusted. One clerk described the job as working up a perpetually changing jig-saw puzzle. In all but the smallest offices, assignments to board positions are adjusted and prepared weekly and must be ready by Friday for the following week. In a large office clerks spend full time on scheduling or on assignment duties, and in small offices the work is combined with pay-roll and other clerical duties. The half-hourly checks, made in all but the smallest offices, of numbers of positions covered by operators, are made by schedule assignment or pay-roll clerks, who also keep records of the checks.

Pay-roll and personnel-records clerk.—The duties of this clerk are similar to those of the pay-roll and personnel-records clerk in any industrial office. In a telephone central office preparing pay rolls for the accounting department has complications because shift, Sunday, holiday, temporary supervisory, and sometimes other differentials must be clearly indicated, as well as overtime hours. Generally the actual hours for the first four days of the week and an estimate of time to be worked on the remaining days are posted on the office pay-roll sheets. Changes occur, and adjustments must be sent daily to the accounting department.

Pay-roll and personnel clerks may also work with schedule clerks on vacation schedules; keep absenteeism reports; keep seniority records, notifying pay-roll department when automatic increases fall due; and work on various reports concerned with personnel. The computation of pay rolls is done in the accounting department.

Service-order clerk.—The service order is a much circulated form which affects the records of all the major departments. The central office is concerned with changes shown by the service order—new connections, disconnects, and changes in addresses, in names of subscribers, and in type of service, etc. Such changes affect the central office's intercept, information position, panel and jack, line and facilities records, and board markings. In a large central office processing service orders may be the work of several clerks. Changes are posted to books and to the records affected. Where visual filing systems are used for information and intercept records, filing strips are typed and filed. Board markings are changed. The work is all detailed record work requiring accuracy and careful application.

Peg-count-records clerk.—Calls are recorded at each operator's position, and a great variety of summarizing counts, called peg counts, are made of calls at each position, at each board, for special services, and for anything that presents a problem. Some peg counts are taken hourly, some daily; some special-purpose ones, at odd intervals. Over-all supplementary peg counts are taken several times a year. Calls register automatically for some peg counts. For other counts, the operator is required to use a hand counter. For still others, such as the over-all peg count, operators at each position keep special tally sheets. The peg-count clerks' job is to read the automatic registers, hand counters, and tally sheets and to prepare report sheets, adding and sub-

tracting to obtain summaries of service. These reports are turned over to the traffic engineering units for their traffic studies and planning programs for force and equipment needs. When supplementary and special counts are made, operators are often relieved from board duty to assist with the peg-count records.

Chief-operator's clerk.—The title of chief-operator's clerk covers a variety of duties. In a small office it is synonymous with central-office clerk and includes all the clerical duties of the office. In a large office, the chief-operator's clerk often acts as a supervisor of other clerks in assigning work, and does miscellaneous clerical work in compiling summary reports, answering the chief operator's phone, listening to customers' complaints, keeping confidential personnel reports such as ratings, etc.

Some offices use only the general title of central-office clerk and the work carried on may be any or a combination of all duties indicated as typical of the clerical work in a central office. A knowledge of operating procedures is a requirement for clerical work of this kind.

Service observer.—Service observers were sometimes found classified with the employees of the central offices and at other times with the employees of general, administrative offices. Service observers check and report on the effectiveness of service rendered the public. They do not check on the merit of individual operators.

The service observer works at special monitoring switchboards equipped with signals, jacks, and designations matching those of the regular operating room boards. These observation boards are almost always located in rooms away from the operating room. The service observer wears a headset equipped with two earpieces in order to monitor or listen to both the customer and the operator. Usually she has a stop watch in one hand, as operations must be timed. Lighted signals appear at her board and she plugs in at random, following a call through all its stages. She checks all types of service. For outward calls, both local and long distance, tally sheets carry more than 40 items, many of which require timing. Detailed record forms are provided for local manual, dial, dial "0" trunks, auxiliary services, and for outward, inward, and through toll service. The service observer must be thoroughly familiar with standard operating practices and must be alert to all types of errors and deviations from established standards which impair service. Tickets are checked whenever they are involved in calls. Details of observations are turned daily into the general traffic office where summarizers add and combine sheets for purposes of making statistical tabulations and computing service indices.

If the index for an office falls below the established standard, the chief operator and her assistants and supervisors intensify their efforts at coaching and appraising and on development programs to raise the level of service rendered. Operators are not directly aware of observation, as the service observers work at remote listening posts, but are conscious of it as one more factor in the checking of their job performance.

Service observers have usually been promoted from supervisors. In some cities a change from a position as a supervisor to service observer is a lateral promotion at the same wage level. In most offices the job is less strenuous than that of operator and for that reason is

considered desirable. In other offices, service observers are classified with divisional clerical employees, and the job carries a higher maximum rate. In the larger cities, the chief service observer, whose job is on management level, assigns, supervises, and checks the work, but the supervision is not, in general, so close and confining as that given in the operating room; to a large extent the service observer is responsible for handling her assignment without much immediate supervision. The rooms in which service operators work are quiet and the duties less restricting. Small town central offices do not have regular service observers, and even in the large cities jobs as service observers are relatively few.

WOMEN'S JOBS IN THE TRAFFIC DEPARTMENT— ADMINISTRATIVE OFFICES

CLERICAL JOBS

An understanding of central office operations and equipment is a basic background for most of the jobs in the administrative, district and divisional offices of the traffic department. The opportunities for work in the administrative offices are limited, as less than 5 percent of the women in the traffic department are in these offices.

Operating experience is considered essential for clerks who summarize the data and prepare the reports which are used by superintendents and engineers in managing and planning the work of the traffic department. Central office experience gives familiarity with operations, terminology, and procedures. Many of the women in the administrative offices reported experience as supervisors, central office clerks, and chief operators, as well as operators. Beginners in the industry may be hired for a relatively small number of clerical jobs such as messenger, mail clerk, duplicating machine operator, typist and stenographer, but even for these jobs, transfers are sometimes made from the central offices. Work histories in the administrative offices of the traffic department show that approximately three-fourths of the women have more than 10 years' experience in the industry. Training is given on the job by experienced clerks.

Jobs are usually graded, and in most offices some progression is possible on a merit basis, as well as through seniority rate increases. Group leaders are compensated by being paid in the next higher grade range.

Job classifications vary materially from office to office. In the smaller offices such titles as *district clerk* and *general clerk* cover a wide variety of duties, whereas the largest office lists more than 50 job designations to cover those duties. *Peg-count clerk*, *force adjustment clerk*, *methods clerk*, *service summarizer clerk*, *line assignment clerk*, *engineering clerk*, *analytical clerk*, and *technical clerk* are titles indicative of those frequently given clerks working on administrative data and reports. Also, the PBX instructors and supervisors, who as liaison representatives of the company service customers who have private branch exchanges, are part of the traffic general offices, as are the employees of the employment office. Service observers are sometimes an auxiliary part of the central offices and at other times are classed with traffic department administrative office workers.

PEG-COUNT CLERK

Calls handled in the central offices are counted and classified under a great many headings. The enumerations are made in the central offices and the work sheets sent to the administrative offices for summarizing, tabulation, and analysis. Clerks usually designated as

peg-count clerks examine the sheets for errors, omissions, irregularities, etc.; when necessary have corrections made in the originating offices; then post and tabulate the counts under prescribed headings. Calculating machines and slide rules are used as computing tools. Counts by positions, services, and time periods are compiled into many tabulations. Telephone operating experience gives the needed background for handling peg-count data. Procedures are standardized, but the statistical work requires close concentration, accuracy, and ability to compute and equate work loads at the various operating boards.

FORCE ADJUSTMENT CLERK

Force adjustment clerks often have had experience as peg-count clerks and the job is usually graded higher than that of peg-count clerk. A force adjustment clerk correlates peg-count data and employee or man-power needs per hour, as a basis for assigning operators and supervisors to meet traffic needs and to secure an equitable distribution of force; she determines the numbers of operators and supervisors to be assigned by tours for week days, Saturdays, Sundays, and holidays. Master schedules for each central office are developed quarterly or more frequently and are revised in whole or in part as changes in equipment, rates at which calls are made, and operators' experience require. Coefficients for experience, position loads, and other qualifying factors must be applied. Calculating machines and slide rules are used in statistical work. Summaries of force statistics are made on a variety of forms and reports as required by the traffic superintendents. The work requires accuracy and ability to follow outlined statistical procedures.

SERVICE SUMMARIZING CLERK

Detailed recordings of all the factors affecting the handling of calls and rendering services are made by the service observers (see under central office jobs, p. 20). Summarizers check their records, post items to summary sheets, summarize errors made in service by type, calculate daily and cumulative indices reflecting the quality of service rendered by each office. They make up special reports of errors in service and prepare weighted reports on offices, districts, and areas as a whole. Experience as a service observer is required. The work is of a statistical nature and calculating machines and other computing devices such as charts and slide rules must be used.

ENGINEERING AND TECHNICAL CLERKS

Engineering and technical clerks serve as clerical assistants and statistical clerks to traffic managers and engineers in preparing and keeping up to date charts, blue prints, circuit route maps, etc. They work on studies of circuit usage and on estimates of future circuit requirements. They write circuit or trunk orders. They tabulate and summarize traffic expense data of all kinds. The work of these clerks usually requires not only a background of operating experience but an all around knowledge of the work of the administrative offices. They must be able to do varied statistical work and use judgment in handling data.

TRAFFIC-CONTROL CLERK

In the large cities which serve as central switching locations for large volumes of toll business, traffic-control bureaus or offices are concerned with any actual or potential service inadequacies and with the administration of toll circuits. Traffic-control clerks receive frequent reports by telephone or teletype of delays due to overloaded circuits. Delays, cut overs, and circuit conditions are posted on wall charts. The clerks determine what re-routing of circuits is necessary and, under only very general supervision, arrange by teletype and telephone for temporary re-routing and re-assignment of circuit from one toll point to another. The work requires a background of toll operating experience and ability to work rapidly in making decisions on re-arrangement of routes.

PBX INSTRUCTOR

The PBX instructor, or *PBX supervisor*, is a part of the staff of the general traffic administrative offices. She serves as a liaison between telephone company and customer for giving and securing good service.

The PBX instructor or supervisor visits PBX boards in her district, observing the operators at these boards, giving suggestions for improving service, training new PBX operators, making special surveys of traffic on PBX boards for re-arrangement of equipment and changes in the installation. She usually also trains PBX operators in the company's own offices. She must know company policies and understand equipment so well that she can make recommendations for changes. She must exercise judgment in dealing with PBX customers and their switchboard employees. She must have had operating experience and often has had additional experience, both as supervisor of operators and as service observer.

TWX INSTRUCTOR

Her job is similar to that of a PBX instructor except that she trains operators of teletype equipment.

EMPLOYMENT CLERK

Policies and practices relating to employment and personnel activities of the traffic department are usually the responsibility of the traffic superintendent or, in the large cities, of an employment manager. Employment clerks and sometimes *interviewers* and *receptionists* handle personnel files, transfers, and employment inquiries. These jobs are filled by promotion from the operating department which gives a background of personal experience in the requirements and duties for the job useful in interviewing recruits and explaining duties.

DINING SERVICE CLERK

Wherever there are cafeterias for the traffic employees, clerks in the dining service section usually are recruited from the employees of the central office, although there is no direct relation between their duties. Sometimes women administer dining rooms and cafeterias. Dining service clerks are generally office clerks who have varied duties and responsibilities. A dining service clerk orders foods and supplies,

keeps the personnel records, prepares work schedules and pay rolls, keeps records of money receipts and expenditures, checks bills and vouchers, checks on costs, and may assist with planning of menus.

OTHER CLERICAL STAFF

Messengers, mail clerks, file clerks, duplicating machine operators, typists, and stenographers perform the duties indicated by their job titles. They make up a special group and do not necessarily have operating experience. Many communications that would ordinarily be handled by correspondence naturally are handled by phone; stenographic employees reported less dictation than usual and much more work on transcribing rough long-hand notes, which they are often expected to edit into report form, and transferring data to many varieties of forms, some of which are involved. Cutting stencils was also reported as a primary duty.

WOMEN'S JOBS IN THE ACCOUNTING DEPARTMENT

A large and well organized industry naturally has an elaborate system of account records and controls set up for its income and expense transactions. Many of the large telephone companies have millions of customers renting their services and equipment. The number of items for toll calls and measured and special services to be accounted for and recorded monthly is prodigious. Standardized accounting principles and procedures have been fixed by the Federal Communications Commission.

The accounting department is largely a behind-the-scenes clerical and statistical service which does not require the public contacts the traffic and commercial departments have. Accounting departments are centralized in the key cities of areas, and accounting employees work in main or divisional offices. Women clerks make up approximately 9 of every 10 of the nonsupervisory employees in the department and perform all types of clerical work. Men are primarily supervisors, general bookkeepers, or accountants and auditors.

Billing customers for revenue accounting, checking and computing voucher, pay roll and all types of expense items, classifying, analyzing, summarizing, and finally showing financial items in a series of statements and reports involve all types of clerical skills from those that are simple and routine to those requiring increasing degrees of experience and analytical ability. Job titles are more numerous in the accounting department than in traffic or commercial. In the largest company included in the survey, there were more than 100 accounting job titles. Terminology for jobs differed considerably from company to company and duties differed somewhat, depending on the size of the company and on the organization of the department.

REQUIREMENTS FOR EMPLOYMENT

Assembling, analyzing, and summarizing financial items requires more experience and knowledge of procedures than the first sorting, filing, and recording of tickets and vouchers. Jobs in the accounting departments were ranked in groups in accordance with the difficulty of the job. The number of such groups varied from three to seven in the companies surveyed. General practice was to employ young, inexperienced workers for the beginning or lowest level jobs and to fill the more complex and higher level jobs that required experience by upgrading or promotion. However, a job title often was found to involve several different degrees of skill and responsibility in processing data, and the same job title, for example, "pay-roll clerk," might therefore appear in several of the group classifications.

In all companies the general requirement for employment in the accounting department was graduation from high school, and this requirement had been adhered to, so that the proportion of high school graduates was high in all companies. Since many of the jobs or work steps in processing financial items require the use of office machines

such as calculators, billing machines, addressing machines and typewriters, preference is often given to beginners who have training or experience in their use.

TRAINING ON THE JOB

Training in the accounting department was almost entirely the responsibility of each unit or division. Detailed instructions on all regular routines have been developed and issued in company manuals and bulletins for the different units. For many of the beginning jobs little instruction other than demonstration and a few days close supervision is needed. Training is largely by co-workers or senior clerks. In most companies the practice is to train each employee for several tasks in each division in order to give flexibility to each work unit and prepare employees for promotion to higher rated jobs in the same or other units. There is no formal training period, and training methods are adjusted to individual and work needs. Because of the scarcity of and need for calculating-machine operators, some of the companies had given employees intensive training and drilling in their operation either during or after work hours. Supervisors and senior clerks in some of the companies had been given training courses in job instruction methods similar in content to courses sponsored by the Training Within Industry Division of the Federal Government.

As requirements and training for all jobs in the accounting department follow the same general plan, they will not be discussed under individual job descriptions unless deviations from the general plan exist.

ORGANIZATION OF THE DEPARTMENT'S WORK

The accounting department has two main divisions, the revenue or income accounting division, and the disbursement division which keeps the records of money spent for pay rolls, materials and service, and costs of carrying on the business.

The *revenue division* work units prepare and send out the bills to all the company's customers, allocate revenue and settlements with other companies, and summarize and make reports on all items which are the source of income. This division is several times as large as the disbursement because of the many customers who must be billed for telephone service.

Telephone bills are issued monthly to customers, and, to keep the flow of work equalized, the month is divided into six billing periods, customers are assigned to one of the six periods, and bills go out daily. Steps in billing include printing and addressing the blank bill and its stub on specially designed addressing machines; sorting and arranging the tickets for charges for services in addition to monthly rentals, such as tickets for measured, suburban, and long-distance service; checking rates for toll charges; entering charges, taxes, and other adjustments; typing statements for toll and other special charges; totaling statements of extra charges to accompany bills; preparing final bills; checking and balancing all the various entries; and mailing the bill with its enclosures.

More than half the clerks have duties concerned with preparation of customers' bills. Much of the preparatory work for billing cus-

tomers is routine and repetitive and can be carried on by clerks with a minimum of training and experience. Operating the business machines used in billing requires machine skills and some background in company procedures and routines and usually was found to rank in a mid range of skills. Handling toll-ticket data for settlement reports, making special studies, and preparing analytical and statistical reports on the many items of revenue require experience and varying degrees of judgment in handling materials and are usually performed by clerks with considerable experience in the company.

The *disbursement division* receives expense and cost items from all departments of the company. The pay-roll records, the material records for costs of telephone equipment, wire, poles, and plant equipment and properties, distribution of labor and materials items, taxes, insurance, maintenance, depreciation, and all recording and allocating of expenditures and preparation of costs and related reports are within the scope of the disbursement units. There is more accounting, statistical, and reporting work in the disbursement than in the revenue units and therefore a correspondingly larger proportion of jobs requiring experience and knowledge. Often the general books and final reports are the responsibility of this division. Beginning jobs are not as numerous, and vacancies in the lower level jobs are often filled by transfer from the revenue division.

ROUTINE BEGINNING JOBS ¹

Jobs requiring little experience and found to be filled for the most part by women who had less than 1 year's service were those of *messenger, mail clerk, file clerk, bill-enclosing clerk, measuring clerk, sampling clerk, ticket-sorting clerk, ticket-counting clerk, ticket-arranging clerk, and ticket-rating clerk*. Most of these jobs are in the revenue division and their titles themselves explain the simple and repetitive duties involved. Measured service and toll tickets are forwarded from the traffic department where preliminary sortings have been made and rates have been checked. Measuring clerks weigh, or use some other methods of gaging, the volume of tickets received from the different exchanges. Beginning clerks sort tickets by exchanges and telephone numbers into billing books. They check toll tickets for rates and arrange them by tax groups. Before sorting, sampling clerks select a prescribed proportion of the toll tickets and copy entries for a continuous study of long distance business. Measured service and interzone tickets are counted, sorted, and incorporated in the billing data assembled for machine billers. Mail clerks sort, deliver, and pick up outgoing mail. Bill-enclosing clerks check to see that all supplementary statements are included, insert bills in envelopes, and operate machines which seal and stamp the envelopes for delivery to customers. Adding clerks make simple computations on adding machines. All these jobs are routine and repetitive, and the work is closely supervised and checked by more experienced clerks.

¹ Job titles for the same or similar duties differ considerably from company to company and, in view of the large number of titles reported, it is impractical to describe the detailed duties under each job title as reported by employees in interviews. Jobs of similar classification and duties have been grouped together under their most common title and duties described are those most frequently reported.

OFFICE MACHINE OPERATORS

Some women are hired as office machine operators, but most begin in the department on such jobs as that of ticket clerk, on which they become familiar with the terms and many symbols used by the telephone industry.

TOLL BILLING TYPIST

Toll billing typists operate special electromatic typewriters, listing on a continuous roll of forms all the toll calls made by the subscriber during the billing period. The toll tickets come to the typist sorted by telephone exchange, number, name, and date order, rated and taxed.



Accounting department clerks sort tickets recording toll calls.

The machines used have special keys; most frequently used numbers are combined on one key. The toll billing typist must be accurate and fast on the machine and be dextrous in handling the tickets. A short period of instruction on the special attachments of the machine is given by supervisors or senior clerks on the job.

TOLL ADDING CLERK

The toll statements usually are added by clerks using calculating or nonlisting adding machines. The job is simple adding but the clerks must be dextrous and efficient in handling the statements. They must be rapid and accurate.

ADDRESSING MACHINE OPERATOR

Addressing machines print the bill forms for the regular customer statement with triplicate stubs, one for the customer, one for the commercial, and one for the accounting department. The forms show the bill date, customer's name, address, telephone number, and spaces

for an itemized statement of charges. Adjusting and setting up the large printing-addressing machines and supervising the work usually is done by men, as lifting and feeding the large rolls of paper into the machine is considered too heavy for women workers. Women clerks, termed *graphotype clerks* or *addressing machine clerks*, make the name plates showing the identifying information about the customer, file the plates, keep the files up to date from changes shown by service orders, and feed plates to the addressing machine. The work is varied and involves considerable lifting of trays. The number of women working in the addressing machine section is relatively small. Some of the clerks had many years of experience in the unit and were classed in the intermediate levels of skill. In large cities, there is some dilution of the job; new clerks do the filing and check changes in plates and more experienced clerks make the plates and assist with machine operation.

In the pay-roll department addressing machines are used for preparing pay-roll sheets, checks, and service records. The machines are the regular type commercial machine and women clerks were employed as all around operators making the plates, keeping the files, and operating the machines.

BILLING MACHINE OPERATOR

The billing machine operator prepares the customer's monthly statement. She receives the addressed statement and stubs prepared by the addressing unit and billing books prepared and arranged by the ticket clerks. These books show each customer's regular service charge, unpaid balance, and charges for extra equipment, directory advertising, local and interzone calls on measured rates, toll call statements, telegrams, etc. On specially designed billing machines the operator lists the charges, manipulating designated keys for entry spaces and totals. She must exercise care and pay close attention to the details to be listed, and is working under the pressure of a production schedule. The work is repetitive and routine. It requires a knowledge of tickets, billing symbols, and preliminary procedures.

The preceding are typical machine operator jobs. Production schedules have been determined for all such jobs and records are kept of individual production and errors as a basis for rating and promotion. All the work is checked and closely supervised. Strains on the billing jobs reported by employees interviewed were those of speed, close attention, and eyestrain, and some of the addressing machine operators reported that lifting trays of address plates made their job more physically fatiguing than those of other women clerks.

Tabulating machine operators were reported in only one of the five accounting departments included in the survey. A *key-punch-machine operator's job* was regarded as a beginning job, whereas *operators of tabulating, sorting, and verifying machines* were ranked with general or intermediate clerks.

Calculating machines are used extensively for adding, subtracting, multiplying, dividing, throughout the accounting department. Pay-roll clerks, analytical clerks, and report clerks use them as tools incidental to their job. *Machine computing clerks (calculating machine operators)* employed as such have duties ranging from routine

adding and computing to work which requires specialized knowledge and experience. Many are on production quotas. Special training has been given them, as well as others who use the machines incidental to their other clerical duties.

PAY-ROLL CLERKS

One of the largest divisions of disbursement accounting is the pay-roll section, which computes and checks the earnings of and amounts due each employee. The term "pay-roll clerk" covers a wide range of duties and oftentimes is classified at two or more group salary levels. A pay-roll clerk may be on a routine, repetitive job or may be working on analytical and summary reports which require judgment, experience, and ability to analyze varied data.

All department and area offices in the territory served by the accounting department send in their weekly, bi-weekly, or semimonthly pay-roll sheets listing employees; their rates, their normal, overtime and Sunday hours; shift differentials (for traffic department employees) and all other information needed for computing earnings and deductions. *Pay-roll preparation clerks* total hours and compute total earnings from special charts or with the use of calculating machines. The same or another clerk may complete the pay roll, making the deductions for social security, union dues, hospitalization, bonds, etc. All computations are checked and verified by verification clerks or senior clerks in the division.

Addressing-machine operators prepare and file plates for individual employees according to instruction, and operate addressing machines for setting up pay-roll sheets, checks, and such other lists of employees as may be needed. Beginning clerks are sometimes employed for this work.

The pay-roll division keeps service records for all employees in its area. *Service-record clerks* in pay-roll departments maintain individual records, arranged in pay-roll order, for each employee, showing length of service, age, job classification, rates of pay, changes in classification, and increases. They check the pay roll with the service record, and they keep files current, adding new employees and removing terminations to dead files. If there are discrepancies in pay-roll rates and service record entries, they telephone or send out queries for explanations. They exchange information with other telephone companies on service records of employees who transfer in and out of the local company. As incidental duties they often keep records of social security numbers and assist report clerks in securing data. Their duties are those of personnel record clerks responsible for keeping an accurate, active file of the rates, classifications, and service status of all employees. The service-record clerk was an experienced clerk with several years of service on other pay-roll jobs.

Control clerks balance the pay rolls, checking deductions, overtime, benefit payments, and other pay-roll distribution items against the controls which have been prepared. They were usually clerks with years of experience.

Pay-roll voucher clerks audit and compute expense accounts and other receipts or items for which employees must be specially reimbursed. This, too, is a job to which experienced clerks are promoted.

Pay-roll reports clerks, or *statistical clerks*, summarize and compile, from service and pay-roll records, a large number of requested reports

on employment, earnings, and other statistical data. Their work is varied and responsible, the job usually one of the highest rated for women in the accounting department, and it was always held by employees who had had experience in the pay-roll department.

OTHER TYPICAL JOBS

The jobs described below are graded as intermediate, general, or high, and are typical of jobs held by experienced women clerks. They are all jobs which are covered by collective bargaining. Duties, titles, and rank differ somewhat from company to company, depending on the number of employees and organization of the work.

ASSIGNMENT CLERK

The assignment clerk gathers together tickets, vouchers, blank forms, and any data needed by a unit of clerks who are working on a job such as billing. She gives out the work. She must be able to detect errors and irregularities in data and have them adjusted before the work is assigned to clerks in the unit. She must be familiar with all the duties performed in the unit and must follow the progression of work. She assists in training new clerks.

BALANCING CLERK

This clerk computes and proves the distribution of summaries or totals such as those for customers' billing, coin box settlements, pay-roll distribution, and other revenue and expense apportionments. A balancing clerk in the customer billing section must be familiar with machine billing, toll checking and billing, order treatment, and controls; she verifies cash items posted on customers stubs by check against message rates, and checks stub totals against control tapes. The balancing clerk uses a calculating machine. She must be familiar with all the steps in billing preliminary to her work. Clerks on this job usually reported three or more years of experience.

CASH-POSTING CLERK

This employee compares receipted stubs with customers' accounts, makes records of full or partial payments, and makes entries for adjustments on cards or other records. She uses a calculating machine. Accuracy and speed are required. The job is routine and oftentimes was found to be a second level job to which beginning clerks in the revenue department had been transferred.

COIN-BOX CLERK

The coin-box clerk checks and posts receipts to coin-box station accounts. She checks toll tickets for each account and computes taxes and commissions to be charged to the account. She furnishes information to the commercial department and checks with them on conditions of accounts. She records data taken from service orders on equipment and on service. There were often several levels of classification for coin-box clerks, the work varying from routine at the lower level to balancing summaries and preparing analytical reports at the advanced, senior clerk level.

CONTROL CLERK

This clerk summarizes accounting items and works up totals for debit and credit postings for journal entries and for balancing distributions. She must be familiar with the preliminary stages of the work and with the balancing for which controls are computed and, in general, must have a knowledge of bookkeeping debit and credit principles. She uses a calculating machine. Her job is filled by promotion and is rated as a senior or high grade job.

COST CLERKS

Clerks engaged in determining costs of materials, labor, selling, and administration had a variety of job titles and were most commonly termed labor distribution clerk, materials clerk, custom clerk, motor vehicle clerk, estimate clerk, cost record clerk, and sometimes cost clerk. All operate calculating machines. Much of the work of women cost clerks is concerned with the plant department's construction and installation work.

Labor-distribution clerk.—From time sheets and work reports, this clerk computes and equates hours into money value for all types of construction projects and maintenance, making work sheets and summaries for each designated job or project. She distributes and totals costs on regulation accounting forms. The procedures are specifically outlined, and the work is checked by verifiers.

Materials clerk.—This clerk computes, and posts to designated projects and accounts, the cost of materials—for example, poles, wire, cables—all types of supplies. She maintains records of the values and types of supplies and equipment, and she classifies miscellaneous vouchers of all kinds made out by foremen. The work is similar to that of the labor distribution clerk, and sometimes the same group of clerks work on both labor and material costs.

Custom clerk.—The custom clerk posts and keeps records of construction and maintenance work—labor, materials, and overhead—for other companies, and for government, commercial, and industrial establishments. The job requires experience on other cost work and is one on which men were employed in several companies.

Motor vehicle clerk.—This desk keeps records of all trucks and motor cars used by the company and of expenses for tires, gas, repairs, depreciation, etc. She posts expense vouchers for motor vehicles. She determines and equates unit costs and posts them to the projects and accounts to be charged.

Estimate clerk.—The estimate clerk, on the basis of estimate data which are supplied her, sets up accounts and posts estimated expenses of projects to be carried on in the current period. She posts actual expenses against estimates. The work is similar to that of other cost clerks.

Cost clerks follow clearly outlined methods. All the detailed procedures and work sheets they use are, in general, standardized. They

must use judgment in handling and scrutinizing the items which are distributed, and must have a knowledge of the company's terminology and of the symbols used. Little independent initiative is required of them. The work is in the nature of statistical tabulation, and all of it is checked by senior clerks in the section.

The work of cost clerks and the work of reports clerks overlap and dovetail in many instances, for cost clerks make up periodical composite reports of expenses. Cost clerks are in intermediate, general, or high grade classification groups, depending on whether their duties are primarily posting and computing, or primarily summarizing and reporting total costs, or both.

GRAPHICS CLERK

The graphics clerk copies charts, graphs, and drawings for accounting statistics. She must have aptitude for drawing, be able to letter,



Drafting—work characteristic of the graphics clerk's job.

and must be accurate. The duties of this job sometimes are combined with those of the *report clerk*.

ORDER-TREATMENT CLERK

The order-treatment clerk maintains records of types of customers' service, equipment, cash deposits, etc., and as service orders are routed to her, posts charges to these records. Customers' monthly rental or contract cards are kept currently posted by her for billing. She makes statistical tabulations and compiles monthly summaries of changes and of current fixed customer charges. She must have a knowledge of service orders and of types of service and equipment.

The job was usually classified as of intermediate or of general rank in level of experience and skill. "*Station record clerk*" and "*service order clerk*" are other terms sometimes used for the job.

SPECIAL-ACCOUNTS CLERK

This clerk sets up government accounts and does special billing for large accounts that cannot be handled under regular standardized procedures. The job requires experienced senior clerks who are familiar with company procedures and who are capable of exercising judgment.

SETTLEMENT CLERK

The settlement clerks compute and work up pro-rating figures for use in settlement payment of commissions and of switching charges and for joint line facilities with the American Telephone & Telegraph Co., and with other associated and independent, interlocking-service telephone companies. They post all messages and revenue details on service over other company lines. They apply pro rata figures and determine the amounts to be debited and credited. The senior settlement clerk prepares summaries and settlement statements. The job requires experience in and knowledge of toll billing and ability to analyze figures and to work with involved statistics. The job is rated as a high grade job. All clerks interviewed had long work histories. Other titles reported for the job were "*connecting company records clerk*," "*exchange rate audit clerk*," and "*toll rate record clerk*."

REPORTS CLERK

Since the accounting department receives record and financial data from all departments, and since accounting work is of a statistical nature, factual reports covering a great many phases of the business are prepared in the accounting department. A reports clerk makes periodic summaries of certain revenue, expense, or other statistical information which is processed by the accounting department for the general books and for statements and special reports. She brings together all data pertinent to the particular subject being accounted for.

Figures are tabulated, totaled, and reported, usually on prescribed forms. The reports clerk must be familiar with sources of information and with the preparatory work necessary for the summaries. She selects and runs down all needed information, must have the analytical ability to understand and explain fluctuations, and must use judgment in handling material. Reports clerks do not work under immediate supervision and are required to plan their work and to allot their time to meet report dates. The job is one of the top ones for women among jobs covered by collective bargaining.

REPLACEMENT CLERK

This clerk replaces workers who are absent, and she fills in on several jobs as need arises for extra assistance. A replacement clerk was reported as familiar with three or more jobs. She sometimes instructs new employees and may act as a senior clerk in one or more units. While not engaged as a substitute or special assistant in a unit, she may be in training for a higher ranking job. The job may also be a combination verification-replacement clerk job.

VERIFICATION CLERK

The verification clerk checks the quality (and sometimes quantity) of work of several clerks in one or more groups. She is graded one level above the clerks whose work she checks. She must be able to concentrate on detecting errors, using calculating machines, and working rapidly. All routine ticket work and all customer billing is checked and verified by her.

SUPERVISORY CLERK

This clerk supervises the work of a unit of clerks in divisions where a larger number are employed. She does not supervise personnel. Her duties are often combined ones of a replacement, a verification, and an assignment clerk. Senior supervisory jobs that carry responsibility for over-all personnel and work supervision are on a management level and are not covered by collective bargaining.

MEN'S JOBS

Men are numerically a minority group in the accounting department and they mass in the higher level jobs primarily outside the field of collective bargaining. Wage agreements in the accounting department are sometimes separate for men and women, and, as in Illinois Bell, Chicago, in 1944, there was a dual rate structure, one for men and one for women. Women in the upper level jobs rarely could attain the maximum rate of the lowest-level job for men. There is neither equal pay nor equal opportunity for women.

During the war period at least, few men were employed on routine clerical jobs. All but a few of the men designated as covered by collective bargaining were on assignments such as senior clerk, reports clerk, junior and assistant accountants, and audit clerks. Most of the men had long service records and were at the maximum of their classification, but there were many women with equally long service records who were not allowed to qualify or be considered for the higher paid jobs. Men and women describing their jobs as control, custom, special accounts, and reports clerks' jobs reported comparable duties, although in some companies their rates were different. In the scheme of men's job progression to the higher levels, they receive training on some and usually were reported as being paid more than the women who trained them.

WOMEN'S JOBS IN THE COMMERCIAL DEPARTMENT

The commercial department sells the company's services and conducts all business relations with the customers. The activities that are its primary concern are soliciting business, writing contracts for all kinds of service and equipment, receiving and processing orders for changes in and termination of service, collecting customers' bills, making coin box collections, maintaining customers' record files, adjusting charges and complaints, preparing and distributing directories, and forecasting future community needs for telephone service.

Women constitute the bulk (about two-thirds) of the department's force. The principal public-contact jobs held by women are those of *service representative* and *public office representative*, and *teller*. *Coach*, *instructor*, and *service observer* are allied jobs. *Service order writer*, *directory clerk*, *sales clerk*, *engineering and technical clerk*, *personnel clerk*, *typist*, *stenographer*, *routine clerk*, and *general clerk* are the most usual clerical classifications.

Men make up a larger proportion of the employees than in the traffic and accounting departments. Most of the men are authorized as coin box collectors, as salesmen (or outside representatives) of telephone services and directory advertising, as commercial engineers planning and estimating service requirements, and as supervisors and managers above the levels covered by collective bargaining.

PUBLIC CONTACT JOBS

Service representative, *public office representative*, and *teller* jobs offer the chief business office (commercial department) opportunities for women, and more than one-half of the women are employed under these classifications. In normal times the public contact jobs are filled by promotion from clerical jobs such as order writer, checker, mail teller, final account clerk, sales clerk, etc.

SERVICE REPRESENTATIVE

Service representatives make up the largest group of workers in the commercial department. In the commercial departments in Chicago and Kansas City, approximately 45 percent of the women were classified as service representatives. As operator is the key job of the traffic department, service representative is the key job in the commercial department.

The service representative specializes in serving telephone customers who telephone or write the business office regarding new service, changes in service, complaints and adjustments, or who require information about their business relations with the company on any of its services. The service representative acts as company representative in serving the customers assigned to her.

In large cities that have multiple exchanges, blocks of customers by central office and telephone numbers are assigned to each representative who keeps all commercial records relating to her group, takes care of

all their requests, and does all the follow-up clerical work connected with collections and service records. The number of accounts assigned to a service representative varies with the type of customers—residential, business, or government—and with the specialization of duties in the particular office in which she works. The service representative has a tab-filing desk in which accounts are arranged by telephone numbers and are readily accessible. She is connected directly with the company's official board; operators at the official board have listings of the accounts serviced by each service representative and connect customers who call in to their designated representative.

The duties most commonly reported by service representatives are the following. She receives and carries out the clerical work connected with orders for new service, extensions, moving phones and equipment, changes in directory listings, disconnects, etc. She makes out contracts and contact memos. When changes in service are involved, she either writes the service order or prepares a memo for the service order writer.

The representative posts payments of bills and credits to accounts. She makes adjustments of complaints over charges in accordance with company practices, consulting with supervisor or manager if unusual conditions are involved. She keeps credit records and ratings. By telephone or letter she deals with overdue accounts for collection and must use judgment in applying company policies and in meeting special situations tactfully and effectively.

She answers intercompany requests for credit reports. She answers customer's questions regarding charges and services and miscellaneous queries; listens to grievances and seeks to appease customer and adjusts matters satisfactorily for both customer and company; and issues duplicate bills if this duty is not one assigned to other clerks. She keeps all records posted and files in order and may have miscellaneous clerical duties which vary with local offices. She makes periodic tabulated reports of contacts and work carried on and, as directed by the manager, makes special tabulations for company reports and studies.

SERVICE REPRESENTATIVE—GOVERNMENT DESK

In large cities a service unit or several clerks often specialize in handling customer contacts with government offices, especially with Federal Government offices. These accounts have their own peculiarities in forms which must be followed, billing dates, authorization regulations for contracts, and many other requirements not usual in ordinary business transactions. The detail to be checked and observed is such that where the number of government accounts is large, and especially during the war, special representatives have been assigned to government work. The job is broken down in somewhat different ways in different areas, but the work of a government service representative or government desk clerk is similar to that of other service representatives. Fewer accounts are handled but the accounts are apt to be more troublesome, especially in dealing with new offices and their frequent changes in quarters and personnel. Usually experienced service representatives have been assigned to this work.

In some offices visited, the service representatives working with government customers reported that outside men representatives have been assigned to making the initial contacts with government agencies

and to drawing up the contracts. All checking of contracts, carrying out of detailed arrangements, and contacting clerks in the offices concerned, however, have been left to the women. Those interviewed felt that follow-up procedures and completing contracts required more knowledge of procedures and much more exacting attention than the contacts made by the outside men whose services were compensated at much higher rates than those of the women.

PUBLIC OFFICE REPRESENTATIVE

In large cities customers who call in person at the company's business office are taken care of by the public office representative. In small offices the service representative and public office representative is one and the same person, and on the combined job she is sometimes termed *commercial agent*.

The public office representative in large cities usually has been a service representative and has had the same training and experience as that required for a service representative. The number of women who were designated as public office representatives was small, and often they were classed as *service representatives* on the pay roll and could not be distinguished from them. In some offices service representatives are detailed as needed from the inner record office to the outer public office and serve as both public and record office representatives. The public office representative does not have a definite assignment of customers but serves any who come to her desk in the business office.

The duties reported by public office representatives were the following. She takes applications for service installations and changes from customers calling at the office and fills out the necessary forms and routes them to the regular service representative for processing and record work. She answers inquiries and explains services. She listens to complaints, makes immediate adjustments where possible, and consults the service representative handling the account for any needed additional information. She makes out duplicate bills and checks and charges, working with the service representative in charge of the account; keeps a log report of contacts and summarizes them as a work report; and has miscellaneous clerical duties.

The duties of service representatives vary with the size of office. In small offices she is an all around business office employee. She deals with office and mail payments, and handles customer relations by phone, by mail, and by calls in person, and works directly under the local or district manager. In the larger cities service representatives are organized into units of 7 or 8 women under a unit manager and coach who directs and supervises their work.

REQUIREMENTS FOR THE REPRESENTATIVES' JOBS

Education.—High school graduation is a standard requirement. Some offices preferred girls with college training and more women had schooling beyond high school among the representatives than among any other occupational group.

Experience.—Normally beginners are not hired for training as service representatives. Vacancies are filled by promotion from lower-rated jobs in the commercial department such as tellers, order clerks, and general office clerks. During the war women were hired and trained directly for the job. A considerable proportion of the service

representatives interviewed had begun as operators in the traffic department, but the majority had long work histories as service representatives; there was little transfer and promotion from one department to another during the war when it was necessary to retain nuclei of experienced employees in all departments. Experience and training are important for service representatives because the job duties require knowledge of company organization, services, rates, equipment, and policies, as well as ability to function effectively in representing the company to its customers and ability to maintain customer records.

Training on the job.—Formal training in the commercial department or business office is concerned principally with service representatives. Before the war formal 7 to 10 weeks' training programs were usual in the large offices, but in the last few years training has been concentrated into 5- and 6-week periods. Beginners after a few days' or a week's orientation in the classroom are assigned to assist and observe experienced representatives for 1 or 2 weeks. Next they are given several weeks of classroom training and intensive drill by regular instructors on all the most common procedures and records. They are then sent back to work as assistants to regular service representatives. There is finally a classroom period for review and additional instruction before representatives are assigned to desks of their own. Training is continued on the job by the unit coach or unit manager. In small offices where a formal training set-up is impractical, the representatives receive their training through special coaching by experienced employees, through working with them, and by studying company manuals and instructions. Service representatives interviewed reported that it required at least a year to feel confident on the job and that they were constantly being coached and retained in procedures and methods of handling accounts and customers.

Responsibility.—Although procedures and practices are definitely formulated in company policies and manuals, the service representative must use considerable independent judgment in applying them and maintaining the good will of customers. She is held accountable for dealings with and records of all customers assigned to her. She is responsible for good customer relationships. She is under the general supervision of the unit manager, and the quality of her work is frequently checked by observations of managers and service observers.

PROMOTION OPPORTUNITIES FOR REPRESENTATIVES

Several times during interviews held in the course of the survey, information was volunteered that in the past men had been preferred or had been employed exclusively to interview customers in the offices and that for a long time some localities had shown a marked hesitancy to employ women on these jobs. Women, however, made good, and men in the business office are employed chiefly as commercial representatives to handle the larger accounts involving PBX installations. Women as yet have been given little opportunity to qualify for these positions.

Service and public representatives interviewed liked their jobs and often commented that they considered the job the most interesting one open to any considerable number of women in the company. There

are opportunities for a small number to be promoted to jobs as coaches, instructors, and service observers.

TELLER

Tellers as such are employed only in the larger business offices (commercial departments) and even in a large office usually comprise less than 10 percent of the women. They are sometimes termed *cashiers*, if working at payment windows, and *remittance clerks*, if handling payments by mail. Often the tellers work alternately as *public office tellers* and as *mail tellers*.

Tellers' duties are to receive and receipt full and partial payments of bills at the business office or as a mail teller, to check payments against bills, to receipt bill stubs, to sort and list stubs, and using an adding machine, to balance stubs and payments. They keep work sheets of receipts. They may prepare bank deposits, handle petty cash accounts, cash vouchers for employees, and may perform still other allied duties.

High school graduation is a standard requirement. Experience on other clerical jobs of a lower classification generally was required, except that during the war women were hired initially as tellers.

Tellers are usually trained on the job by working with experienced employees for several weeks. Frequently they are first trained in handling and balancing mail payments. In large cities, however, instructors are employed to present a definite course of study in classrooms and on the job. The period of such training is shorter than for a service representative. Interviewees reported periods ranging from 2 to 6 months at the end of which they felt they had acquired adequate background to perform the job confidently.

A teller handles money and checks totaling from several hundred to more than a thousand dollars daily, and must therefore be honest and accurate in money transactions. If a public office teller, she is a representative of the company and must have a pleasing manner towards customers. Tellers are under the supervision of a cashier or supervising teller, and, as procedures are outlined in detail, no special initiative is required.

The teller's most common promotional opportunity is to the position of service representative.

JOBS ALLIED TO PUBLIC CONTACT JOBS

SERVICE OBSERVER

Service rendered to customers by public contact employees such as service representatives, public office representatives, and tellers in the business office of the larger offices is observed and checked similarly to that of the telephone operator. The service observer has a listening position through which she can be connected with the telephones of the service representatives or with microphones inconspicuously placed on the desks of public office representatives and tellers. Her equipment is such that she is able to hear both the customer and employee. In small offices where there are no service observers, the manager of the office usually has observing equipment at his desk and, also, works so closely with his employees that he is able personally to judge the adequacy of the service.

The service observer's duties are to listen to conversations of

employees and customers in the business office, noting erroneous or misleading information given, and to observe the employee's manner and attitude toward customers, the time consumed, and the general effectiveness with which the call or personal contact is handled. She keeps a running account of the customer's and employee's conversation, using standard abbreviations which have been developed. She notes whether the customer seems satisfied with the service rendered. She summarizes each observation for the use of the unit and office manager. The observer also checks and reviews samples of all types of written reports, service orders, contracts, letters, etc., which are processed by the service or other public office employees.

The service observer's job is filled by promotion from service or public office representative positions where experience has trained her and made her familiar with all procedures involved in public contact jobs. She must be thoroughly familiar with the practices and procedures of the department. She must have good judgment and the ability to work independently. In large cities where several observers are employed, they may be under the direct supervision of a chief observer; where only a few are employed, they are generally under the supervision of the commercial manager for the district covered.

INSTRUCTOR

An over-all training program has been developed for service representatives throughout the Bell System. Service representatives are trained in small groups in classrooms equipped with desks, phones, and files like those used in the business office. The formal training period for service representatives varies from five to seven or more weeks of intermittent classroom instruction and practice on the job before assignment to a unit.

The instructor drills and instructs the students on all the most common types of customer contacts and on the related clerical work. She supervises and directs their on-the-job training with experienced representatives. She adapts training methods and drills to individual needs and keeps a record of each student's training and progress; adjusts and reworks general training course to meet local needs and forms; revises lesson plans to conform with current practices; and conducts retraining drills and instruction in new practices. She may train and prepare lesson materials for other business office employees such as tellers and coaches.

The instructor must have had experience as a service representative and must be thoroughly familiar with all the practices and policies of the business office. She must have ability to instruct. In some offices preference is given to women who, in addition to job experience, have had college or normal school training. The instructor is responsible to the business office manager, or, in large cities to the chief instructor, for the training of employees.

COACH

In the large cities service representatives are organized into units, 6 to 10 representatives to a unit, under a coach whose duties comprise on-the-job training, and a unit manager who has over-all supervision. The coach answers the questions of service representatives in her unit and assists them on special problems. She gives on-the-job training to new representatives assigned to the unit. She reviews their clerical

work and gives them instruction on weak points, explains all new practices and checks performance. She works as a relief representative when one is absent or away from her desk, and relieves the unit manager and does clerical work assigned by the unit manager. If there is no training instructor, she may train new representatives or she may serve as an instructor intermittently when new employees are taken on in more than usual numbers.

A coach is promoted from service representative. She must be able to instruct and work with a group. As a work supervisor and group leader, she is responsible for the work of the unit. She is not responsible for personnel supervision.

The preceding are the major business office jobs for women and employ considerably more than one-half the women. The jobs are related directly or indirectly to the work of handling customer relationships and usually are filled from jobs of a lower clerical rank.

CLERICAL JOBS

Job terminology varies considerably from one office to another, as, depending on the volume of business handled, does the breakdown of operations. Clerical jobs requiring neither experience nor special training are often grouped under titles such as *routine clerk*, *junior clerk*, or *business office clerk*. These are simple routine jobs performed under close supervision. They may require ability to use calculating machines and to do simple typing. Training is on the job by experienced workers or work supervisors. In each division or group there is a range in the difficulty and responsibility of the duties involved, those requiring experience and understanding of procedures being assigned to the intermediate or senior members of the group, who are sometimes termed *general clerks*, or *senior clerks*. A few of the jobs, such as those of the *technical*, *engineering*, and *telephone sales clerks*, require marked experience and ability and are filled by employees with long experience or special training.

Briefly discussed here, as typical of the duties of other jobs held by women in the commercial department, are the principal duties of the service order clerk, directory clerk, coin box clerk, final accounts clerk, telephone sales clerk, sales clerk, technical, or engineering clerk, and personnel clerk. *Typist* and *stenographer* are omitted; their duties are similar to those of typists and stenographers in other industries; they take and transcribe dictation, cut stencils, copy form letters, and carry on miscellaneous clerical duties assigned by the supervisor.

SERVICE-ORDER CLERK

Service orders originate in the contact memo made out by the service representative for new service or for changes of any kind in the service rendered by the company to a customer. The service order is a much processed form in the telephone business. Multiple copies are typed and routed to the departments and employees concerned—among others, to the wire-chiefs, testmen, and frame collectors in the plant department, the directory division in the commercial department itself, the traffic and accounting departments. In a small office one of the

service representatives prepares and types the orders, but in a large office the work on the service order is handled by service-order clerks. A group of service-order clerks may again be divided into service-order typists, service-order checkers, and service-order clerks having differing degrees of responsibility.

The duties of a service-order employee are to examine the contact memo, making certain that all needed information is shown, and, if not complete, to confer with the representative responsible for the order and obtain complete data. She assigns the service order a serial



Directory clerks in the commercial department.

number. She types multiple copies on fan forms, using special care that designated spaces and codes are followed. She checks orders with the original contact memo and routes copies of orders for distribution. She may make up reports of the number of orders processed and of types of service affected.

DIRECTORY CLERK

Compiling and publishing telephone directories is the responsibility of regional commercial offices. Clerical work associated with the compilation, editing, and general preparation of alphabetical, classified, and street or other directories is done almost entirely by women. Directory clerks may be classified with other clerks in the department as routine or general clerks, or may have special job titles, such as *directory compilation clerk*, *directory edit clerk*, *directory review clerk*, and *directory checker*. Job break-down and dilution depends

on the size of the office. A knowledge of typing is required for some of the jobs, but much of the work on the routine compilation of the alphabetical directory is a beginner's job and requires no experience. Checking, editing, and reviewing and most of the classified directory lay-out work is done by experienced employees promoted from the simpler jobs.

The work of directory clerks covers the following and similar allied duties. They compile directories, incorporating and merging changes in proper order, on special sheets or in directory manuscripts, from service orders or information teletyped to the directory division. They query any irregularities in orders. They delete listings for discontinued service. They check, edit, and review individual entries and the page make-up of directories. For the classified directory, they arrange and check bold type listings and advertisements, prepare layouts and dummy sheets, keep cut-out books (copies of the directory from which canceled ads have been deleted), and check and keep files of contracts for ads. They read and check printers proofs on directories, and prepare lists for directory distribution.

Work in the directory division is routine and repetitive but requires exactitude and close attention to detail, as errors cause customer ill will and financial loss. Senior clerks usually are responsible for checking and work supervision.

COIN-BOX CLERK

The clerical work connected with operating and managing pay stations is assigned either to clerks designated as *routine* or *general*, or to specially designated *coin-box* or *pay-station clerks*. As with service order and directory clerks, the amount of experience and responsibility varies with the size and organization of the office.

Typical duties reported by the coin-box clerk are: She operates and keeps records of coin-counting machines for each station or counts money and records receipts by stations, checks receipts of all pay stations against records of toll calls made at each station, passes out keys and other supplies to coin-box collectors, and prepares and keeps records of collectors' routes, and of the location of coin boxes by numbers. She keeps all types of records concerned with pay stations and their equipment as they relate to the business office. She keeps a report on each collector's automobile, showing mileage, charges, etc. She answers calls for information on coin-box-station locations, rules, and regulations.

FINAL-ACCOUNTS CLERK

The final-accounts clerk, where this specific title was used, had the routine clerical job of maintaining files of customers whose service had been discontinued and of referring to the files for credit data when requests for them were received from other companies or when the customer reapplied for service.

TELEPHONE-SALES CLERK

Selling classified advertising space in the directory is largely carried on by men on a commission basis. Bold type listings and some small, low-revenue accounts are in some offices sold by women through telephone solicitation. The women telephone clerks report that often they find prospects for the men who sell, but the women do not receive any

extra compensation for such accounts. Some telephone sales clerks state that certain of the accounts which the salesmen turn in as "turn downs" are handed over for re-solicitation by phone and that often the clerks succeed in securing new advertising or renewals but receive no commissions, even though the men would have been paid on a commission had they secured the accounts. Usually, when selling campaigns are not in process, the telephone sales clerks also do clerical work for the classified directory department. Selling requires initiative and good personality. Women interviewed who had done this type of work commented on the fact that they had no opportunity for promotion to regular outside-selling jobs.

SALES CLERK

Women designated as sales clerks, other than telephone-sales clerks, carried on the supporting clerical activities for salesmen selling telephone service and advertising space.

The sales clerk checks sales contracts, rates, and customers' credit rating; checks service orders for advertising space and special services; maintains records of sales of services by employees; keeps expense accounts connected with selling efforts; makes lists of sales prospects and prepares prospect cards for salesmen; makes out sales reports as directed; and answers phone inquiries about advertising charges and keeps records for follow-up visits to be made by salesmen.

The work is varied and requires experience and a knowledge of company policies. It is usually not considered a beginner's job.

ENGINEERING OR TECHNICAL CLERKS

The number of engineering or technical clerk jobs is small and they are usually filled by women employees with many years of service in the telephone company. They work with the commercial engineers and commercial managers in preparing reports on future service needs, or they may be assisting in compiling maps and data for setting rates. These clerks, under the direction of the commercial engineers, compile data on population trends and market developments, prepare maps and charts, and do varied responsible clerical work. The engineering and technical clerks must have initiative and ability to carry on with only general instruction and are all-around high grade clerks.

PERSONNEL CLERKS

The commercial department, like all other departments, has clerks in the various divisions concerned with records of employees within the department. These clerks prepare pay rolls for the accounting department; keep personnel files, attendance records, and vacation schedules; summarize work reports; figure proficiency ratings; and fulfill a variety of incidental clerical duties. They are usually experienced clerks who have served on several of the department's jobs. They work under only general supervision and are ranked as high grade clerks in most of the companies.

SUMMARY, WOMEN'S JOBS IN THE COMMERCIAL DEPARTMENT

The number of women employed in the commercial department in any company is only about one-tenth as many as in the traffic department. Women's jobs carry primarily clerical or a combination of

clerical and public contact duties. Women constitute the bulk of the employees of the group covered by collective bargaining and carry on almost all of the record work of the department. Men make up about one-third of the employees, but relatively few are employed on jobs ranked comparable to those of the women. Men are the commercial managers, supervisors of management level, commercial representatives, engineers, salesmen and coin-box collectors. Men, as beginners, may work on jobs of comparable rank to those held by women, but it is usually only as a step in their training or progression to higher paid levels. Opportunities to be promoted to these levels are, with few exceptions, closed to women.

Women hold practically all the routine, general, and stenographic jobs, and the teller and service-representative public contact jobs in the business office. Public contact jobs employ more than one-half of the women. Jobs are ranked or graded in classifications that are not always comparable or similar in terminology from company to company, but the levels of duties are similar. The general practice is to hire high school graduates for the beginning jobs, and, as openings occur, to promote from the lower groups to the higher paid levels on a basis of length of service and merit rating. For most women in the department, service representative represents the top job. Opportunities above this level are few for women; most of the higher level opportunities in the department are definitely closed to them. A few women were reported as commercial managers and commercial representatives in companies not visited, but throughout the industry women in such jobs are rare.

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*Duties include office-machine operation.

¹ See also, under *Clerk*, jobs marked with asterisk.

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175. Earnings in the Women's and Children's Apparel Industry in the Spring of 1939. 91 pp. 1940. 15¢.
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188. Office Work in 5 Cities in 1940:
 1. Houston (10¢); 2. Los Angeles (10¢); 3. Kansas City (15¢); 4. Richmond (15¢); 5. Philadelphia (15¢); Chart, Salary Rates in 5 Cities.
189. Part 1. Women's Factory Employment in an Expanding Aircraft Production Program. 12 pp. 1942. 5¢. (See Bull. 192—1.)
Part 4. Employment of and Demand for Women Workers in the Manufacture of Instruments—Aircraft, Optical and Fire-Control, and Surgical and Dental. 20 pp. 1942. 5¢.
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191. State Minimum-Wage Laws and Orders, 1942. An Analysis. 52 pp. and 6 folders. 1942. 20¢. Supplements through 1946. Mimeo. Progress of Minimum-Wage Legislation, 1943—1945.
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201. Employment Opportunities in Characteristic Industrial Occupations of Women. 50 pp. 1944. 10¢.
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 Part IV. Analysis of Industrial Home-Work Laws. 26 pp. 1945. 10¢.
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208. Women's Wartime Hours of Work—The Effect on their Factory Performance and Home Life. 187 pp. 1947. 35¢.
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217. International Work for Status of Women. (In press.)
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Protect Future Wage Levels Now (on minimum-wage legislation). 1946.
Unemployment Compensation—How It Works for Working Women. 1945.
Why Women Work. 1946. Multilith.
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