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UNITED STATES DEPARTMENT OF LABOR
BULLETIN OF THE WOMEN'S BUREAU, NO. 116

**A STUDY OF A CHANGE FROM ONE SHIFT
OF 9 HOURS TO TWO SHIFTS
OF 6 HOURS EACH**

UNITED STATES DEPARTMENT OF LABOR
FRANCES PERKINS, SECRETARY
WOMEN'S BUREAU
MARY ANDERSON, Director

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OF 9 HOURS TO TWO SHIFTS
OF 6 HOURS EACH

BY
ETHEL L. BEST



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UNITED STATES DEPARTMENT OF LABOR

WOMEN'S BUREAU

STUDY OF THE WORKSCHEDULE OF THE

A STUDY OF A CHANGE FROM ONE SHIFT
OF 8 HOURS TO TWO SHIFTS
OF 6 HOURS EACH

BY
ETHEL L. BERT



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.

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LETTER OF TRANSMITTAL

UNITED STATES DEPARTMENT OF LABOR,
WOMEN'S BUREAU,
Washington, October 19, 1933.

MADAM: I have the honor to submit herewith a report on the effects on women employees of a change in working hours and in shifts in an industrial establishment. In June 1932 this plant changed its workday from one shift of 9 hours to two shifts of 6 hours each. The facts courteously supplied by the management were augmented by data secured by the Bureau's agents in interviews with 309 women workers to obtain their conclusions and preferences regarding the change.

Women's Bureau Bulletin 105 presents comparable material for a plant whose schedule was changed in 1930 from three 8-hour shifts to four 6-hour shifts. I believe both studies are important in the present economic conditions.

This report has been prepared by Ethel L. Best, industrial supervisor.

Respectfully submitted.

MARY ANDERSON, *Director.*

HON. FRANCES PERKINS,
Secretary of Labor.

v

A STUDY OF A CHANGE FROM ONE SHIFT OF 9 HOURS TO TWO SHIFTS OF 6 HOURS EACH

INTRODUCTION

In industrial plants there has always been wide divergence in hours of plant operation as well as in hours of work. Operating hours are determined by the demand for the product and the nature of the process. Where there is a large market for the goods manufactured but it is not sufficiently stable to warrant increased equipment, an extra shift frequently is added. Where the process is such that continuous operation is necessary, as in steel, glass, or chemicals, the plant operates 24 hours a day, with an occasional complete shut-down for a short period for cleaning and upkeep. In continuous operation, the hours of work of any one person do not coincide with the operating hours, as from 2 to 4 shifts of workers are employed. In plants where only one day shift is worked, however, operating hours and the work hours of the individual normally are identical.

In plants with this one day shift or workday, a week of 48 hours has been considered reasonably good except in certain industries where, through mutual agreement or custom, the hours were 44. However, in industries such as textiles, tobacco, and laundries the weekly hours have been much longer.

Since 1930 there has been a tremendous increase in unemployment, and to remedy this considerable numbers of plants have divided the work among as many persons as possible, with the idea that half a loaf is better than none. In some establishments groups of workers have been employed alternate weeks, in others the working days of each week have been divided among the workers, and in still others—plants operating 24 hours—an additional shift has been introduced, with an extra group of workers hired and hours on each shift correspondingly shortened.

In the plant discussed in the present study still another plan was put into effect. This firm introduced two shifts of 6 hours on 6 days of the week in place of one shift of 9 hours and a 4½-hour Saturday. When the two shifts of 6 hours are worked at full capacity the workers are employed for 36 hours a week instead of 49½ as formerly. Operating hours were increased from 49½ to 72, more people were employed, and operating costs per unit of production were lowered.

The change to the 36-hour schedule took place in June 1932. With the exception of a few departments where the process was a continuous one and men only were employed, it affected the entire establishment. The change to 6 hours was not made in these men's departments, as the volume of work at the time of the change required only a 3-day week—too little to permit of any dividing of work and consequent

reduction of pay. The hours of the office force—8 and 44—were not changed.

Under the 49½-hour schedule a half hour on Monday to Friday was allowed for lunch; the machinery was shut down, and this time was not included in the daily operating schedule of 9 hours. Under the arrangement of two 6-hour shifts, each worker is given a 13-minute rest or lunch period, staggered so that other workers with the assistance of the supervisors can keep the machines in operation. This time is paid for by the company. No food may be eaten in the workrooms, but a cafeteria has been provided near the cloakrooms and only one or two minutes' walk from the workrooms.

Under the new schedule the number of women has increased. A count made at two periods—October 1931 and October 1932—showed an increase of 107.2 percent in the number of women employed.

Some changes and economies have been put into effect. Formerly each operator tended one machine on the line, but under the two-shift system, with overhead belts and better delivery of material, each woman operates two. Under the old system there was one packer to a single line; under the new system each packs for one and one half lines. In addition to supervising, the foreladies now help to instruct new workers, a change that resulted in the elimination of an instructor in each department and a saving in foreladies' salaries when they were reduced to the status of supervisors and instructors.

The number of men decreased by 17.3 percent; this was due not to a change in hours but to a change in production methods.

The pay of all women workers was on a straight hourly basis both before and after the change in hours, and with the exception of the foreladies no alteration in hourly rates was made with the change to shorter hours. Rates were from 27 cents to 33 cents an hour, varying with the work and the experience of the worker, with slightly higher rates for the supervisors.

Interviews were obtained by Women's Bureau agents in visits to the homes of 309 women, and the advantages and disadvantages of the change from 9 to 6 hours were discussed. The same methods were used and the same questions asked as in an earlier study by the Bureau of a plant that had changed the hours of work from 8 to 6 a day. There were, however, a number of differing conditions in the two plants that affected to a considerable extent the opinions of the women. The first plant surveyed had increased its hourly rates of pay so that at the time of the study (1932) the earnings of nearly one fourth of the women showed an increase; and though earnings of three fourths of the women were lower than those of 1930 because of the shorter hours, this decline was less than 20 percent for more than two thirds of the women.

In the plant in the present study, in which hourly rates were not increased, shortening the work schedule reduced earnings by 33 percent, those of foreladies declining even more sharply. Furthermore, the plant frequently had to cut its 6-day week to 4 and even 3 days, with earnings proportionately less.

Of the other factors influencing women's attitude in regard to the change, the most important are these: (1) In the earlier plant surveyed, the women, before the change, worked in three 8-hour shifts, 7 to 3, 3 to 11, and the night shift of 11 to 7, so that many had become accus-

tomed to hours other than a straight day shift and had already made the adjustment in their home conditions. In the plant studied more recently all the women had worked on the one day shift (7 to 4:30) and the earlier opening and later closing with the two 6-hour shifts were found inconvenient by many employees. (2) The majority of the women in plant no. 2 are young and single, in contrast to an older group in the first factory, who were married and had home responsibilities. This influence appears in the value placed on the extra leisure afforded by the shorter work hours.

On the whole, the management of the present plant, like the earlier one, feels that the change has been a success. More people have been given work, hourly production has increased slightly, the expense of the cafeteria is lower with no heavy meals served in the plant, and the cloakrooms and washrooms are less crowded. In fact, the management hopes, as business improves, to place the men in the other departments on four 6-hour shifts, so that the entire plant will be operating on a 6-hour basis.

SUMMARY

FACTS REPORTED BY MANAGEMENT

The change from one 9-hour shift to two 6-hour shifts was made in June 1932. The number of women employed increased by 107.2 percent between October 1931 and October 1932.

Hourly production increased slightly, due to the better upkeep of machines; all machines were not in use on either shift, and in case of a break-down work could continue on the machines not in use, and repairs be made without holding up production.

Cafeteria cost was decreased, as only light lunches were served.

FACTS REPORTED BY WOMEN

Schedule preferred

Of the 230 women who had worked on both the 9-hour and the 6-hour schedules, only 13.9 percent expressed a preference for the 6-hour schedule.

Of the 51 who had worked at this plant only under the 6-hour schedule, 47.1 percent preferred the 6-hour schedule.

Reasons given for preference

Principal reasons for preferring the 6-hour schedule:

More leisure.

Spreads work.

Less fatigue.

More time for home duties.

Principal reasons for preferring the 9-hour schedule:

Earn more money.¹

Earn more; better routine.²

More regular hours.²

Shift preferred

Nearly one half of the women reporting on preference liked the morning shift better than the afternoon.

Nearly three tenths of the women had no preference as to shift.

Use of leisure

Home duties.

Home duties, rest, and recreation.

Rest and recreation.

Extra sleep.

¹ Hourly rates remained the same with the shorter hours, so earnings decreased in proportion to the fewer hours worked.

² Two shifts of 6 hours each were worked instead of one of 9 hours, so the beginning time of one was earlier, and the ending time of the other later. Women worked on the shifts alternately—on the morning shift one week and on the afternoon shift the next week.

Arrangement of meals

The arrangement of meal hours was more difficult than on the 9-hour day. Work on the morning shift was less upsetting to meal hours than work on the afternoon shift.

Alternating the shifts each week made the problem of meal hours more difficult to arrange; nevertheless, three fourths of the women preferred this arrangement to working the same shift each week.

During the 13-minute lunch period allowed in the plant, food was taken either regularly or occasionally on the morning shift by 90.8 percent of the women and on the afternoon shift by 82.4 percent of them.

Effect on earnings

Hourly rates in general were unchanged and varied from 27 to 33 cents; daily earnings were reduced one third by the change from 9 to 6 hours. For supervisory work the rate was decreased; foreladies were reclassified as supervisors or instructors and their pay was reduced.

Personal history

Nearly three fourths of the women were native born; only 6 percent were from non-English-speaking countries. Three fourths of the women (74.8 percent) were under 25 years of age; only 3.2 percent had reached 35.

Two thirds of the women were single; only 3.2 percent were widowed, separated, or divorced.

Nearly a fourth (23 percent) reported less than 6 months' service in the plant, due largely to the extra shift. About seven tenths (71.2 percent) of the women had been 1 year or more with the firm; about one seventh, 5 years or more. A greater proportion of married than of single women had been with the firm as much as 5 years.

PREFERENCE FOR A 6-HOUR OR A 9-HOUR DAY

That women work to earn a living and not some extra pin money is shown in the present study by the importance to the workers of the amount in the pay envelop in comparison with several hours of leisure. At the time of the survey, the late autumn of 1932, many of the women interviewed were responsible not only for their own support but for that of an entire family, and those living away from home frequently sent part of their week's earnings back to their families. Though hourly rates were the same before and after the change to shorter hours, the decrease in actual earnings was marked, even when full time was worked. As the demand in the industry is irregular, the work periods vary from 6 to 4 and even 3 days a week. The following figures illustrate the difference in earnings between the old hours and the new under full and short weeks.

| Hourly rate | Former 9-hour shift, 5½ days | Present 6-hour shift on— | | |
|------------------------|---------------------------------------|--------------------------|---------|---------|
| | | 6 days | 4 days | 3 days |
| Lowest, 27 cents..... | \$13. 37 | \$9. 72 | \$6. 48 | \$4. 86 |
| Highest, 33 cents..... | 16. 34 | 11. 88 | 7. 92 | 5. 94 |

When these effects are realized it is not surprising that only a fifth of all the women reporting expressed unqualified preference for a 6-hour day rather than one of 9 hours. Many who liked the shorter workday agreed with the woman who said, "Six hours would be swell if they would keep up the pay." Another, who expressed herself in favor of the 9-hour day, would have preferred 6 hours if work had

been steadier; "I should be crazy about 6 hours if we were sure of 5 days a week."

It is not surprising to find that a much larger proportion of the employees who had worked at the plant only under the 6-hour schedule than of the women who had worked under the two sets of hours preferred the 6-hour day.

| Schedules worked at plant studied | Women who preferred— | | | |
|-----------------------------------|----------------------|---------|---------|---------|
| | 6 hours | | 9 hours | |
| | Number | Percent | Number | Percent |
| Total..... | 56 | 19.9 | 225 | 80.1 |
| Both 9 and 6 hours..... | 32 | 13.9 | 198 | 86.1 |
| 6 hours only..... | 24 | 47.1 | 27 | 52.9 |

This difference may be attributed to the decline in earnings of women who had experienced the two sets of hours and who were doing the same work as before, while the woman who had never worked the 9-hour schedule compared the 6-hour day and its pay with her former jobs or with no job at all. One girl said, "I'm lucky to get any job." For her there was no decrease from earnings considerably more adequate, but a change from idleness to employment.

When a comparison is made of the women's reactions to the reduced hours in this plant and in the one surveyed 6 months earlier, the following statement appears warranted: If there is sufficient work to give full time to employees on the reduced schedule and the hourly rate is increased so that weekly earnings do not decline too sharply, the shorter hours are preferred by a large majority of the women; but if the weekly hours are reduced, the volume of production does not permit a full week's work, and the hourly rates remain unchanged, the reduction in earnings is so great as to overcome, in the opinion of most of the women workers, the benefit of shorter hours.

Only one fifth of the women supplying such information in the present study were favorable to the reduced hours, though in the plant previously surveyed, where rates were increased and full time was worked, over four fifths preferred the 6-hour shift to the longer one. There were, no doubt, some minor factors influencing this result, but the interviews brought out clearly that the principal reason for the less favorable opinion in the present study was earnings.

Married women showed a greater appreciation of the 6-hour day than did single women, while none of the women who were widowed or not living with their husbands liked the shorter workday.

| Marital status | Preferring 6 hours | | Preferring 9 hours | |
|--------------------------------------|--------------------|----------------------|--------------------|----------------------|
| | Number | Percent ¹ | Number | Percent ¹ |
| Total..... | 56 | 19.9 | 225 | 80.1 |
| Single..... | 31 | 16.8 | 154 | 83.2 |
| Married..... | 25 | 28.7 | 62 | 71.3 |
| Widowed, separated, or divorced..... | | | 9 | |

¹ Not computed where base less than 50.

REASONS FOR PREFERENCE

The 6-hour day

The three principal reasons for preferring the shorter day of 6 hours were more leisure, spreads work, and less fatigue. The small proportion of married women lessened the importance of the reason "more time for home duties."

| Principal reason | Women preferring 6 hours ¹ | |
|--------------------------------|---------------------------------------|---------|
| | Number | Percent |
| More leisure..... | 18 | 34.6 |
| Spreads work..... | 14 | 26.9 |
| Less fatigue..... | 10 | 19.2 |
| More time for home duties..... | 7 | 13.5 |

¹Total preferring 6 hours and reporting reason for preference, 52 women.

It is interesting to note that 14 women included among their reasons for liking the change the fact that it gave work to more people. It is not surprising that 5 of the women who approved the new hours were among those taken on as a result of the change, but it is interesting that 9 whose hours were shortened gave this benefit to others as one of their reasons for preference. As a woman who personally did not like the change expressed it, "If it weren't for myself, I'd like the 6-hour day because I know it gives more people work."

Increased leisure under the shorter workday was mentioned most frequently as a reason for preferring the 6-hour schedule; spreads work was given as a reason by 14 of the 52 women, and less fatigue by 11.

The 9-hour day

The chief reason given by the women for preferring the 9-hour day was its larger earnings. Of the 225 women (80.1 percent of those reporting) who expressed a preference for the longer day, 83.6 percent gave the difference in earnings as a reason and 63.1 percent gave it as the principal reason.

| Principal reason | Women preferring 9 hours ¹ | |
|--------------------------------|---------------------------------------|---------|
| | Number | Percent |
| Earn more money..... | 142 | 63.1 |
| Earn more; better routine..... | 41 | 18.2 |
| More regular hours..... | 28 | 12.4 |

¹Total preferring 9 hours and reporting reason for preference, 225 women.

The need of money, especially at the time of the survey, when many of the usual contributors to the family income were unemployed, requires no emphasis. A woman who had received an increase of 1 cent an hour just before the interview, expressed its importance to her by the remark that she "was glad like everything." In most

cases a dollar or so a week was more important to the women than any reduction in fatigue or increase in leisure.

The preference for the day of 9 hours because of its larger earnings was of equal importance to single and married women. Of all who preferred 9 hours, about 84 percent both of single and of married women mentioned earnings as a reason. The nine who were widowed, separated, or divorced all were in favor of the longer day.

| Principal reason for preference | Single | | Married | | Widowed, separated, or divorced | |
|---------------------------------|--------|---------|---------|---------|---------------------------------|---------|
| | Number | Percent | Number | Percent | Number | Percent |

WOMEN WHO PREFERRED 9-HOUR DAY

| | | | | | | |
|--------------------------------------|-----|-------|----|-------|-------|-------|
| Total reporting..... | 154 | 100.0 | 62 | 100.0 | 9 | (1) |
| Earn more money..... | 92 | 59.7 | 43 | 69.4 | 7 | ----- |
| Earn more money; better routine..... | 32 | 20.8 | 9 | 14.5 | ----- | ----- |
| More regular hours..... | 20 | 13.0 | 7 | 11.3 | 1 | ----- |

WOMEN WHO PREFERRED 6-HOUR DAY

| | | | | | | |
|--------------------------------|-------|-------|----|-------|-------|-------|
| Total reporting..... | 27 | (1) | 25 | (1) | ----- | ----- |
| More leisure..... | 11 | ----- | 7 | ----- | ----- | ----- |
| Spreads work..... | 6 | ----- | 8 | ----- | ----- | ----- |
| More time for home duties..... | ----- | ----- | 7 | ----- | ----- | ----- |
| Less fatigue..... | 7 | ----- | 3 | ----- | ----- | ----- |

¹ Not computed where base less than 50.

At the time of the survey the great number of unemployed men, normally good wage earners, without doubt laid on the married women more than the usual responsibilities, and a larger proportion of married than of single women gave earnings as the chief reason for preferring the longer day. The same thing probably made the married woman less inclined to object to the inconvenience caused by the different schedule of work and the weekly change of routine, for both these were more frequently complained of by the single than by the married woman worker.

Married women appreciated the shorter hours more than did the single women. Either "more leisure" or "more time for home duties" was mentioned by four fifths of the married women who preferred the 6-hour shift, as compared to one half of the single women.

PREFERENCE AS TO MORNING OR AFTERNOON SHIFT

In any shortening of work hours, many changes and adjustments are involved. Probably everyone would prefer working 3 hours less each day if earnings remained the same and hours were as convenient as before. In considering the reaction of the workers to the change in the present study, it must be borne in mind that not only were earnings less, but because of the introduction of the two-shift system

it was necessary to change the hours of work. The morning shift began at 6 o'clock instead of 7; the afternoon shift ended at 6 o'clock instead of 4:30. It is true that when the work begins at 6 it is over at 12, and that when it ends at 6 it had not begun until noon. Many of the women appreciated these advantages, but 1 in every 4 of those visited objected to the new hours. The women alternated the shifts, working in the morning one week and in the afternoon the next week, so all the women visited had experienced both shifts.

Nearly one half (47.4 percent) of the 302 women reporting on preference liked the morning shift better than the afternoon, and the chief reason was that it gave more free time or more time at home. Nearly three tenths of the women had no preference as to shift.

The increased time at home was the reason especially important among the married women. Other reasons given for preferring the morning shift were, "Time goes faster on the morning shift" and "I like being through at noon." One girl voiced the opinion of a number: "When you go in the afternoon it's on your mind all morning; you don't feel as free. I do like my afternoons free."

The afternoon shift was preferred by about half as many women as preferred the morning shift. Many of those who preferred the afternoon declared that it was less tiring to work then, as they did not have to get up so early. With work beginning at 6 o'clock, it was necessary to get up at 4:30 or 5, and in winter especially this was a hardship. Some of the girls who lived at a distance from the bus line were nervous during the early walk in dark and deserted streets. "It's terribly dark," said one girl, "and I keep looking around to see that no one is following me."

There were 84 women, a little more than a quarter of all reporting, who had no choice as to morning or afternoon shift. They felt that the morning shift had its advantages and "gave you more free time", while the afternoon shift "let you sleep later in the morning and get more rest."

A larger proportion of the married than of the single women preferred to work in the morning. The majority of these gave more time for housework as the reason for their preference. The afternoon shift was more favored by the single girl, as it allowed her to stay in bed mornings after an evening's recreation.

The advantages and disadvantages of the alternating shifts were freely discussed by the women. The majority, 73.9 percent, liked this arrangement better than to work continuously on either the morning or afternoon shift. Many felt that when working on the morning shift they got less rest and that in the alternate week they had the opportunity to sleep later, while most agreed that you could accomplish a lot more when you worked in the morning. Each had advantages: The system "gives every one a fair deal"; "you get rested one week; get a lot done the next."

There was a larger proportion of married than of single women in the group of 73 who preferred working the same shift each week. The former found it less upsetting to their household routine, and, although in each group there were individuals who had difficulty in changing their routine of eating and sleeping from week to week, as a whole both the married and the single women preferred the alternating system to being on the same shift all the time.

If the same shift were to be worked all the time, the morning was more popular than the afternoon, especially among the women who were or had been married. When there were children, as was the case with 34 women, 18 stated a preference for the alternating shifts and 11 would have liked the morning all the time. The principal reason for such preference was, as would have been expected, the ability to be with their children when they returned from school as well as the more uniform hours of meals in the home.

| Shift preferred | Single | Married | Widowed, separated, or divorced |
|-----------------------|--------|---------|---------------------------------------|
| Women reporting | 1 189 | 82 | 9 |
| Alternating | 146 | 54 | 7 |
| Morning | 24 | 23 | 1 |
| Afternoon | 16 | 5 | 1 |

¹ Includes 3 women who preferred 1 shift only but were not specific as to morning or afternoon.

FATIGUE IN 9-HOUR AND 6-HOUR DAY

A reduction of one third in daily hours may result in a considerable decrease in fatigue, but other conditions accompanying the change may counteract such decrease. How much the changed habits of eating and sleeping may result, at least temporarily, in an increased sensation of fatigue, it is impossible to estimate, but these changes were frequently mentioned by the women interviewed. "Too hard on you and too hard on your family to change your living habits every other week."

The largest group of women (42 percent) who had worked at the same job under both hour schedules reported no difference in fatigue since working the short hours. The time away from the plant was felt by many to be so filled with home duties as to offset the rest they might have enjoyed through the shorter work schedule. It was also felt by some that the greater regularity of the longer day resulted in less fatigue than did the change from one shift to another each week under the 6-hour schedule. Of the 207 women who compared their relative fatigue under the two sets of hours and whose job was the same on both shifts, there was a fairly even division on this question. Less fatigue from the 6-hour shift was felt by 28.5 percent of the women and less from the 9-hour shift by 26.1 percent.

The work in the plant required close attention, and principally for this reason the large majority of the jobs were rotated, that is, every 10 or 15 minutes the woman who was inspecting changed with the one who was packing or with one operating the machine. As inspection is a sitting job and the other two workers stand, fatigue is, in this way, considerably lessened, but alternating is even more important for the elimination of eye strain. The inspector must watch the product as it passes by on a moving belt. This requires the closest attention and is hard on the eyes, making the alternating system exceedingly important to the worker.

In a change to shorter hours it is impossible to obtain very accurate findings of its effect on fatigue because of the many other factors

involved. The extra leisure may be used not in rest or recreation but in other work. At the time of the survey work was too scarce for anyone to hold two paid jobs, but there was opportunity for increased household duties; "If I don't work in the factory, I work at home", one woman reported. The change in routine also resulted in increased fatigue in some cases; "On the morning shift I am awake all night watching the clock for fear the alarm will not go off." Because of the alternating shifts, one week working in the morning and the next in the afternoon, some found it difficult to adjust their habits of eating and sleeping. "It keeps you all confused, I never know where I am—its mixing", reported one woman, while another said, "You feel all muddled—it's on your mind all the time." Without doubt, the numerous changes accompanying the shortening of hours so complicated the result that it was difficult for the girls to tell whether the actual fatigue decreased, increased, or remained the same. The following summary shows how the women reported as to fatigue:

| Previous work | Women reporting fatigue as— | | | | | |
|------------------------------|-----------------------------|---------|--------|---------|--------|---------|
| | Same | | Less | | More | |
| | Number | Percent | Number | Percent | Number | Percent |
| In same plant..... | 98 | 42.1 | 67 | 28.8 | 61 | 26.2 |
| In other establishments..... | 22 | 36.1 | 30 | 49.3 | 4 | 6.6 |

About one half of the women whose previous experience had been on other work reported less fatigue on their present jobs. The previous work of more than a fourth of the women reporting had been in domestic and personal service, and in the majority of cases they reported less fatigue on the 6-hour day than on their former jobs. Of the 10 women whose experience had been in sales work and who reported on fatigue, 8 considered it less under the 6-hour day. Among the 10 formerly employed in clerical work, 5 declared the fatigue felt was no greater after a 6-hour day in the factory than on their old work; 3 found it less.

USE OF LEISURE

In any discussion of the use of leisure in a time of unemployment or reduced earnings, it must be borne in mind that the uses of leisure most commonly approved—for example, education and recreation—generally involve more or less expense, if only for car fare and suitable clothing.

For most women the use of more free time through shorter plant hours is determined to a great extent by the fact that they either keep house or assist in household tasks. The girl living away from home generally has a room or apartment that must be cleaned; usually she must prepare her own meals and must wash and iron her clothes. When a 9-hour day is worked in the factory, these household duties are attended to in the evenings and week-ends. A workday of 6 hours makes it possible to do many of these things in the extra leisure provided.

Of the 309 women interviewed, 55.7 percent reported that they made the same use of their leisure whether they were working in the morning or the afternoon. The other 137 women, however, made a different use of their leisure according to the shift worked. Two thirds of the 168 women who reported the way they spent their extra time and whose use of leisure was the same in the alternating weeks, spent all or part of it in home duties. Over a fifth of the number devoted the extra hours to rest and recreation, while a small group (9) took piano lessons or courses in typing, show-card writing, or beauty-parlor work. Only 3 women used their extra time for other paying jobs: One cared for children, one delivered packages from her father's store, and a third, a French woman, gave French lessons.

| Use of leisure | Women reporting as to— | | | | | |
|---|------------------------|---------|-------------------|---------|---------------------------|---------|
| | Morning leisure | | Afternoon leisure | | Leisure with either shift | |
| | Number | Percent | Number | Percent | Number | Percent |
| Number reporting..... | 135 | 100. 0 | 137 | 100. 0 | 168 | 100. 0 |
| Home duties..... | 24 | 17. 8 | 15 | 10. 9 | 49 | 29. 2 |
| Home duties plus rest or recreation or both..... | 59 | 43. 7 | 76 | 55. 5 | 61 | 36. 3 |
| Rest, recreation, or both..... | 9 | 6. 7 | 34 | 24. 8 | 38 | 22. 6 |
| Extra sleep..... | 43 | 31. 9 | 3 | 2. 2 | 8 | 4. 8 |
| Other..... | | | 9 | 6. 6 | 12 | 7. 1 |

Though a good many women made the same use of their leisure whether working in the morning or in the afternoon, another group reported different programs according to the shift worked. More time was spent in sleep when working in the afternoon and more in recreation when working in the morning. One girl said she liked the afternoon shift because she could sleep mornings and the morning shift because it gave her a long afternoon. These sentiments were quite generally shared.

Though not many girls were taking definite courses of study, a number agreed with the girl who said, "It's nice to have time for something besides work; now I am reading good books that I never had time for before—working people would improve themselves if they had time." With married women it was less the case of improving themselves than of improving their homes, and it is not surprising that more of their extra time was spent in home duties and less in rest, recreation, or self-improvement.

Well over two fifths of the women reported some difference in the use of extra time according to whether the morning or afternoon shift was worked. More women spent this time on household care when working on the afternoon shift than when they worked in the morning. But the greatest difference was in rest and recreation and in extra sleep. When beginning their factory day at noon, nearly a third of the women slept late in the morning; when they worked in the morning, about a fourth reported rest and recreation as the chief use made of their free time in the afternoon. One girl on her free afternoons

“played lots more tennis” and went shopping, or out with a girl friend; when mornings were free, she never got up until late even when she had set the alarm for earlier.

ARRANGEMENT OF MEALS

The change from a regular day of 9 hours, with a break in the middle of the day for lunch, to a shorter day with different schedules—that is, different hours of beginning and ending—upsets to a considerable extent the routine of the home. The change is upsetting not only to the habits of the worker herself but in some cases to those of the entire family. In this study, when the morning shift was worked the only dislocation was breakfast, as the other meals could be eaten with the family at the usual time, but when the worker was employed on the afternoon shift she often got up too late for the family breakfast and left too early for the regular noon meal. Nearly two thirds of the women reported that when on the afternoon shift they combined breakfast and lunch. About a third ate both breakfast and lunch when working afternoons, but these were as a rule housewives who had responsibilities that necessitated early rising. About half the workers reporting stated that they ate the evening meal, normally dinner, with their families; in 50 other cases the family waited dinner and in 75 cases the woman ate alone.

When the afternoon shift was worked, in many cases no meal was eaten with the family and the adjustment was very difficult for the housekeeper. “Mother had to cook Thanksgiving Day dinner twice—for my brother, who is on a different shift from me, and then for me”; and “Well, mother is pretty disgusted with meals now”, were two of the comments made.

Although work in the morning was more upsetting to habits of sleep than work in the afternoon, the former was more easily adjusted to family meal hours. When they worked on the morning shift, breakfast was eaten alone by a little more than half the women and no breakfast or simply a cup of coffee was taken by over two fifths, so that only 6 of the 281 women living with their families had breakfast with the household before starting to work. Lunch and dinner hours were not interfered with by the hours of this shift and these meals were eaten with the family at the normal time.

| Arrangement as to meals | Women reporting as to— | | | |
|---|------------------------|---------|-----------------|---------|
| | Morning shift | | Afternoon shift | |
| | Number | Percent | Number | Percent |
| Breakfast alone..... | 158 | 52.8 | ----- | ----- |
| No breakfast or cup of coffee..... | 131 | 43.8 | 3 | 1.1 |
| With household (regular breakfast)..... | 10 | 3.3 | 98 | 35.5 |
| Breakfast combined with lunch..... | ----- | ----- | 175 | 63.4 |
| Dinner alone..... | ----- | ----- | 75 | 29.4 |
| Family waits dinner..... | ----- | ----- | 50 | 19.6 |
| Normal dinner hour with family..... | ----- | ----- | 130 | 51.0 |

Included in this summary are the women who were rooming, boarding, or keeping house with friends, comprising only a small group (6.1 percent) of the women included in the survey. For these

the change of hours was less upsetting and the adjustment of meal-times easier. For both the women workers and their families the fact that in one week the morning shift was worked and in the next the afternoon made the adjustment of meal-times more difficult than if the same shift had been worked each week. Nevertheless, in spite of this fact nearly three fourths (73.9 percent) of the women reporting a preference liked the alternating shift better than constant work on either the morning or the afternoon shift.

As already stated, a rest period of 13 minutes for lunch was allowed during each shift. Three fourths of the women who reported on this ate lunch regularly in the rest period in the afternoon; less than one tenth as many reported doing so occasionally and only about one sixth never took food at this time. An even larger proportion of women ate lunch on the morning shift; more than four fifths took food regularly, less than one tenth (8.9 percent) ate sometimes and a like proportion (9.2 percent) never took food during the rest period.

| Shift | Number of women reporting | Percent taking food at rest periods— | | |
|----------------|---------------------------|--------------------------------------|--------------|------------|
| | | Regularly | Occasionally | Not at all |
| Morning..... | 304 | 81.9 | 8.9 | 9.2 |
| Afternoon..... | 284 | 75.4 | 7.0 | 17.6 |

The need for food in a 6-hour shift was very generally felt, as is shown by the fact that 81.9 percent of the women took food regularly when working in the morning and 75.4 percent took it when working in the afternoon. An additional 8.9 percent and 7 percent, respectively, ate occasionally.

PERSONAL HISTORY

Country of birth

The fact that the plant is situated in a border State and in a city where there is a considerable demand for men for heavy work probably explains the large proportion (27 percent) of foreign-born women. By far the largest number were from English-speaking countries, Canada or the British Isles being reported by 20.8 percent of the women. The remaining 19 who were born outside the United States came from 7 other countries, including such distant ones as Russia and China.

Age

On the whole, the women were a very young group; 53.1 percent were 20 and under 25 years and 21.7 percent were less than 20. Only 2 of the 309 women had reached the age of 40.

| Age group | Women reporting | |
|----------------------------|-----------------|---------|
| | Number | Percent |
| Total..... | 309 | 100.0 |
| Under 20 years..... | 67 | 21.7 |
| 20 and under 25 years..... | 164 | 53.1 |
| 25 and under 30 years..... | 56 | 18.1 |
| 30 years and over..... | 22 | 7.1 |

From the viewpoint of the management the most efficient age of women workers was between 20 and 25, and the effect of this preference is shown by the large number in this group. The women of 30 years or more comprised less than 8 percent of the total, a considerably smaller proportion than is found in most manufacturing establishments.

Marital status

The preponderance of women under 25 years (74.8 percent) would indicate a high proportion of single women, and it is not surprising that two thirds of the women were unmarried. Only 10 reported their status as widowed, separated, or divorced; 94 were married.

| Marital status | Women reporting | |
|--------------------------------------|-----------------|---------|
| | Number | Percent |
| Total..... | 309 | 100.0 |
| Single..... | 205 | 66.3 |
| Married..... | 94 | 30.4 |
| Widowed, separated, or divorced..... | 10 | 3.2 |

Length of service

The change to two shifts and the resulting ability to hire more workers are plainly seen in the increase in the number of women with less than 6 months' service with the firm. Almost 1 in 4 women reported less than 6 months of service and only 1 in 7 had a record of 5 years or more. As was the case with the age figures, the number of new workers employed because of the extra shift makes any comparison with normal factory distribution impossible. From the following summary it is clear that the extra shift gave employment to a number of young women.

| Length of service | Women of all ages | Women under 20 years of age | |
|------------------------------------|-------------------|-----------------------------|----------------------|
| | | Number | Percent ¹ |
| Total..... | 309 | 67 | 21.7 |
| Less than 6 months..... | 71 | 33 | 46.5 |
| 6 months and less than 1 year..... | 18 | 7 | ----- |
| 1 and less than 2 years..... | 58 | 14 | 24.1 |
| 2 and less than 3 years..... | 72 | 13 | 18.1 |
| 3 and less than 5 years..... | 45 | ----- | ----- |
| 5 years and more..... | 45 | ----- | ----- |

¹ Not computed where base less than 50.

The proportion of married women was greater in the longer service groups than in the shorter—28.7 percent had been with the firm 5 years or more as compared with 17 percent with a service of less than 1 year. For the single women the opposite was true, only 6.8 percent having been as long as 5 years with the firm and 35.1 percent reporting less than 1 year's service. Though three fifths (60 percent) of the women with a service record of 5 years and more were married, less than one fifth of those with less than a year's service were in the married group.

