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[California, University, Institute of industrial relations (Berkeley)  
[Survey of occupational mobility...]

The Relation of Gross to Net Changes in the  
Inter-Occupational and Inter-Industrial  
Movements of the Urban Labor Force

Final Report to U.S. Bureau of the Census

[Part 1]

Institute of Industrial Relations  
University of California  
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## Summary of the Findings

This is a highly experimental and exploratory study in an area of mobility research in which very little previous work has been done.<sup>1</sup> As we have worked with the material, we have been impressed with the need for clarification of the basic concepts involved and for critical appraisal of the various statistical techniques which we have employed. Some of our lines of investigation have proved more fruitful than others, and in summarizing the results we shall emphasize the more fruitful ones. It is to be hoped that the study will prove useful as a guide to the acceptance or rejection of particular statistical techniques as well as for the new insights which we have gained into factors and patterns in mobility.

### Gross Mobility Rates in the War and Postwar Periods

Average mobility rates (as measured by the average number of civilian job or assignment shifts per person) were about equally high in the two halves of the decade. In other words, the readjustments of the postwar period apparently required as many shifts, on the average, as did the exigencies of the war period.

In both periods, persons who had experienced net shifts in occupation, industry, or employment status tended, as we might have expected, to have experienced more job or assignment shifts, on the average, than persons with no net shifts, but a significant fraction of all shifts was made by the latter group.

Differences in age, labor-force-exposure, and years of residence in the area influenced mobility rates in very much the same manner in the war and postwar periods, but occupational and industrial differences in mobility followed somewhat different patterns in the two halves of the decade. During the war period, the production shifts which accompanied industrial mobilization -- together with manpower controls -- brought about a highly uneven expansion in employment in the various sectors of the economy. Certain occupation and industry groups attracted many more new workers, relatively, than did other groups, and if workers are classified by major occupation group at the end of each period, mobility rates for the groups into which workers were shifting tended to be higher, in relation to those for other groups, than would have been likely had rates of expansion been more uniform, as they were, for the most part, in the postwar period and over the decade as a whole.

On the basis of a re-appraisal of occupational differences in mobility -- drawing on various types of statistical evidence for the two halves of

<sup>1</sup>. This report was prepared by Margaret S. Gordon, with the assistance of Richard Osborne and Alice Lundin.

the decade as well as for the decade as a whole -- we uncovered no evidence suggesting a need for modification of our earlier conclusion that mobility rates tend to vary considerably between the top and bottom of the occupational ladder. But there is a good deal of evidence to suggest that the precise position of a particular occupation group in the mobility scale may be influenced by the economic conditions prevailing in a given period, particularly if the period is one in which employment opportunities are expanding unusually rapidly for certain occupation groups. In relation to the problem of statistical measurement of mobility differences, it is clear that the choice of the period to be investigated, as well as the time-reference of the occupational classification of workers, may be expected to influence the results.

While occupational differences, at broad levels of skill, apparently constitute a more important independent factor in mobility than differences in industrial attachment, there is some evidence that industrial differences may play a more important role than earlier findings indicated. The fact that the particular decade under study was one in which marked shifts in the industrial distribution of employment in the first half of the decade were followed by shifts in more or less the opposite direction in the second half of the decade may have had the effect of narrowing the differences which showed up in our data for the ten-year period. On the whole, it seems reasonable to conclude that such industrial variations in mobility as we found were attributable primarily to (1) differences in the occupational distribution of workers employed in the various major industry groups, (2) differences in the stability of employment conditions in these industry groups, and (3) differences in the impact of changes in the industrial structure of employment on workers in the various industry groups.

### Types of Shifts

The tendency to shift occupations varied significantly for persons at different levels of the occupational scale. The average number of occupation shifts per worker tended to increase between the top and bottom of the occupational ladder, but the increase did not proceed in a regular manner. Clerical workers, operatives, and laborers had the highest occupational mobility rates among the men, and managerial workers, sales, and service workers among the women.

Most occupation shifts were inter-group in character, although the actual ratio of inter-group occupation shifts to total occupation shifts was somewhat higher for men than for women. The groups with the highest occupational mobility rates also had the highest inter-group occupational mobility rates.

The tendency to shift industries varied significantly by major industry group for both men and women only in the war period. The same generalization applies to the tendency to shift between industry groups, and it was inter-group industry shifts which constituted the great majority of industry shifts. During the war period, moreover, it is clear that industrial variations in average inter-group industry shifts

reflected the influence of the industrial mobilization program. We did not find clear-cut evidence that there were significant industrial variations in average industry or inter-group industry shifts apart from the effects of industrial mobilization and, to some extent, of demobilization.

Complex job shifts (involving a simultaneous change in employer, occupation, and industry) constituted a somewhat larger percentage of all job shifts in the war period than in the postwar period. Furthermore, geographic shifts -- which were somewhat more likely to be of the complex type than nongeographic shifts -- played a relatively more important role in the war than in the postwar period. On the whole, these differences between the war and postwar periods held for all years-of-residence, major occupation, and major industry groups, but there is evidence that, in certain respects, the war had more pronounced effects on the mobility patterns of older workers than of younger workers. When older workers shifted jobs during the war, the shift was more likely to involve a change in industry and, in the case of men, in geographical location of the job than was true in the postwar period. These contrasts between the war and postwar periods in patterns of shifts were less marked for younger workers.

Somewhat unexpected was the finding that, during the war period, the ratio of geographic shifts to total shifts was about as high for postwar migrants (those who moved to the San Francisco Area after the war) as for wartime migrants.

When a nonmanual worker changed jobs, the shift was somewhat more likely to have been geographical in character, particularly if he was a professional worker, than was the case when a manual worker changed jobs. Yet nonmanual workers, as we know, did not, on the average, experience as many job shifts as did manual workers, and when we computed the average number of geographic shifts per worker, we found that there was no tendency for nonmanual workers to have experienced more geographic shifts, on the average, than manual workers. Industrial variations in the role of geographic shifts -- which were not marked -- also followed slightly different patterns according to the method of measurement.

#### Short-Run Fluctuations in Mobility

Annual mobility rates fluctuated markedly during the course of the decade, with peak rates occurring in the year following Pearl Harbor (1942) and in the year following V-J Day (1946). These fluctuations appeared in varying degrees in all three measures which we developed -- average job separations per person, average job shifts per person (within the year), and average job accessions per person.

In the case of men, both average job separations and average job shifts reached a peak in 1942, fell off substantially in 1943 and 1944, and reached a secondary high level in 1945-46. Average job accessions also rose to a peak in 1942, but reached a second and higher peak in 1946, reflecting postwar demobilization. In the case of women, all three measures reached a peak in 1942, did not decline as much as the corresponding

measures for men in 1943 and 1944, and maintained relatively high levels until 1947 or (in the case of job separations) 1948, after which they fell off substantially. Except in the years 1942 and 1945-46, when large numbers of men were either entering or leaving the Armed Forces, the three measures tended to differ more widely for women than for men, reflecting, in all probability, the greater propensity of women to move into and out of the labor force.

On the whole, these annual fluctuations in job mobility were reflected in the data for nearly all age and years-of-residence groups, but mobility rates tended to vary inversely with age and years-of-residence in the Area throughout the decade.

There were rather marked changes in the occupational distribution of job separations and accessions during the course of the decade. This was particularly true of those separations or accessions which were associated with a change in the major occupation group in which the worker was employed. For the most part, these changes followed the pattern which we might have expected in the light of the production shifts occurring during the course of the decade. Worthy of special comment, in the case of men, were the unusually large percentage of separations from managerial jobs to take jobs at other levels in the 1940-41 period and the marked rise in separations from skilled craftsmen's jobs to take jobs at other levels in the 1945-46 period. Also worthy of note was the remarkable stability, throughout the decade, of the proportion of all separations (associated with changes in major occupation group) which was represented by separations from male operatives' jobs to take jobs at other levels. This suggests that there is a steady movement of men out of the operatives group, at least in a period of high employment and income levels, which goes on almost regardless of changes in the direction of production shifts.

Marked changes also occurred in the industrial distribution of separations and accessions -- all very much in line with the character of the production shifts that were occurring.

#### Channels of Inter-Group Occupational and Industrial Movement as Indicated by Data on Gross Shifts

When workers did experience changes in major occupation group, was there any tendency for certain groups to be particularly important as sources of recruits for other groups?

It was found that the occupation groups which workers entered were by no means independent of those from which they came. For nearly every major occupation group, moreover, there was evidence of a significant degree of concentration or "channelization" of the occupational sources from which workers came. Manual workers tended to be recruited from manual groups and nonmanual workers from nonmanual groups, but even so the volume of movement across the barrier between manual and nonmanual occupations was substantial. It was considerably more common for a male managerial or clerical worker to have come from a manual job than for a

male professional or sales worker to have done so. On the other hand, it was somewhat more common for a male craftsman, operative, or even a laborer to have been recruited from a nonmanual job than for a male service worker to have come from a nonmanual job.

Channels of inter-group occupational movement were by no means identical for men and women, although there were certain similarities.

Analysis of channels of inter-group industrial movement led to significantly different results. It was found that, for inter-group industrial movement as a whole, the industry group which a worker entered was not independent of the group from which he came. For five out of eight male industry groups and five out of seven female groups, however, there was no significant indication of channelization of the industrial sources of movement into the group. In other words, the jobs that workers left prior to shifting into these groups were distributed industrially in almost identically the same way as were all jobs left by workers making inter-group industry shifts in the ten-year period. One of the groups of which this was true was the durable goods manufacturing group -- probably the most important major industry group in connection with problems of mobilization planning.

#### Ratios of Gross to Net Shifts

There are innumerable ways in which ratios of gross to net shifts could be computed, but we have tried to select certain measures which might be generally useful in connection with labor force projections.

It is not easy to summarize our results in a few broad generalizations, since the magnitude of the ratios and patterns of variation by major occupation and industry group tended to differ for each type of ratio that we analyzed. On the whole, ratios of gross to net shifts were probably unusually high in the decade of the forties because of the impact of industrial mobilization for a major war and of subsequent demobilization. Thus -- so far as absolute magnitude is concerned -- the ratios probably have very little predictive value for a situation in which changes occur more gradually, though the ratios which we computed for the 1940-44 period may have some predictive value in relation to the situation that we would face in another all-out war.

Patterns of variation in the ratios, moreover, probably do have some predictive value if interpreted with caution. Our data suggest that ratios of gross to net shifts -- however defined -- tend to decline with advancing age and with increasing years of residence in the area. Patterns of occupational and industrial variation and of sex variation, however, tend to differ somewhat for each type of ratio and -- so far as we could judge on the basis of inadequate data -- in each of the three periods for which we undertook computations.

During the war period, when shifts of all types were strongly influenced by the requirements of the industrial mobilization program,

patterns of occupational and industrial variation in average gross shifts tended to be very similar to those in average net shifts. For this reason, variations in ratios of gross to net shifts -- so far as they could be computed -- tended to be minimized. In the postwar period, and over the decade as a whole, there was less resemblance between patterns of variation in average gross and average net shifts, and, on the whole, variations in average gross shifts, which were more marked than those in average net shifts, tended to exert the strongest influence on variations in ratios of gross to net shifts. Thus, with certain exceptions, the groups with relatively high gross job mobility tended to be characterized by comparatively high ratios of civilian job or assignment shifts to net shifts in employment status or major occupation (or industry) group. Similarly, the groups with high gross occupation or inter-group occupation shifts tended to be characterized by high ratios of gross to net inter-group occupation shifts. Where ratios were higher or lower than might have been expected on the basis of these generalizations, differences in the age composition of the various occupation groups were at least partially responsible (since these differences affected gross and net shifts in somewhat different ways), though differences in the ratios were not consistently related to age differences.

There is some evidence that the character of job attachments in certain major industry groups -- wholesale and retail trade, the finance group, and public administration -- tended to give rise to higher or lower ratios of gross civilian job or assignment shifts to net shifts in employment status or industry group than we should have expected on the basis of variations in gross mobility rates alone. In fact, the rather marked variations in these ratios were of considerable interest as constituting possible additional evidence that industrial variations in mobility may be somewhat more important than our earlier tentative conclusions implied.

#### Ratios of Gross to Net Changes

Another type of ratio -- the ratio of gross to net change in major occupation or industry group -- was briefly examined. Variations in ratios of gross to net change in major occupation group tended to be related to variations in degrees of occupational attachment and to be somewhat similar in San Francisco and the Six Cities. Variations in ratios of gross to net changes in major industry group, on the other hand, were quite different in San Francisco and the Six Cities, for reasons that seemed to be associated with differences in employment trends by major industry group. These ratios, too, are of considerable interest in connection with mobilization planning and warrant further study.

In the final chapter of the present report, we have summarized the mobility characteristics of the various major occupation groups. It is suggested that those who do not wish to read the entire report may wish to turn to Chapter VII for this summary.

## CHAPTER I

### INTRODUCTION:

#### THE PROBLEMS TO BE INVESTIGATED

In the planning and execution of a long-term mobilization program, it is obviously essential that estimates be made not only of (1) total labor force potential in relation to total manpower requirements at various levels of production but also of (2) potential supplies of workers in broad occupational and industrial categories under varying conditions. The net change in the number of workers in a particular broad occupational or industrial category over the course of a given period of time will depend on (1) the net gain or loss attributable to movement into or out of employment and (2) the net gain or loss attributable to inter-group occupational or industrial shifts in employment.

In a period of mobilization, net changes in the occupational and industrial structure of employment are likely to be in a direction which is consistent with the objectives of the mobilization program. Gross shifts in employment on the part of individual workers may, however, greatly exceed the net shifts that are required to bring about a desired change in the structure of employment. Some of the shifts experienced by individual workers, moreover, may actually be in a direction which runs counter to the objectives of the mobilization program. Similarly, in any period of economic change, some of the shifts made by individuals may run counter to the prevailing trend.

In addition, it is important to recognize that many job shifts involve a change in occupation or industry within a given major occupation or industry group but do not involve a movement from one group to another. It may well be that workers in certain occupation or industry groups make frequent intra-group shifts but rarely experience inter-group shifts, while the reverse may be true of other categories of workers.

These considerations all point to the need for an analysis of the relationship of gross to net changes in inter-occupational and inter-industrial movements. In earlier reports based on the Six-City Occupational Mobility Survey, both gross and net movements of workers were analyzed, but the relationship between the two types of movement was not studied intensively. The present project, which has been specifically designed to shed light on this type of relationship, is based on the Occupational Mobility Survey data for San Francisco.

An analysis of the relationship of gross to net shifts requires more than a mere computation of ratios of gross to net shifts. Clearly, any information that sheds light on gross or net shifts, considered separately, will contribute to our understanding of the relationships between the two types of movement. In addition, we shall find that we are limited in the extent to which we may attach significance to actual ratios of gross to net shifts, because of the relatively small numbers of persons who experienced net shifts. Ratios computed on very small bases cannot be regarded

as either reliable or stable.

If a study of this type is to be useful in connection with manpower planning, it is clear that an analysis of what happened in an actual period of mobilization is of special interest. One of the major objectives of the present study, therefore, has been to shed as much light as possible on mobility in the two halves of the decade of the forties (the war period and the postwar period), considered separately, as well as over the decade as a whole.

In planning and carrying out the present project we have been impressed by the need for clarifying some of the basic concepts involved. As one works with the statistical material, it becomes increasingly clear that the ratio of gross to net shifts may be defined in a number of different ways. We have selected certain concepts for use in the present study, without in any way wishing to suggest that other concepts, some of which were not even considered, might not be equally useful.

As already indicated in our first quarterly report, one troublesome problem which we faced in formulating coding and punching plans was the selection of an appropriate method of measuring gross shifts for purposes of this study. The basic problem which is being analyzed is the relationship of gross to net shifts in the inter-occupational and inter-industrial movements of the urban labor force. Since net shifts in occupational attachment reflect changes in occupational assignment on the same job as well as occupational changes associated with job changes, we decided to include changes in occupational assignments on the same job in our counts of gross shifts made by each worker. Thus, the basic measure which is being used in many of our tables is the number of civilian job or assignment shifts made by each worker in a given period. In arriving at this measure, the number of job shifts made by each worker was determined (in accordance with the methods used by the Census Bureau in the preparation of Tables W-15 to W-20, and W-32, W-38, and W-44), and to this number was added the number of shifts in occupational assignment on the same job.<sup>1</sup>

Table A-1 (Appendix) provides a basis for determining the probable effect of this procedure (as opposed to inclusion of job shifts alone) on our results. In this table, the number of civilian jobs held by workers in the sample from January, 1940 to December, 1949 is cross-tabulated with the number of occupational assignments (counting each change in job as a change in occupational assignment). It is clear that, for the great majority of workers, the total number of occupational assignments was equal to the total number of jobs. In other words, changes in occupational assignment on the same job were comparatively rare. In those cases in which the number of occupational assignments exceeded the number of jobs,

<sup>1</sup> Unlike the Census Bureau, however, we included shifts made by persons with only one employer in the relevant period.

the great majority were cases in which the total number of occupational assignments was one more than the total number of jobs. Among the men (but not among the women), there was some tendency for the percentage who had held the same number of assignments as jobs to decrease as the number of jobs increased.

On the basis of Table A-1, we should expect (1) that the average number of civilian job or assignment shifts per person would exceed by a slight margin the average number of civilian job shifts per person, but that (2) the incidence of the two alternative mobility measures by age, occupation, or other characteristics would not vary greatly.<sup>1</sup>

We might, of course, have included shifts in employment status, as well as job or assignment shifts, in our basic mobility measure. This we decided not to do, since we were concerned primarily with inter-occupational and inter-industrial movements rather than with movements into or out of employment. A few tabulations dealing with all changes in activity status have, however, been included.

Those who have not read earlier reports based on the Occupational Mobility Survey will need to know something about the sample design that was used in the project. Approximately 1900 households and a small number of quasi-households were included in the survey in each city. The Household Schedule provided information on all members of these households, with particular reference to the employment status of persons 14 years of age or over at the time of the survey (January-February, 1951). In addition, a Work History Schedule was completed for every member of the household who was 25 years of age or over and who had worked full time for pay at least one month in 1950. Each worker in this group was asked to reproduce his work history over the entire period from January, 1940 to the date of the survey, starting with his current job (or current work status) and tracing his employment history backward step by step over the 11-year period. It was requested that he account, not only for the actual jobs which he had held, but also for every period when he was unemployed or out of the civilian labor force for any reason.

The Work History Schedules, therefore, provide the data for an analysis of labor mobility over an 11-year period. The period actually selected as a basis for the mobility measures used in the present report was the 10-year period from January, 1940 to December, 1949. The workers whose mobility will be measured constitute a sample of those members of San Francisco's adult population aged 25 years and over, as of early 1951, who had worked full time for pay at least one month in 1950. Nearly

1. The second point would appear to follow from the fact that so large a majority of all workers in the sample had held the same number of assignment shifts as jobs. Exceptions to this generalization might arise if changes in occupational assignments were especially common in certain occupation or industry groups. Certain of our later tabulations, not discussed in the present report, will shed further light on this question.

two-fifths of these persons, as we shall see, had moved into the San Francisco area between January, 1940 and the date of the survey. On the other hand, many of the workers who had been living in San Francisco in January, 1940 had since migrated to other areas. In addition, many of the persons for whom work histories were obtained were not in the civilian labor force during the entire period (they were still in school in 1940, they were in the Armed Forces during World War II, they were housewives during much of the period, and so on). Thus, the measures of labor mobility which we shall be discussing are not measures of the mobility of San Francisco's labor force over a 10-year period -- they are measures of the mobility over a 10-year period of workers who were living in San Francisco at the end of the period and not all of whom were in the labor force during the entire period. This distinction is most important and will be mentioned again at several points in our discussion.

One final point -- because they are based on a sample survey, the data are subject to sampling variability. The reader is referred to an earlier report for a statement on the source and reliability of the data, prepared by the Census Bureau.<sup>1</sup> In our analysis of the material, we shall, in general, select for discussion only those relationships which may be regarded as significant after allowing for the element of sampling variability. The larger estimates, together with percentages based on them, are more reliable than the smaller estimates or the percentages based on these small estimates. Percentages which have been computed on the basis of totals below 25,000 are especially unreliable, while percentages based on totals below 2,955 in the case of males or 2,874 in the case of females have been eliminated altogether from the tables. In a few cases, we shall mention relationships which are suggestive even though they cannot be regarded as necessarily significant after allowing for the element of sampling variability, but in all such cases we shall warn the reader that the findings cannot be regarded as conclusive. All estimates in the tables have been converted to a total population basis.

1. The Mobility of San Francisco Workers: 1940-1949, Appendix.

## CHAPTER II

### GROSS MOBILITY RATES IN THE WAR AND POSTWAR PERIODS

In earlier reports based on the Occupational Mobility Survey, we analyzed gross mobility rates for the 1940-1949 period as a whole, using "number of civilian jobs held" as our basic mobility measure. In view of the objectives of the present study, an analysis of gross mobility rates in the war and postwar periods, as well as for the decade as a whole, is essential, and, for reasons already discussed, we shall use "number of civilian job or assignment shifts" as our basic mobility measure.

As Table 1 indicates, the men represented by the work history sample made 2.3 job or assignment shifts, on the average, over the course of the decade, while the women made 2.0 such shifts.<sup>1</sup> For both sexes, the gross mobility rate in each half of the decade was about half of the rate for the decade as a whole. Whatever annual fluctuations in mobility rates may have occurred during the course of the decade--and we shall see at a later stage that annual fluctuations were quite marked<sup>2</sup>--the readjustments of the postwar period required as many shifts, on the average, as did the exigencies of the war period.<sup>3</sup>

As we might have expected, mobility rates were comparatively low, in both halves of the decade, and over the decade as a whole, for persons who had experienced no net shifts in employment status or occupation. Nevertheless, these persons had experienced job or assignment shifts to some extent and accounted for by no means negligible percentages of all shifts made in each period.

In the war period, the highest mobility rates, for both men and women, were those of the workers who had experienced a net shift in major occupation

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1. The reader will note that, throughout the present report, the mean number of shifts experienced by a given group of workers is used to measure the mobility rate for the group. In earlier reports, medians, rather than means, were used, largely because many of our mobility tables included cases which fell in an open-end class interval. The actual numbers of persons falling into such open-end classes is, however, very small, especially in tables relating to five-year periods, so that it is possible to compute a reasonably accurate mean by estimating the average number of jobs held (or job shifts experienced) by persons in the open-end interval. In view of the many advantages of using the mean, rather than the median, in this type of statistical work, it was decided to employ this type of average in the present study.

2. See Chapter IV.

3. The reader will note that the mobility rate for the decade as a whole does not always equal the sum of the rates for the two halves of the decade. The main reason for this is that the average for each period relates to a somewhat different group of persons (those who were employed at the end of that period).

Table 1.

Average Number of Civilian Job or Assignment Shifts by Sex and Net Shift in Employment Status or Occupation, January 1940-December 1944, January 1945-December 1949, and January 1940-December 1949---

San Francisco Work History Sample<sup>A</sup>

Period and net shift in employment status or occupation	Men		Women	
	Total persons <sup>B</sup>	Average number of shifts	Total persons <sup>B</sup>	Average number of shifts
January 1940-December 1944	203,011 <sup>C</sup>	1.2	98,860	1.0
Employed 1944	159,129	1.1	84,203	0.9
In same occupation 1940	88,947	0.4	36,929	0.4
In different occupation but same occupation group 1940	10,638	1.8	5,604	1.7
In different occupation group 1940	46,246	2.0	11,208	2.0
Not employed 1940	13,298	1.4	30,463	0.9
Not employed 1944	43,882	1.7	14,657	1.7
Employed 1940	33,540	1.7	7,472	1.5
Not employed 1940	10,343	1.7	7,185	1.9
January 1945-December 1949	210,251 <sup>C</sup>	1.2	111,649	1.1
Employed 1949	202,125	1.1	100,728	1.0
In same occupation 1945	103,131	0.5	55,752	0.6
In different occupation but same occupation group 1945	10,638	2.0	8,765	2.4
In different occupation group 1945	41,075	2.2	14,226	2.3
Not employed 1945	47,281	1.2	21,985	0.9
Not employed 1949	8,127	2.5	10,921	2.1
Employed 1945	5,024	2.3	6,035	2.2
Not employed 1945	3,103	2.9	4,886	2.0
January 1940-December 1949	211,433 <sup>D</sup>	2.3	112,942	2.0
Employed 1949	201,976	2.2	100,872	1.9
In same occupation 1940	86,878	1.3	32,905	1.0
In different occupation but same occupation group 1940	16,696	3.3	7,041	2.8
In different occupation group 1940	68,542	3.0	15,950	3.0
Not employed 1949	29,550	2.8	44,976	1.9
Not employed 1949	9,456	3.8	12,070	3.1
Employed 1940	6,353	3.7	5,029	3.3
Not employed 1940	3,103	4.2	7,041	3.0

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 296 men not reporting relevant information.

<sup>D</sup>Excludes 591 men not reporting relevant information.

Source: Occupational Ability Survey, San Francisco, Tabulations P-2, P-15, and P-28 (see Tables A-2 to A-4, appendix).

group between the beginning and end of the period. But workers who had experienced a net shift in occupation (without a shift in occupation group) and workers who were not employed at the end of 1944 also had relatively high mobility rates. The latter group, in fact, accounted for nearly a third of all shifts made by men and for about a fourth of all shifts made by women during the period.<sup>1</sup> Most of the men who were not employed at the end of 1944, of course, were in the Armed Forces, and we may infer that they were predominantly young men.

In the postwar period, and over the 1940-49 period as a whole, relative mobility rates for the various groups which we have been discussing were somewhat similar to those of the war period. Workers who were not employed at the end of 1949, however, had experienced an unusually large number of shifts, on the average, in both the postwar period and over the decade as a whole, especially in the case of the men. Probably this latter group included a number of persons with comparatively unsteady attachments to the labor force as well as a small number who had experienced difficulty in holding jobs.

If workers are classified according to whether or not they experienced net shifts in employment status or industry (rather than occupation), we find that variations in mobility rates were very similar to those we have just been discussing.<sup>2</sup>

#### Factors in Mobility

Did the factors which we found to have influenced mobility over the decade as a whole exert their influence in the same manner in the two halves of the decade?

This was certainly true of age, which we found to have been a decisive factor in mobility over the decade as a whole. In fact, variations in mobility rates by age were so similar in the two halves of the decade that no real purpose would be served by presenting the relevant statistical data in this report.

In earlier reports, the relationship of mobility to labor force exposure was analyzed, but, since all persons who had been in the civilian labor force less than five years were classified in one group, it was not possible to analyze the relative mobility of groups with even shorter periods in the labor force.

Table 2 indicates that the least mobile persons (in terms of average number of civilian job or assignment shifts) in both the war and postwar periods were those who were in the civilian labor force from four to five years. We may infer, from the tables analyzed in earlier reports, that this group was composed chiefly of persons who were in the labor force during virtually the entire ten-year period.

1. Computed from Table A-2, Appendix.

2. See Table A-5, Appendix, which applies only to persons who were employed both at the beginning and end of the period.

TABLE 2.

Average Number of Civilian Job or Assignment Shifts by Years  
in the Civilian Labor Force and Sex, January 1940-December 1944  
and January 1945-December 1949 ---

San Francisco Work History Sample<sup>A</sup>

Period and years in civilian labor force	Men		Women	
	Average number of shifts	Average yearly number of shifts <sup>C</sup>	Average number of shifts	Average yearly number of shifts <sup>C</sup>
January 1940-December 1944	1.2	0.3	1.0	0.4
Less than one year	1.2	1.5	0.7	0.9
1-2 years	1.5	0.9	1.1	0.6
2-3 years	1.7	0.6	1.3	0.5
3-4 years	2.0	0.5	1.4	0.4
4-5 years	1.0	0.2	0.9	0.2
January 1945-December 1949	1.2	0.3	1.1	0.3
Less than one year	*B	*B	0.5	0.7
1-2 years	1.1	0.7	1.0	0.6
2-3 years	1.3	0.5	1.5	0.6
3-4 years	1.5	0.4	1.9	0.5
4-5 years	1.1	0.2	1.0	0.2

<sup>A</sup> Excludes persons with no civilian job or with casual work only in each of the two periods, respectively.

<sup>B</sup> No averages shown for groups with fewer than 2,955 men or 2,874 women.

<sup>C</sup> The average yearly number of shifts is the average number of shifts divided by the average number of years in the labor force, for each group of persons in the table. It was assumed that on the average, for each class interval, the number of years spent in the labor force was  $\frac{1}{2}$  year less than the upper limit of the class interval. After computation of averages for each class interval, weighted averages were computed for all men and women, for each period.

Source: Occupational Mobility Survey, San Francisco, Tabulations, P. 4 and P. 17 (See Table A-6, Appendix).

For groups with less than four years in the labor force, mobility tended to increase with increasing periods in the labor force. If we convert the average number of shifts over each five-year period into the average yearly number of shifts, however, we find that mobility, as measured in this manner, tended to decline with increasing periods in the labor force.

Thus, while persons with relatively short periods in the labor force represented a minority of all workers who were employed at some time during the war or postwar periods, such persons were responsible for disproportionately large percentages of the total shifts made in each period. Furthermore, persons with comparatively short periods in the labor force played a relatively more important role in the war than in the postwar period. This was particularly true in the case of the women. Of the women represented by the sample who held jobs at some time during the war period, 41 per cent were in the civilian labor force less than four years and accounted for nearly half of all civilian job or assignment shifts made by women during the period. During the postwar period, such women comprised 29 per cent of all women who worked at some time during the period and accounted for 35 per cent of shifts made by women.<sup>1</sup>

In earlier reports, we found that job mobility tended to vary inversely with years of residence in the San Francisco-Oakland Metropolitan Area and that there was quite a marked contrast between the average number of jobs held by the migrants and by the nonmigrants in the ten-year period.

Table 3 sheds further light on this question, indicating that in each of the five-year periods the persons who had most recently moved to the Area had displayed the highest average mobility (as measured by numbers of civilian job or assignment shifts).

Thus, in the war period, it was the wartime migrants (those with 6 to 11 years of residence in the Area in 1951) who had displayed the highest average mobility, followed by (1) the postwar migrants, (2) those with 12-20 years of residence, and (3) those with 21 or more years of residence. Most of the postwar migrants, of course, were living elsewhere during the war period, and we have no way of knowing how long they had been living in the places in which they were residing at that time. In all probability, their comparatively high mobility during the war period was attributable primarily to their comparatively youthful age distribution.<sup>2</sup> We shall find, when we come to examine geographic shifts, that many of the shifts made by this group of workers in the war period were geographic in character.

In the postwar period, mobility varied inversely with years of residence in the Area, the postwar migrants, as we should expect, displaying the highest average mobility.

Thus far, the factors which we have been examining influenced mobility

1. Computed from Table A-6, Appendix.

2. See The Mobility of Migrants and Nonmigrants, 1940-1949: San Francisco, Table e-27.

Table 3.

Average Number of Civilian Job or Assignment Shifts  
by Years of Residence in San Francisco - Oakland  
Standard Metropolitan Area and Sex, January 1940—  
December 1944 and January 1945—December 1949—

San Francisco Work History Sample<sup>A</sup>

Period and years of residence (as of 1951)	Men		Women	
	Total persons <sup>B</sup>	Average number of shifts	Total persons <sup>B</sup>	Average number of shifts
January 1940 - December 1944	203,307	1.2	98,860	1.0
0-5 years of residence	40,189	1.6	28,307	1.3
6-11 years of residence	28,663	1.9	17,817	1.5
12-20 years of residence	31,028	1.2	14,081	0.9
21 years and over	103,426	0.8	38,653	0.6
January 1945 - December 1949	210,547	1.2	111,649	1.1
0-5 years of residence	42,700	2.1	33,049	1.9
6-11 years of residence	29,698	1.5	20,979	1.3
12-20 years of residence	31,914	1.0	15,375	0.6
21 years and over	106,234	0.7	42,245	0.6

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the two periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

Source: Occupational Mobility Survey, San Francisco, Tabulations P - 8 and P - 21 (see Table A - 7, Appendix).

in very much the same manner in the two halves of the decade. When we turn to the influence of occupation on mobility, however, we find a somewhat different situation. As was shown in earlier reports, occupational differences exercised an important independent influence on mobility, over the decade as a whole, at least if defined in terms of broad levels of skill or training.<sup>1</sup> Mobility rates for the various major occupation groups tended, on the whole, to vary inversely with the position of the group in the occupational ladder. Differences between adjacent groups were not always large enough to be considered significant, and the increase in mobility rates was not entirely regular, especially for the women, but there was pronounced variation between the top and bottom of the ladder.

Variations in mobility by major occupation group were somewhat similar in each half of the decade (see Table 4), but there were certain differences that are worth noting.<sup>2</sup> Many of the groups occupied quite a different position in the scale of relative mobility in the second half of the decade from that occupied in the first half. This was true especially for men, although there were certain differences in the case of women, also. Thus, male clerical, sales, and service workers had comparatively low mobility rates in the first half of the decade and comparatively high rates in the second half. Male craftsmen and laborers, on the other hand, stood out with unusually high rates in the first half of the decade, but had rates that were no higher than those of many other groups in the second half of the decade. In the case of the women, a significant contrast appeared in the case of service workers, who had an unusually high mobility rate in the postwar period but only a moderate rate in the war period.

Occupational variations in mobility rates for men were considerably wider, moreover, in the first half of the decade than in the second, when the men in five out of the eight groups had identical mobility rates. For women, occupational differences in mobility were wide enough to be considered significant in the war period but not in the postwar period. Over the decade

1. In characterizing the influence of occupation on mobility as independent, we do not intend to imply that occupation exerts an influence that is independent of the influence of factors that are highly correlated with occupation, e.g., education.

2. A word of explanation is needed here with respect to the method of classification used. We know that the occupational attachments of many of the workers in our sample changed one or more times during the course of the decade. Thus, the occupational attachment of a worker on the basis of his longest job in 1950 might have borne little relation to the occupation at which he had worked during the war period (1940-1944). For this reason, we decided that in studying occupational variations in mobility in the war period, it would be best to classify workers on the basis of their occupations at the end of the period (December, 1944), and, in the postwar period, by their occupations at the end of that period (December, 1949). In connection with mobility rates for the decade as a whole, we classified workers on the basis of their longest jobs in 1950, as was done in the preparation of earlier reports. At a later stage, we shall look into the question as to how mobility rates varied if workers were classified on the basis of their occupations at the beginning of the period.

Table 4.

Average Number of Civilian Job or Assignment Shifts by  
Major Occupation Group at End of Period and Sex, January 1940 -  
December 1944, January 1945 - December 1949, and January 1940 -  
December 1949—

San Francisco Work History Sample<sup>A</sup>

Major occupation group at end of period	Men			Women		
	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
Total	1.1	1.1	2.3	0.9	1.0	2.0
Professional, technical, and kindred workers	0.6	0.9	1.8	0.6	0.6	1.4
Managers, officials, and proprietors, incl. farm	0.8	0.8	1.5	0.7	1.1	1.9
Clerical and kindred workers	0.7	1.2	2.4	0.9	1.0	2.0
Sales workers	0.6	1.2	2.2	1.2	1.1	2.1
Craftsmen, foremen, and kindred workers <sup>B</sup>	1.5	1.2	2.8	*	*	*
Operatives and kindred workers	1.1	1.2	2.6	0.9	0.8	1.6
Service workers, incl. private household Laborers <sup>B</sup>	0.9	1.3	2.6	0.9	1.3	2.5
	1.5	1.2	2.6	*	*	*

<sup>A</sup> and <sup>B</sup> See footnotes to Table 5.

Source: Occupational Mobility Survey, San Francisco (see Tables A-8 to A-10, Appendix).

Table 5.

Average Number of Civilian Job or assignment Shifts by Major  
Industry Group at End of Period and Sex, January 1940 - December 1944,  
January 1945 - December 1949, and January 1940 - December 1949—  
San Francisco Work History Sample<sup>A</sup>

Major industry group at end of period	Men			Women		
	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
Total	1.1	1.1	2.3	0.9	1.0	2.0
Extractive industries <sup>B</sup>	*	*	*	*	*	*
Construction <sup>B</sup>	1.5	1.5	3.3	*	*	*
Manufacturing	1.3	1.0	2.3	0.9	0.9	1.9
Durable goods	1.5	1.1	2.5	1.1	1.0	2.2
Nondurable goods	0.8	1.0	2.0	0.6	0.9	1.7
Transportation, communication, and other public utilities	1.3	0.8	2.1	0.8	1.0	1.8
Wholesale and retail trade	0.8	1.3	2.4	1.0	1.3	2.3
Finance, insurance, and real estate	0.3	0.5	1.4	0.7	0.9	1.6
Service industries	0.8	1.2	2.2	0.7	0.9	1.8
Public administration	1.4	1.0	2.4	1.2	0.9	2.3

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three  
Periods, respectively.

<sup>B</sup>No averages shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco (see Tables A-11 to A-13, Appendix).

as a whole, they were barely significant.<sup>1</sup>

If we examine industrial differences in mobility rates for the two halves of the decade, we find somewhat similar contrasts. Before discussing these contrasts, however, certain general comments need to be made about earlier findings on industrial differences in mobility over the decade as a whole. In earlier reports for the six cities, only six major industry groups were used in mobility tables. One of these six groups was an "all other" category, which combined seven of the groups in the Census major industry classification. On the basis of this classification, it was found that men in the construction industry stood out with relatively high mobility rates, but that otherwise industrial differences in mobility were quite narrow. In the present study, we have broken down the "all other industries" category into four separate industry groups--(1) extractive industries, (2) finance, insurance, and real estate, (3) service industries, and (4) public administration--partly in order to determine whether the broad "all other" category concealed important industrial differences in mobility and partly in order to employ a classification which was better adapted to an analysis of inter-industry movements.<sup>2</sup> Table 5 indicates that the former "all other" category did conceal significant differences in mobility, particularly in the case of men. If we examine mobility rates for the decade as a whole, we note that men in finance, insurance, and real estate stood out with relatively low mobility rates, while men in the construction industry had unusually high rates. Variations among the other groups in the table fell within a rather narrow range and cannot

1. We have used a chi-square test throughout the present report to test the significance of differences in mobility. Thus, in the present instance, we tested the hypothesis that the classification of workers by number of shifts was independent of their classification by major occupation group. In carrying out the test, we used eight occupation groups (for men) and four "number-of-shift" groups (0, 1, 2, and 3 or more), i.e., there were 21 degrees of freedom. The resulting values of chi-square were as follows: 1940-44, 109.35; 1945-49, 50.25; and 1940-49, 86.47. These results were clearly inconsistent with the hypothesis that the two bases of classification of workers were independent. (A chi-square table must be consulted in interpreting the results. Cf., for example, F. C. Mills, Statistical Methods [New York, 1938], p. 703.) For women, we used only seven occupation groups, so that there were 18 degrees of freedom. The results were: 1940-44, 45.78; 1945-49, 24.20; and 1940-49, 29.36. We may interpret these results as clearly inconsistent with the above hypothesis only for the war period. For the postwar period, they were not inconsistent with it, and for the decade as a whole, the results were borderline.

2. There is no thoroughly satisfactory answer to the problem of handling the major industry groups for our purposes. The service industry group used in the present report is quite heterogeneous, combining such different groups as the professional services and personal services groups, but, if it were subdivided, all of the resulting groups would be too small for satisfactory analysis in the light of considerations of sampling variability. On the other hand, the extractive industries group is extremely small, and we have refrained from presenting averages or percentages for this group, but we have handled it separately in order to avoid reducing the homogeneity of any other group with which it might have been combined.

be regarded as clearly significant.<sup>1</sup> In the case of women, industrial variations in mobility rates could not be considered significant, in the postwar period or over the decade as a whole, though they were significant in the war period.

The relative positions of a number of the male industry groups with respect to mobility rates were quite different in the two halves of the decade. Thus, the mobility rates of male workers in trade and in service industries were considerably closer to the top of the scale in the second half of the decade than in the first, while the reverse was true of male workers in durable goods manufacturing, the transportation group, and public administration. Somewhat similar contrasts appearing in the case of some of the women's groups cannot be regarded as statistically significant.

What is the significance of these contrasts between the war and postwar periods? Should they lead us to modify earlier conclusions with respect to occupational and industrial differences in mobility? We shall consider this problem in some detail in the next section.

### A Re-examination of Occupational and Industrial Differences in Mobility

#### Occupational Differences

If we are to re-examine earlier conclusions with respect to occupational differences in mobility, we need, as a first step, to seek an explanation for the differing patterns in the two halves of the decade. An examination of these differing patterns immediately suggests that they were related, at least to some extent, to differences in the direction of inter-occupational movements in the two halves of the decade. In the war period, for example, when the mobility rate of male craftsmen was higher than that of all other male groups except for laborers, the craftsmen group included (as of the end of the period) a relatively high percentage of workers who had shifted into the group since the beginning of the period. On the other hand, in the postwar period, when the mobility rate for male craftsmen was no higher than for many of the other male occupation groups, the percentage of workers who shifted into the group was comparatively low.

It is well to bear in mind, in this connection, that in measuring mobility rates we classified workers according to their occupations at the end of each period. If workers who are employed in a group at the end of a given period include a relatively large percentage who have shifted into

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1. Values of chi-square for number of shifts by major industry group (Tables A-11 to A-13, Appendix) for men (21 degrees of freedom) were as follows: 1940-44, 163.28; 1945-49, 67.74; and 1940-49, 71.62. For women (18 degrees of freedom), they were: 1940-44, 56.13; 1945-49, 13.72; and 1940-49, 26.17. These results were clearly inconsistent with the hypothesis of independence for men, but not for women in the postwar period or over the decade as a whole. If, however, we recompute chi-square for the 1940-49 period, omitting men in construction and in finance, insurance, and real estate from the computations, we get a borderline result (28.30, with 15 degrees of freedom). For women, we get a result that is not inconsistent with the hypothesis of independence (22.57 with 15 degrees of freedom).

the group since the beginning of the period, we should expect, ceteris paribus, that the mobility rate for this group would be comparatively high, since we have found that workers who had experienced a net shift in occupation group or employment status had substantially higher mobility rates than workers with no net shifts.<sup>1</sup>

These considerations suggest that we might expect to find a high degree of correlation between mobility rates for the major occupation groups in each period and the percentages of workers with net shifts into the various groups. In order to test this hypothesis, we computed co-efficients of rank correlation between these two magnitudes for both halves of the decade and for the decade as a whole, treating men and women separately.<sup>2</sup> We found that, in the case of men, the co-efficient was high (.905) only for the 1940-44 period. The co-efficient was low (.381) for the 1945-49 period, and, for the decade as a whole, there was complete absence of any rank correlation whatever between the two variables. In the case of women, we obtained only a moderately high co-efficient of rank correlation (.771) for the first half of the decade, and a low co-efficient (.371) for the decade as a whole. No co-efficient was computed for women in the postwar period, since occupational variations in mobility rates could not be considered significant for this period.

What is the explanation of these varying results? A study of the data indicates that a high rank correlation co-efficient was obtained in cases in which variations in the percentages of workers who had experienced net shifts were pronounced. They were most pronounced in the case of men in the 1940-44 period, in which the rate of net shifts into the craftsmen group (48%), at one extreme, was 2 1/2 times the rate of net shifts into the professional group. For the decade as a whole, on the other hand, the highest rate of net shifts (61% for the sales group) was only 1.4 times the lowest rate (44% for the professional group).<sup>3</sup>

1. See Table A-48, Appendix, for percentages of workers experiencing net shifts in employment status or occupation by major occupation group.

2. The co-efficient of rank correlation was selected in this case, because of its appropriateness in a situation in which the distributions of observations depart from normality. Cf. H. Hotelling and M. Pabst, "Rank Correlation and Tests of Significance Involving No Assumption of Normality," Annals of Mathematical Statistics, VII (1936), 29-43. In computing the co-efficients, a problem rose in assigning ranks to groups with identical gross mobility rates. It was decided that the least arbitrary method of assigning ranks in such cases was to carry the measures of average gross mobility out to a second decimal place and to assign ranks accordingly.

3. In the case of women, for the decade as a whole, the highest rate was nearly twice as high as the lowest rate, but inspection of the data indicates that the rate of net shifts into the professional group was very much lower than the corresponding rates for all other occupation groups. If we eliminate the professional group, the highest rate was only 1.3 times the lowest rate.

What this suggests is that, in a period in which conditions in the labor market are such that workers are being drawn into certain occupation groups at substantially higher rates than into other groups, these variations in rates of net shifts may have a considerable effect on differences in gross mobility rates by major occupation group for the period, perhaps distorting them somewhat from the pattern of differences that would apply to a more "normal" period. Essentially, what we are saying is that statistical measures of occupational variations in mobility computed from data relating to a period in which marked production shifts were occurring may be substantially influenced by demand conditions as well as by supply conditions in the labor market.<sup>1</sup> We must be wary, of course, of generalizing this result without examination of data for other areas and other periods.

These results indicate that the differing patterns of occupational variations in mobility in the two halves of the decade are to be explained largely on the ground that wartime variations were influenced substantially by the production shifts occurring in the period, while postwar variations (which were not even significant for women) were much less influenced by this factor.

Another way of approaching this range of problems is to inquire whether there were significant variations in gross mobility rates for persons with no net shifts and, if so, whether they corresponded to the occupational differences that prevailed for all workers. It was not possible to perform an adequate statistical test of the significance of occupational variations in mobility for women with no net shifts because of the small numbers of women in many of the classes. In the case of men with no net shifts, we found that there were significant occupational differences in mobility for each of the periods being investigated.<sup>2</sup> On the whole, the pattern of occupational differences (see Table 6) was not greatly different from that for all men in the sample (see Table 4), although certain occupation groups for which inter-group shifts were relatively important (clerical, sales, and laborers) had mobility rates that were closer to those at the lowest end of the scale than was the case when all men were included. Among workers

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1. We must recognize that it is never easy to separate the influence of demand and supply conditions, and yet, when we are trying to test the hypothesis that there are significant occupational differentials in mobility (i.e., differences in the propensity to make shifts of various kinds), we are necessarily engaged in an attempt to analyze the influence of supply factors in the labor market.

It is important that we recognize, also, in this case, that our conclusions do not rest solely on our computation of co-efficients of rank correlation, since there is undoubtedly an element of spurious correlation involved in the results of this computation. They rest in part on a logical inference drawn from the fact that workers who experienced net shifts had substantially higher gross mobility rates than workers who did not experience net shifts and in part on our analysis (discussed below, p. 12) of occupational variations in mobility for persons who experienced no net shifts.

2. Values of chi-square (with 21 degrees of freedom) were as follows: 1940-44, 47.97; 1945-49, 48.75; and 1940-49, 60.44.

Table 6.

Average Number of Civilian Job or Assignment Shifts for Men with No Net Shift in Occupation Group, by Major Occupation Group at End of Period, January 1940 - December 1944, January 1945 - December 1949, and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Major occupation group at end of period	1940 - 1944		1945 - 1949		1940 - 1949	
	Total men	Average number of shifts	Total men	Average number of shifts	Total men <sup>C</sup>	Average number of shifts
Men with no net shift in occupation group during period <sup>B</sup>	99,565	0.6	113,769	0.7	103,574	1.6
Professional, technical, and kindred workers	9,308	0.3	10,047	0.6	10,934	1.1
Managers, officials, and proprietors, incl. farm	21,129	0.3	24,527	0.4	21,572	0.9
Clerical and kindred workers	7,535	0.4	7,979	0.6	6,649	1.0
Sales workers	7,240	0.3	7,979	0.4	7,683	1.2
Craftsmen, foremen, and kindred workers	20,538	1.0	24,970	0.9	19,799	2.2
Operatives and kindred workers	15,662	0.7	16,105	0.8	15,366	1.8
Service workers, incl. private household	12,707	0.7	15,071	0.7	15,218	2.3
Laborers	5,467	0.5	7,092	0.6	6,353	1.5

<sup>A</sup>Excludes men with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>For this period, men are classified by major occupation group of longest job in 1950.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-57 to P-59.

with no net shifts, moreover, craftsmen and service workers stood out with higher mobility rates than other manual workers.

One should not make the mistake of assuming that the mobility rates presented in Table 6 provide a more accurate picture of "genuine" occupational differences in mobility (undistorted by changes in the occupational structure of employment) than those in Table 4. Inter-group occupational movement is an important aspect of mobility. In addition, we are not justified in assuming that the mobility rates of workers who experienced no net shifts were unaffected by the changes in the occupational structure of employment.

In attempting to evaluate the significance of earlier findings with respect to occupational differences in mobility, we need to inquire, also, about the effect of classifying workers by occupational attachment at the end of the period. The occupation group of the job held at the end of the period was, for many workers, different from that of the job held at the beginning of the period and may in some cases have been different from that of the job held longest during the period. In Table 7, we present mobility rates for workers classified by major occupation group of employment at the beginning of the period, for each of our three periods. Occupational variations in rates on this basis were about as wide as on the basis of occupational attachments at the end of the period, and the pattern of differences was broadly similar. But, especially in the two halves of the decade, there were differences in detail that are worth noting. In the first half of the decade, for example, men in clerical, sales, operative, and service jobs stood higher in the mobility scale on the basis of occupational attachment at the beginning of the period than on the basis of occupational attachment at the end of the period. These were, on the whole, groups that experienced substantial net losses of workers during the period (at least so far as our sample was concerned) and for which the rate of net shifts into the group was not particularly high. The reverse was true for skilled craftsmen. Similar contrasts can be pointed out for the other periods and for women, also. They suggest that, while there is a broad tendency for mobility rates to increase between the top and bottom of the occupational ladder, the precise position of a given group in the mobility scale will depend on the time-reference of the occupational classification as well as on differences in rates of movement into and out of various groups, where these differences are large.

Would we have obtained different results on the basis of a different mobility measure, e.g., one which did not take account of changes in occupational assignments? A partial answer to this question is provided by Table 8, which shows the average number of jobs held in each of our three periods by workers classified on the basis of the major occupation groups of the longest job held in 1950. The patterns of occupational differences in mobility which show up in this table are not materially different from those which appeared in Table 4.<sup>1</sup>

1. The reader will note that the sum of the average number of jobs held in the two halves of the decade exceeds the average for the decade as a whole. This merely reflects the fact that a job which began sometime in the first half of the decade and ended sometime in the second half of the decade would have been counted as a job held in each five-year period but would have been counted as only one job for the decade as a whole.

Table 7.

Average Number of Civilian Job or Assignment Shifts  
by Major Occupation Group of Employment at Beginning of Period and Sex,  
January 1940 - December 1944, January 1945 - December 1949,  
and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Major occupation group at beginning of period and sex	1940 - 1944		1945 - 1949		1940 - 1949	
	Total persons	Average number of shifts	Total persons	Average number of shifts	Total persons	Average number of shifts
Total men employed at beginning of period <sup>B</sup>	179,371 <sup>C</sup>	1.1	159,277	1.1	179,371	2.2
Professional, technical, and kindred workers	13,445	0.7	11,377	0.9	13,445	1.4
Managers, officials, and proprietors, incl. farm	35,165	0.9	31,028	0.7	35,165	1.7
Clerical and kindred workers	15,662	1.1	11,229	1.0	15,662	1.9
Sales workers	13,298	1.0	9,752	0.6	13,298	1.9
Craftsmen, foremen, and kindred workers	28,073	1.2	39,007	1.5	28,073	2.4
Operatives and kindred workers	36,199	1.5	27,186	1.4	36,199	2.8
Service workers, incl. private household	21,867	1.3	17,582	0.9	21,867	2.5
Laborers	15,662	1.3	12,116	1.3	15,662	2.5
Total women employed at beginning of period <sup>B</sup>	60,925	0.9	84,060	1.2	61,213	1.9
Professional, technical, and kindred workers	10,633	0.9	9,484	1.0	10,633	1.8
Managers, officials, and proprietors, incl. farm	5,029	0.7	7,185	1.3	5,029	1.6
Clerical and kindred workers	22,847	0.9	35,205	1.1	22,847	1.8
Sales workers	4,598	1.2	4,742	1.5	4,598	2.5
Craftsmen, foremen, and kindred workers <sup>D</sup>	718	*	2,012	*	718	*
Operatives and kindred workers	6,610	0.7	11,783	1.4	6,610	2.0
Service workers, incl. private household	10,202	1.2	12,501	1.0	10,346	2.2
Laborers <sup>D</sup>	287	*	1,150	*	431	*

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 296 men not reporting occupation.

<sup>D</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-60 to P-62.

TABLE 8.

Average Number of Civilian Jobs Held by Major Occupation Group  
of Longest Job in 1950 and Sex, January 1940 - December  
1944, January 1945 - December 1949, and January 1940 -  
December 1949 ---  
San Francisco Work History Sample<sup>A</sup>

Major occupation group of longest job in 1950 and sex	1940 - 1944		1945 - 1949		1940 - 1949	
	Total persons	Average number of jobs held	Total persons	Average number of jobs held	Total persons	Average number of jobs held
Total men <sup>B</sup>	203,159 <sup>C</sup>	1.9	210,399 <sup>C</sup>	2.0	212,024 <sup>C</sup>	3.0
Professional, technical, and kindred workers	17,287	1.5	18,173	1.8	19,060	2.4
Managers, officials, and proprietors, incl. farm	40,041	1.5	40,780	1.6	40,927	2.2
Clerical and kindred workers	15,957	1.8	16,696	2.0	16,843	2.9
Sales workers	18,321	1.7	19,356	2.1	19,503	3.0
Craftsmen, foreman, and kindred workers	38,711	2.2	39,893	2.2	39,893	3.5
Operatives and kindred workers	28,959	1.9	29,846	2.2	29,846	3.3
Service workers	29,846	2.0	31,471	2.2	31,619	3.4
Laborers	14,036	2.1	14,184	2.2	14,332	3.4
Total women <sup>B</sup>	98,573 <sup>D</sup>	1.8	111,074 <sup>D</sup>	2.0	111,792 <sup>D</sup>	2.7
Professional, technical, and kindred workers	10,921	1.5	11,208	1.6	11,783	2.2
Managers, officials, and proprietors, incl. farm	8,334	1.7	9,484	2.0	9,484	2.6
Clerical and kindred workers	41,527	1.7	45,550	2.0	45,694	2.7
Sales workers	6,897	1.8	8,622	2.0	8,621	2.9
Craftsmen, foremen, and kindred workers <sup>E</sup>	1,581	*	1,724	*	1,724	*
Operatives and kindred workers	10,777	1.7	12,214	1.8	12,357	2.5
Service workers	17,818	1.9	21,410	2.3	21,266	3.0
Laborers <sup>E</sup>	718	*	862	*	862	*

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 148 men not reporting occupation.

<sup>D</sup>Excludes 575 women who were in the Armed Forces in 1950.

<sup>E</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P. 63, P-64, and W-52 (Census).

Table 9.

Average Number of Civilian Job or Assignment Shifts for Persons with No Net Shift in Industry Group, by Major Industry Group at End of Period and Sex, January 1940 - December 1944, January 1945 - December 1949, and January 1940 - December 1949—

San Francisco Work History Sample<sup>A</sup>

Major industry group at end of period and sex	1940 - 1944		1945 - 1949		1940 - 1949	
	Total persons	Average number of shifts	Total persons	Average number of shifts	Total persons <sup>D</sup>	Average number of shifts
Men with no shift in industry group during period <sup>B</sup>	96,482 <sup>C</sup>	0.5	111,110	0.6	108,354 <sup>C</sup>	1.5
Extractive industries <sup>E</sup>	1,921	*	1,034	*	1,478	*
Construction	5,467	0.8	6,797	0.9	8,865	2.2
Manufacturing	20,242	0.7	22,606	0.7	18,765	1.7
Durable goods	10,490	0.8	12,854	0.9	8,570	2.1
Nondurable goods	9,752	0.5	9,752	0.3	10,195	1.3
Transportation, communication, and other public utilities	12,263	0.6	15,662	0.5	11,525	1.1
Wholesale and retail trade	26,300	0.5	29,107	0.7	31,471	1.6
Finance, insurance, and real estate	8,422	0.2	9,752	0.2	9,899	0.8
Service industries	16,400	0.4	18,026	0.6	19,208	1.3
Public administration	5,467	0.5	8,126	0.3	6,944	1.4
Women with no shift in industry group during period <sup>B</sup>	38,941	0.4	58,052	0.6	37,073	1.3
Extractive industries <sup>E</sup>	144	*	—	*	—	*
Construction <sup>E</sup>	—	*	144	*	—	*
Manufacturing	8,765	0.2	11,208	0.5	6,610	1.1
Durable goods	2,012	*	3,018	0.4	862	*
Nondurable goods	6,754	0.2	8,190	0.5	5,748	1.1
Transportation, communication, and other public utilities <sup>E</sup>	2,012	*	3,449	0.3	2,730	*
Wholesale and retail trade	9,771	0.6	15,519	1.0	8,909	1.6
Finance, insurance, and real estate	4,167	0.4	5,317	0.4	4,023	0.8
Service industries	12,789	0.4	17,243	0.6	13,363	1.2
Public administration <sup>E</sup>	1,293	*	5,173	0.7	1,437	*

<sup>A</sup> Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup> Individual items do not always add to totals because of rounding.

<sup>C</sup> Excludes 148 men not reporting occupation.

<sup>D</sup> For this period, workers are classified by major occupation group of longest job in 1950.

<sup>E</sup> Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-65 to P-67.

Another question which has been raised with respect to the interpretation of the findings of the Six-City Study in relation to occupational differences in mobility has to do with whether these differences may not be attributable almost entirely to occupational differences in the degree of exposure to involuntary job separations.<sup>1</sup> It has been argued that the tendency of mobility to vary inversely with the position of workers in the occupational ladder may merely reflect an increase in the incidence of involuntary job shifts as we proceed down the ladder. While this problem has not been specifically investigated in connection with the present project, it seems desirable, in this re-examination of occupational differences in mobility, to consider what light may be shed on it on the basis of tabulations available to us. In an earlier report, we found that there were occupational variations in the percentage of total shifts that occurred for economic reasons,<sup>2</sup> but we did not attempt to determine whether occupational differences in mobility would prevail if we eliminated shifts for economic reasons. If we compute the average number of employer shifts for economic and noneconomic reasons<sup>3</sup> for persons in each major occupation group, we find (as we should expect on the basis of earlier findings) that workers had experienced substantially fewer economic shifts, on the average, than shifts for other reasons (data not presented in this report). While occupational variations in the average number of shifts for economic reasons were more marked than was the case with shifts for noneconomic reasons, variations in the latter type of shift were by no means narrow. Among the men, skilled craftsmen and service workers experienced twice as many employer shifts for noneconomic reasons during the course of the decade as did managerial workers, while female service workers experienced almost twice as many shifts of this type, on the average, as did female professional workers. It is quite possible, of course, that somewhat different results might have been obtained for a decade in which employment conditions were less favorable and in which involuntary shifts represented a larger percentage of all shifts.

On the basis of this re-examination of occupational differences in mobility, we have uncovered no evidence suggesting a need for modification of our earlier conclusion that mobility rates tend to vary considerably between the top and bottom of the occupational ladder. But there is a good deal of evidence to suggest that the precise position of a particular

1. Cf. Herbert S. Parnes, Report on Mobility Research (to be published by Social Science Research Council).

2. The Mobility of San Francisco Workers, 1940-49, p. 45.

3. As pointed out in earlier reports, a job shift was classified as having occurred for economic reasons if a worker was forced to leave a job (1) because of the condition of his employer's business (layoffs, shut-downs, etc.) or (2) because he had owned a business of his own which had gone bankrupt or failed to prosper. Thus job shifts for economic reasons include most involuntary job shifts, omitting only those which occurred because an individual worker was fired or discharged. For purposes of tabulations performed by the Bureau of the Census, job shifts included only those shifts experienced by persons who had had more than one employer during the ten-year period. If we exclude from such job shifts the relatively small number of shifts which involved a return to the same job, we arrive at the number of employer shifts.

occupation group in the mobility scale may be influenced by the economic conditions prevailing in a given period, particularly if the period is one in which employment opportunities are expanding unusually rapidly for certain occupation groups. In relation to the problem of statistical measurement of mobility differences, it is clear that the choice of the period to be investigated, as well as the time-reference of the occupational classification of workers, may be expected to influence the results. On the whole, these findings tend to underscore the advantages of collecting life work histories in a large-scale statistical investigation of mobility, in order to have access to data shedding light on the manner in which mobility changes under the impact of changing economic conditions.

### Industrial Differences

In re-examining industrial differences in mobility, let us first look into the question as to whether the differing patterns in the two halves of the decade were related to differences in the direction of inter-industrial movements, i.e., can be explained on a basis analogous to the explanation we found to hold for occupational differences.

If we compute co-efficients of rank correlation for each of our three periods, between mobility rates by major industry group and percentages of workers who had experienced net shifts, we again find that, for men, the resulting co-efficient was highest (.905) in the war period, when there were wide variations from group to group in the percentages of persons who had experienced net shifts. Co-efficients were lower for the postwar period (.548) and for the decade as a whole (.619), when variations in percentages of persons with net shifts were considerably narrower. For women, we obtained a co-efficient of .929 for the war period but did not compute co-efficients of rank correlation for the postwar period or for the decade as a whole, since industrial variations in mobility were not found to be significant for these periods.

Were there significant industrial differences in mobility for persons who experienced no net shift in major industry group in the three periods? Table 9 indicates that there were, although only in the case of the men can we demonstrate that these differences were statistically significant.<sup>1</sup> The pattern of variations for this group of men, over the course of the decade, was somewhat similar to that for all men in the sample, but there were certain differences that are worth noting. Although men in construction had the highest mobility rate and men in finance, insurance, and real estate the lowest rate, these two groups did not stand out from the other groups as decisively as they did when we were considering the mobility rates of all men in the sample. Mobility rates for the industry groups which lay between these two groups varied more widely, and the mobility rate for men in construction, for example, was not significantly higher than that for men in durable goods manufacturing. There was a more marked difference between the mobility rates of men in durable and nondurable goods manufacturing, moreover, than was the case when we were considering all men in the sample.

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1. Chi-square values (with 21 degrees of freedom) were the following: 1940-44, 42.33; 1945-49, 64.46; 1940-49, 54.54.

What sort of picture of industrial variations in mobility do we get if we classify workers by major industry group of employment at the beginning of each period (See Table 10). For the decade as a whole the pattern of variations was not very different from that which we found when workers were classified by industrial attachment at the end of the period (Table 5). The only significant difference was that, on the basis of industrial attachment at the beginning of the period, men in the construction industry did not stand out with an unusually high mobility rate.<sup>1</sup>

If we consider the two halves of the decade separately, we find that there were some significant differences between Tables 5 and 10 in patterns of industrial variation in mobility rates. Perhaps the most interesting and suggestive differences relate to men in construction and in durable goods manufacturing in the second half of the decade. On the basis of the classification presented in Table 5, construction workers had a significantly higher mobility rate than men in durable goods manufacturing, whereas on the basis of Table 10, the relationship was the reverse. These contrasts clearly reflect the fact that men were shifting out of durable goods manufacturing and into the construction industry on a substantial scale in the postwar period. Other similar contrasts could be pointed out.

Do we gain any further insights into industrial differences in mobility if we distinguish between employer shifts for economic and noneconomic reasons? We find (data not presented here) that men in construction and in durable goods manufacturing, in that order, had experienced more employer shifts for economic reasons, on the average, than had men in other industry groups. Nevertheless, there were significant industrial differences in the average number of employer shifts for noneconomic reasons, which conformed, on the whole, to the pattern of differences for all job or assignment shifts.

Finally, the question has frequently been raised as to whether such industrial differences in mobility as exist may not be attributable entirely, or almost entirely, to differences in the occupational composition of the various major industry groups. There is little question that this factor plays a role. As Table A-14 indicates, the percentage of manual workers in the major industry groups which we have been examining ranged, for men, from 20 per cent in finance, insurance, and real estate (the group with the lowest mobility rate) to 84 per cent in construction (the group with the highest mobility rate). For women, the proportion of manual workers varied from a very small fraction of all workers in the transportation, finance, and public administration groups to 59 per cent in nondurable goods manufacturing. Yet it is clear that this explanation of variations in mobility breaks down at certain points. The percentage of manual workers among men in the transportation group, for example, was far higher than among men in wholesale and retail trade, and yet average mobility over the decade was not higher in the former group than in the latter. Even if we were to

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1. It should be noted that the unusually high mobility rate for men who were in the extractive industries at the beginning of the period should not be interpreted as providing us with any information about mobility rates in this group of industries. It is clear that these were chiefly men who migrated to San Francisco sometime after the beginning of 1940 and subsequently found employment in other industries.

Table 10.

Average Number of Civilian Job or Assignment Shifts  
by Major Industry Group of Employment at Beginning  
of Period and Sex, January 1940 - December 1944, January  
1945 - December 1949, and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Major industry group at beginning of period and sex	1940 - 1944		1945 - 1949		1940 - 1949	
	Total persons	Average number of shifts	Total persons	Average number of shifts	Total persons	Average number of shifts
Total men employed at beginning of period <sup>B</sup>	178,780 <sup>C</sup>	1.1	158,981 <sup>D</sup>	1.1	178,780 <sup>C</sup>	2.2
Extractive industries <sup>F</sup>	7,092	1.7	2,807	*	7,092	3.5
Construction	13,002	1.5	7,979	1.1	13,002	2.5
Manufacturing	36,938	1.3	46,690	1.5	36,938	2.4
Durable goods	17,435	1.4	31,278	1.8	17,435	2.6
Nondurable goods	19,503	1.2	12,411	0.6	19,503	2.2
Transportation, communication, and other public utilities	21,720	1.0	21,720	1.0	21,720	2.1
Wholesale and retail trade	46,690	1.1	35,313	1.0	46,690	2.2
Finance, insurance, and real estate	11,672	0.7	9,752	0.2	11,672	1.1
Service industries	31,471	1.0	21,276	0.9	31,471	2.0
Public administration	10,195	1.2	13,445	1.2	10,195	2.1
Total women employed at beginning of period <sup>B</sup>	60,782 <sup>E</sup>	0.9	84,060	1.2	61,069 <sup>E</sup>	1.9
Extractive industries <sup>F</sup>	287	*	431	*	287	*
Construction	---	---	575	*	---	---
Manufacturing	12,645	0.7	20,692	1.4	12,789	2.0
Durable goods <sup>F</sup>	2,730	*	9,627	1.9	2,874	2.2
Nondurable goods	9,915	0.7	11,064	1.1	9,915	1.9
Transportation, communication, and other public utilities	3,592	1.0	5,317	1.1	3,592	1.8
Wholesale and retail trade	14,513	1.0	19,542	1.2	14,513	2.3
Finance, insurance, and real estate	4,886	0.7	6,610	0.9	4,886	1.2
Service industries	22,991	1.0	21,697	0.9	23,134	1.8
Public administration <sup>F</sup>	1,868	*	9,196	1.2	1,868	2.1

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 886 men not reporting industry.

<sup>D</sup>Excludes 296 men not reporting industry.

<sup>E</sup>Excludes 144 women not reporting industry. (It should be noted, also, that a few women who worked in the 1940-49 period did not work at all in the 1940-44 period.)

<sup>F</sup>Averages not shown for groups with 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-68 to P-70.

include clerical and sales workers, as comparatively mobile occupation groups, along with manual workers in our comparison, we should find that we had accounted for 86 per cent of all male workers in the transportation group as compared with only 63 per cent in wholesale and retail trade.

Indeed, we cannot rule out the possibility that the influence runs, at least to some extent, in the opposite direction, i.e., that occupational differences in mobility are at least partially explained by differences in industrial attachments. Consider, for example, the fact that approximately half of all the craftsmen and foremen in our sample were employed in 1950 in either construction or durable goods manufacturing, two industries which, both on the basis of statistical evidence examined here (on exposure to employer shifts for economic reasons) as well as other generally available evidence, are characterized by relatively unstable conditions of employment.

On the whole, the evidence which we have examined in the present chapter tends to confirm our earlier finding that occupational differences, at broad levels of skill, constitute a more important independent factor in mobility than differences in industrial attachment. But there is considerable evidence that industrial differences may play a somewhat more important role than earlier findings indicated. The fact that the particular decade under study was one in which marked shifts in the industrial distribution of employment in the first half of the decade were followed by shifts in more or less the opposite direction in the second half of the decade seems to have had the effect of narrowing the differences which showed up in our data for the decade as a whole. On the whole, it seems reasonable to conclude that such industrial variations in mobility as we found were attributable primarily to (1) differences in the occupational distribution of workers employed in the various major industry groups, (2) differences in the stability of employment conditions in these industry groups and (3) differences in the impact of changes in the industrial structure of employment of the various industry groups. A fourth factor, the nontransferability of specialized types of skill or knowledge may well play a role in certain industries, e.g., the clothing industry.

CHAPTER III  
TYPES OF SHIFTS

Gross Occupation and Industry Shifts

In earlier mobility reports, we have had access to information on the relative importance of various types of job shifts during the 1940-1949 period. These data indicated that nearly three-fifths of all the shifts made by workers in the six cities in the ten-year period involved a change in occupation and almost three-quarters a change in industry.<sup>1</sup> A shift was classified as involving a change in occupation or industry on the basis of the detailed Census occupation and industry codes. On the other hand, tables relating to net occupational and industrial changes in the war and postwar periods and for the decade as a whole provided information only on net shifts among major occupation and industry groups. Thus, the available data on gross and net shifts in occupation and industry were not comparable; and it was essential, in preparing the present report, that we develop data which would permit direct comparisons.

In the present chapter, we shall summarize our findings relating to gross occupation and industry shifts, as well as intra-group and inter-group shifts. Gross occupation and industry shifts will be treated very briefly, since we shall merely be presenting, in somewhat different form, information that was covered in earlier reports.

Gross Occupation Shifts.

The men represented by the San Francisco work history sample had experienced, on the average, 1.5 occupation shifts in the 1940-1949 period, and the women had experienced 1.1 such shifts (see Table A-15, Appendix). A shift was classified as occupational in character if it involved a change in occupation on the basis of the detailed Census code. Shifts in occupational assignments on the same job, as well as job shifts involving a change in occupation, were included in arriving at these averages.

The tendency to shift occupations had varied significantly for persons at different levels of occupational skill.<sup>2</sup> In the case of

1. Computed from The Mobility of Workers in Six Cities: 1940-1949, Table 28, Appendix.

2. A chi-square test was used to determine whether the number of occupation shifts experienced by workers was independent of their classification by major occupation groups. For men, the values of chi-square (with 21 degrees of freedom) for the three periods were as follows: 1940-1944, 87.61; 1945-1949, 48.91; and 1940-1949, 65.12. For women, they were (18 degrees of freedom): 1944-1949, 43.51; 1945-1949, 41.03; and 1940-1949, 53.37.

men, occupational mobility rates of professional and managerial workers, at the top of the occupational ladder, were distinctly lower than those of laborers, at the bottom, but rates did not increase in a regular manner from the top to the bottom of the ladder. Clerical workers, operatives, and laborers had the highest occupational mobility rates, while those of sales workers, skilled craftsmen, and service workers were somewhat lower. In the case of women, the increase in occupational mobility rates from the top to the bottom of the ladder was even less regular, although professional women, at the top, had the lowest rate, and service workers, at the bottom, the highest rate.

Again, in the case of this mobility measure, there were significant differences in patterns of variation by major occupation group in the two halves of the decade. These differences were somewhat similar to those that we found for all job or assignment shifts and probably reflect the influence of similar forces.

The great majority (80%) of occupation shifts experienced by men during the course of the decade were inter-group in character (see Table 11). This was true, moreover, for men at all levels of occupational skill, although there were variations by major occupation group in the proportions of shifts that were inter-group in character.<sup>1</sup>

In other words, when a man changed his occupation, it was likely that he would shift to a different level of skill rather than to an occupation within the same skill level. His occupation shifts tended to represent, for the most part, movements up or down the occupational ladder rather than horizontal movements.

This was not so true for women. Only about two thirds of all occupation shifts made by women in the ten-year period were inter-group in character, and there were rather marked variations by major occupation group in the relative importance of inter-group shifts. Only about half of all the shifts made by female clerical workers--by far the most numerous group of women in the sample--had been inter-group in character. Shifts made by female professional and service workers also included somewhat smaller percentages of inter-group shifts than was the case with most of the male groups. On the other hand, the great majority of shifts experienced by female managerial and sales workers and by female operatives had been inter-group in character.

To some extent, the differences between women and men in this respect reflect the more limited opportunities available to women to participate in "upward" mobility. For a nonmanual male worker, a managerial job probably represents in many instances the ultimate goal toward which he is likely to aim if he does not have professional training, and, as we shall see when we analyze channels of gross inter-occupational movement, shifts into managerial jobs from clerical and sales jobs and even from certain manual occupations were quite common.

1. A chi-square test indicated that the distribution of total shifts between inter-group and intra-group shifts was not independent of the occupational attachments of men or women experiencing the shifts. Values of chi-square were, for men (7 degrees of freedom), 31.51, and, for women (6 degrees of freedom), 66.83.

Table 11.

Ratio of Inter-Group Occupation Shifts to Total Occupation Shifts  
by Major Occupation Group of Employment at End of Period and Sex, January 1940--  
December 1944, January 1945 - December 1949, and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Major occupation group at end of period and sex	Men			Women		
	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
Total shifts of persons employed at end of period	.83	.78	.80	.67	.63	.66
Professional, technical, and kindred workers	.80	.80	.74	.77	.67	.65
Managers, officials, and proprietors, including farm	.90	.90	.86	.84	.88	.82
Clerical and kindred workers	.84	.68	.76	.47	.48	.53
Sales workers	.96	.86	.87	.96	1.00	.86
Craftsmen, foremen, and kindred workers	.86	.75	.80	*B	*B	*B
Operatives and kindred workers	.72	.71	.75	.82	.78	.83
Service workers, incl. private household	.77	.74	.79	.60	.50	.63
Laborers	.84	.90	.88	*B	*B	*B

<sup>A</sup>Excludes shifts of persons with no civilian job or with casual work only.

<sup>B</sup>Ratios not shown for groups with fewer than 2,955 men or 2,874 women.

Source: See Appendix, Tables A-15 to A-16.

Table 12.

Ratio of Inter-Group Industry Shifts to Total Industry Shifts  
by Major Industry Group of Employment at End of Period and Sex, January 1940--  
December 1944, January 1945 - December 1949, and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Major industry group at end of period and sex	Men			Women		
	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
Total shifts of persons employed at end of period	.87	.82	.84	.60	.71	.76
Extractive industries	*B	*B	*B	*B	*B	*B
Construction	.81	.92	.90	*B	*B	*B
Manufacturing	.85	.70	.75	.83	.84	.85
Durable goods	.85	.58	.66	.91	.86	.86
Nondurable goods	.87	.85	.88	.73	.83	.85
Transportation, communication, and other public utilities	.92	.82	.86	1.00	.90	.88
Wholesale and retail trade	.83	.77	.82	.72	.58	.66
Finance, insurance, and real estate	.78	.97	.93	.79	.90	.87
Service industries	.86	.88	.87	.71	.64	.72
Public administration	.94	.88	.90	.84	.89	.81

<sup>A</sup>Excludes shifts of persons with no civilian job or with casual work only.

<sup>B</sup>Ratios not shown for groups with fewer than 2,955 men or 2,874 women.

Source: See Appendix, Tables A-17 to A-18.

But relatively few women can hope to become managerial workers, either in the self-employed or employee category. Furthermore, jobs as skilled craftsmen, which probably represent the goal of many male manual workers, are virtually closed to women. In addition of course, for many women, a job is not part of a career but only a temporary means of earning a living prior to marriage. In view of these considerations, it is scarcely surprising that women tend to participate in inter-group occupation shifts, or in any type of occupation shift, to a less extent than men.

The men represented by our sample had experienced, on the average, 1.2 inter-group occupation shifts during the course of the decade, as compared with 0.7 such shifts for women (see Table A-16, Appendix). For this type of mobility, as for the other types that we have been analyzing, there was marked variation in mobility rates between the top and bottom of the occupational ladder, at least in the case of men.<sup>1</sup> But, as was true for occupation shifts, the increase in mobility rates did not occur in a regular manner. There was a rather sharp contrast between the rates of professional and managerial workers, on the one hand, and all other occupation groups, on the other.

In the case of women, the highest rates of inter-group occupational mobility were not found at the bottom of the occupational ladder. Managerial workers and sales workers appear to have experienced the most inter-group occupational shifts, on the average, but, in view of the small numbers of women in these groups, the differences between their mobility rates, as here measured, and those of female service workers cannot be regarded as necessarily significant.

#### Gross Industry Shifts.

The men represented by the San Francisco work history sample had experienced 1.4 industry shifts, on the average, in the 1940-1949 period, while the women had experienced 1.3 such shifts (see Table A-17, Appendix). The difference between the sexes in this respect was not large enough to be considered significant. This finding is consistent with earlier findings with respect to the relative importance of industry shifts as a type of job shift.

Over the ten-year period as a whole, variations in industrial mobility by major industry group were not wide enough to be considered statistically significant in the case of men. Yet they may be regarded as significant for each half of the decade considered separately.<sup>2</sup>

1. Values of chi-square for number of inter-group occupation shifts by major occupation group for men were as follows (21 degrees of freedom): 1940-1944, 79.43; 1945-1949, 51.35; and 1940-1949, 78.32. For women, they were (18 degrees of freedom): 1940-1944, 63.51; 1945-1949 54.99; and 1940-1949, 78.19.

2. For the decade as a whole, the value of chi-square for men (21 degrees of freedom) was only 30.76. A value as great as this would occur nearly 10 times out of 100, purely as a result of chance. But the values for each half of the decade considered separately were as follows: 1940-1944, 198.44; and 1945-49, 48.26.

For women, variations in industrial mobility by major industry group were wide enough to be considered significant in the war period, but not in the postwar period. Over the decade as a whole, they were barely wide enough to be considered significant.<sup>1</sup>

On the whole, we may tentatively conclude that variations in industrial mobility by major industry group may be expected to appear in periods of mobilization and perhaps in demobilization, but the evidence is not at all clear as to whether such variations would be of material importance in a prolonged peacetime period.

The great majority of industry shifts were inter-group in character, for both men and women, although the percentage of inter-group shifts was somewhat lower for women than for men (see Table 12). Among the men, only the durable goods manufacturing group stood out with a significantly lower percentage of inter-group shifts than other groups. This reflected the experience of the postwar period when, as we know, men were moving out of this group and into the other groups on a substantial scale. Apparently, in the postwar readjustment period, the men who stayed in durable goods manufacturing did experience intra-group shifts to a certain extent, probably chiefly shifts out of shipbuilding and into other branches of heavy industry. Whether intra-group shifts would turn out to be comparatively important in durable goods manufacturing in a more normal period is not at all clear.<sup>2</sup>

In the case of the women, the proportion of inter-group shifts was somewhat lower in wholesale and retail trade and in the service industries than in other groups, particularly in the postwar period.

On the whole, however, it would appear that when a worker of either sex changed industries, he was likely to shift to a different industry group rather than to a closely related industry. If it were possible for us to employ a more refined industrial breakdown, we might find that there were certain combinations of industries which constituted important exceptions to this generalization.

The average number of inter-group industry shifts experienced by men in the ten-year period (1.1) was not significantly higher than the average number experienced by women (1.0) (see Table A-18, Appendix.) In the war period, variations in average inter-group industry shifts by major industry group were wide enough to be considered clearly significant for both men and women. During this period, moreover, it is clear that these variations reflected the influence of the industrial mobilization program. For both men and women, average inter-group industry shifts were relatively high for the workers who were employed

1. For the women, values of chi-square were as follows (18 degrees of freedom): 1940-1944, 50.76; 1945-1949, 24.84; and 1940-1949, 30.82.

2. A chi-square test shows that there were significant industrial variations in the division of shifts between inter-group and intra-group shifts. Values of chi-square were, for men (7 degrees of freedom), 73.41, and for women (6 degrees of freedom), 40.96.

in durable goods manufacturing, public administration, and the transportation group at the end of the period. In the postwar period industrial variations in inter-group mobility were significant for men but not for women, while over the decade as a whole, they were significant in the case of the women but not in the case of the men.<sup>1</sup> The results of tests of statistical significance, as applied to the two sexes, were not, however, so different as to justify attaching much importance to this distinction.

#### Types of Job Shifts in the War and Postwar Periods

At this point, we return to an analysis of types of job shifts like that used in earlier mobility reports, in order to determine (1) whether there were differences between the war and postwar periods in the relative importance of the various types of shifts and (2) how geographical shifts fitted into the picture.<sup>2</sup> The discussion will be brief, since our purpose will be to bring out only those points that add to the information on types of job shifts presented in earlier reports.

Complex job shifts (employer, occupation, and industry) were somewhat more important, relatively in the war period than in the postwar period. This was particularly true of shifts experienced by women. On the other hand, shifts that involved a change in employer only played a relatively more important role in the postwar period than in the war period. Other types of shifts occupied positions of approximately equal relative importance in both periods.

These contrasts between the two periods hold fairly consistently for all age groups, for all years-of-residence groups, for nearly all major occupation groups, and for most major industry groups (see Tables A-19 and A-22, Appendixes).

There were a few differences between the two periods with respect to the influence of age and years of residence on types of shifts, however, that are worth noting. The tendency for the proportion of "employer and industry" shifts to increase with advancing age, which was mentioned in an earlier report as prevailing for men in the 1940-1949 period, showed up most clearly for the war period and applied especially to shifts by men in that period, though a somewhat similar but less pronounced tendency prevailed for shifts by women in the war period. In the postwar period, this tendency showed up much less clearly for shifts by men, and there was almost a reverse tendency in the case of shifts by women. If

1. Values of chi-square for men (21 degrees of freedom) were as follows: 1940-1944, 170.95; 1945-1949, 37.85; and 1940-1949, 30.03. For women (18 degrees of freedom) they were: 1940-1944, 76.62; 1945-1949, 23.28; and 1940-1949, 41.68.

2. The tabulations analyzed in the present section differ from those analyzed in earlier reports in that (1) they are based on occupational assignment cards rather than on worker cards and (2) they do not exclude job shifts experienced by persons with only one employer in the ten-year period. Like the earlier tabulations, however, they apply only to job shifts and do not include shifts in occupational assignment on the same job.

we combine "employer and industry" and "employer, occupation, and industry" shifts and leave out of account the men who were aged 65 and over, we find that there was no tendency for the proportion of industry shifts to decline with advancing age in the war period in the case of men, whereas such a tendency was quite pronounced in the postwar period. In the case of women, the tendency was present in both periods but was much less pronounced in the war period.<sup>1</sup> Perhaps a more significant way of expressing these differences is to point out that, whereas, for the youngest group of men in the sample industry shifts had been about equally important as a percentage of total shifts in both the war and postwar periods, they had represented a considerably larger percentage of wartime than of postwar shifts for older men in the sample, especially those aged 55 to 64. In the case of women, though industry shifts were somewhat more important, relatively, for all age groups save the 35 to 44 group in the war period, the difference was considerably more marked for women aged 55 to 64 than for younger groups.

In other words, although mobility rates were about equally high in the war and postwar periods for all age groups, the war had on the whole, a more pronounced effect on the mobility patterns of older workers than of younger workers, at least as regards the tendency to change industries.

It is likewise interesting to note that "years of residence" had practically no influence on the types of shifts experienced by men in the war period. Complex job shifts constituted virtually the same proportion of shifts made by men in all years-of-residence groups, and, for the most part, variations in percentages of other types of shifts by years of residence could not be regarded as significant. This was true, moreover, in spite of substantial differences in the age composition of these years-of-residence groups. It must be remembered, of course, that these groups did not all participate in shifts to the same extent<sup>2</sup> in the war period, but apparently, if a man did change jobs, his residence-status did not have very much influence on the type of shift that he made. In the postwar period, there was some tendency for the proportion of complex shifts to decline with increasing years of residences, but it was not entirely consistent and not very marked.

For women, the relationship between years of residence and types of shifts in the war period was more in line with what we should have expected. The proportion of complex job shifts was highest for wartime migrants and lowest for those who had lived in the area 21 years or more. In the postwar period, the relationship between years of residence and types of shifts was somewhat irregular. Again, the percentage of complex shifts was highest for the women who had migrated to the area during the war, not for the more recent migrants.

1. Shifts by women aged 35 to 44 constituted an exception in the postwar period. There is much evidence throughout our data to suggest that many women in this age group took war jobs during the war and were forced to shift into other industries after the war.

2. Cf. Table A-7.

## Geographic Shifts

In an earlier report,<sup>1</sup> we undertook an intensive analysis of the types of job shifts that were associated with migration to the San Francisco Bay Area but did not attempt to classify all shifts experienced by workers at any time during the 1940-1949 period according to whether they were geographic or nongeographic in character. In preparing the present report, we have attempted such a classification, defining non-geographic shifts as those which occurred within a distance of less than 50 miles or within the San Francisco-Oakland Standard Metropolitan Area.<sup>2</sup>

Geographic shifts figured somewhat more prominently among shifts made in the war period than in the postwar period, particularly for the men (see Table 13). In general, this relationship prevailed irrespective of age or of major occupation or industry group for men, but did not hold so consistently for women (Tables 13, 15, and 16).

While there was some tendency for geographic shifts to represent a declining proportion of total shifts with advancing age, such a relationship did not clearly prevail for men in the war period (especially if we exclude the 65 and over group) or for women in postwar period. During the war period, the ratio of geographic shifts to total shifts was as high for men aged 55 to 64 (as of 1951) as it was for men aged 25 to 34, and a similar statement could be made for women in the postwar period. This is not equivalent to saying, of course, that older men or women participated in geographic shifts to as large an extent, in the relevant periods, as did younger men and women, since older persons made fewer shifts of any kind than did younger persons.

As might have been expected, very few geographic shifts were made by nonmigrants in either period, while in the postwar period, it was only the postwar migrants who experienced geographic shifts to any material extent (see Table 14). During the war period, however, the ratio of geographic shifts to total shifts was about as high for postwar migrants as for wartime migrants in the case of both sexes. This is an interesting relationship and one that we should not have altogether anticipated. All things considered, the most probable explanation appears to be that the decision to migrate to the San Francisco Area in the postwar period was influenced in a good many instances by a wartime experience which had weakened a worker's ties to his pre-war place of residence.<sup>3</sup> It should

1. The Mobility of Migrants and Non-Migrants, 1940-1949: San Francisco.

2. The classification was based on the location of the employer's place of business, on which information was available for each job in the work history.

3. In the years immediately following the war, it was a matter of common knowledge in the San Francisco Area that many veterans who had been stationed in California during the war, or had merely passed through en route to and from the Pacific theater of war, were moving to the state because they liked what they had seen here during the war. A good many of these veterans may have experienced civilian job shifts of a geographic character during the war. We know also, of course, that there were a number of persons in our sample who had made several geographic shifts into and out of the San Francisco Area during the decade. Cf. ibid., A Note on Statistical Procedures (Appendix).

Table 13.

Ratio of Geographic Shifts to Total Civilian Job Shifts for Each Age and Sex Group,  
January 1940 - December 1944 and January 1945 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Age in 1951 and sex	Men <sup>B</sup>				Women <sup>B</sup>			
	1940 - 1944		1945 - 1949		1940 - 1944		1945 - 1949	
	Total shifts	Ratio of geographic shifts	Total shifts	Ratio of geographic shifts	Total shifts	Ratio of geographic shifts	Total shifts	Ratio of geographic shifts
Total	211,581 <sup>C</sup>	.29	220,003 <sup>D</sup>	.21	87,652 <sup>E</sup>	.30	117,971 <sup>E</sup>	.27
25 - 34 years	58,211	.31	68,409	.23	32,474	.32	47,418	.29
35 - 44 years	80,968	.30	72,989	.24	31,756	.29	36,641	.24
45 - 54 years	45,803	.24	51,713	.18	15,950	.30	24,428	.29
55 - 64 years	21,572	.32	21,129	.16	5,891	.22	7,759	.28
65 and over	5,024	.24	5,762	.05	1,581	* <sup>F</sup>	1,724	* <sup>F</sup>

<sup>A</sup>Excludes shifts of persons with no civilian job or with casual work only in each of the two periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 5,762 shifts for which relevant information was not reported.

<sup>D</sup>Excludes 3,398 shifts for which relevant information was not reported.

<sup>E</sup>Excludes 2,012 shifts for which relevant information was not reported.

<sup>F</sup>No ratios shown for groups with fewer than 2,955 shifts (of men) or 2,874 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulations 0-5 and 0-9.

Table 14.

Ratio of Geographic Shifts to Total Civilian Job Shifts for Each Years-of-Residence  
and Sex group, January 1940 - December 1944 and January 1945 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Years of residence in San Francisco-- Oakland Metro. Area (as of 1951) and sex	Men <sup>B</sup>				Women <sup>B</sup>			
	1940 - 1944		1945 - 1949		1940 - 1944		1945 - 1949	
	Total shifts	Ratio of geographic shifts	Total shifts	Ratio of geographic shifts	Total shifts	Ratio of geographic shifts	Total shifts	Ratio of geographic shifts
Total	211,581 <sup>C</sup>	.29	220,003 <sup>D</sup>	.21	87,652 <sup>E</sup>	.30	117,971 <sup>E</sup>	.27
0-5 years of residence	57,328	.53	78,900	.52	34,055	.42	60,494	.47
6-11 years of residence	48,463	.54	40,484	.09	24,715	.45	25,002	.30
12-20 years of residence	32,358	.04	28,368	.03	10,346	.01	9,340	.02
21 and over years of residence	73,433	.05	72,251	.01	18,536	.01	23,134	.04

<sup>A</sup>Excludes shifts of persons with no civilian job or with casual work only in each of the two periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 5,762 shifts for which relevant information was not reported.

<sup>D</sup>Excludes 3,398 shifts for which relevant information was not reported.

<sup>E</sup>Excludes 2,011 shifts for which relevant information was not reported.

Source: Occupational Mobility Survey, San Francisco, Tabulations 0-8 and 0-12.

Table 15.

Ratio of Geographic Shifts to Total Civilian Job Shifts and  
Average Number of Geographic Shifts per Worker  
by Major Occupation Group of Employment at End of Period and Sex,  
January 1940 - December 1944, January 1945 - December 1949,  
and January 1940 - December 1949---

San Francisco Work History Sample<sup>A</sup>

Major occupation group of employment at end of period and sex	Ratio of geographic shifts to total shifts			Average number of geographic shifts per person		
	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1949
Total shifts of men <sup>B</sup>	.29	.20	.25	0.3	0.2	0.5
Professional, technical, and kindred workers	.36	.30	.33	0.2	0.2	0.5
Managers, officials, and proprietors, incl. farm.	.38	.26	.27	0.2	0.2	0.3
Clerical and kindred workers	.37	.19	.29	0.2	0.2	0.6
Sales workers	.24	.26	.31	0.1	0.3	0.6
Craftsmen, foremen, and kindred workers	.24	.17	.25	0.3	0.2	0.6
Operatives and kindred workers	.27	.14	.17	0.3	0.2	0.4
Service workers, incl. private household	.27	.20	.25	0.2	0.2	0.6
Laborers	.30	.19	.21	0.4	0.2	0.5
Total shifts of women <sup>B</sup>	.27	.28	.28	0.2	0.3	0.5
Professional, technical, and kindred workers	.39	.30	.32	0.2	0.2	0.4
Managers, officials, and proprietors, incl. farm	.29	.31	.26	0.2	0.3	0.4
Clerical and kindred workers	.25	.28	.29	0.2	0.2	0.5
Sales workers	.19	.43	.36	0.2	0.5	0.7
Craftsmen, foremen, and kindred workers <sup>C</sup>	.14	.27	.13	*	*	*
Operatives and kindred workers	.28	.18	.20	0.2	0.1	0.3
Service workers, incl. private household	.28	.27	.29	0.2	0.3	0.7
Laborers <sup>C</sup>	*	*	*	*	*	*

<sup>A</sup>Excludes shifts of persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Ratios for men and women differ in some cases from those in Tables 13 and 14, since they apply only to persons who were employed at the end of each period.

<sup>C</sup>Ratios and averages not shown where base is smaller than 2,955 (men or shifts of men) or 2,874 (women or shifts of women).

Source: Occupational Mobility Survey, San Francisco, Tabulations 0-6, 0-10, and 0-25 (see Table A-21, Appendix for total shifts in 1940-44 and 1945-49 periods).

Table 16.

Ratio of Geographic Shifts to Total Civilian Job Shifts and  
Average Number of Geographic Shifts per Worker  
by Major Industry Group at End of Period and Sex,  
January 1940 - December 1944, January 1945 - December 1949,  
and January 1940 - December 1949

San Francisco Work History Sample<sup>A</sup>

Major industry group of employment at end of period and sex	Ratio of geographic shifts to total shifts			Average number of geographic shifts per person		
	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1949
Total shifts of men <sup>B</sup>	.28	.20	.25	0.3	0.2	0.5
Extractive industries <sup>C</sup>	*	*	.40	*	*	*
Construction	.30	.17	.28	0.4	0.3	0.8
Manufacturing	.30	.19	.23	0.3	0.2	0.4
Durable goods	.28	.21	.24	0.3	0.2	0.5
Nondurable goods	.44	.17	.21	0.3	0.1	0.3
Transportation, communication, and other public utilities	.28	.12	.21	0.3	0.1	0.4
Wholesale and retail trade	.25	.20	.24	0.2	0.2	0.5
Finance, insurance, and real estate	*	.17	.21	— <sup>D</sup>	0.1	0.2
Service industries	.32	.25	.30	0.2	0.3	0.6
Public administration	.31	.19	.24	0.3	0.2	0.5
Total shifts of women <sup>B</sup>	.27	.28	.28	0.2	0.3	0.5
Extractive industries <sup>C</sup>	*	*	*	*	*	*
Construction <sup>C</sup>	*	*	.37	*	*	*
Manufacturing	.28	.19	.22	0.2	0.2	0.3
Durable goods	.25	.09	.17	0.2	0.1	0.3
Nondurable goods	.30	.23	.25	0.2	0.2	0.4
Transportation, communication, and other public utilities	.32	.41	.38	0.2	0.4	0.5
Wholesale and retail trade	.20	.28	.29	0.2	0.3	0.6
Finance, insurance, and real estate	.18	.24	.21	0.1	0.2	0.3
Service industries	.32	.29	.29	0.2	0.3	0.5
Public administration	.28	.42	.34	0.3	0.3	0.7

<sup>A</sup>Excludes shifts of persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Ratios for men and women differ in some cases from those in Tables 13 and 14, since they apply only to persons who were employed at the end of the period; differences in the number of "not reported cases" account for the discrepancy between this table and Table 15 as to the ratio of geographic shifts for men in the 1940-44 period.

<sup>C</sup>Ratios and averages not shown where base is smaller than 2,955 (men or shifts of men) or 2,874 (women or shifts of women.)

<sup>D</sup>Less than 0.05.

Source: Occupational Mobility Survey, San Francisco, Tabulations 0-7, 0-11, and 0-26 (see Table A-22, Appendix for total shifts in 1940-44 and 1945-49 periods).

not necessarily be interpreted to mean that, under normal circumstances, one geographic shift predisposes a worker to participate in a second geographic shift. Many of the geographic shifts experienced by workers during the war were undoubtedly in response to temporarily favorable employment opportunities in war industries, and the workers who participated in such shifts may very well have found themselves in a situation, during the postwar readjustment period, in which a second geographic shift seemed desirable.

The ratio of geographic shifts to total shifts varied significantly by major occupation group (see Table 15).<sup>1</sup> Yet only in the case of male professional workers was the ratio distinctly above average in all three of the periods being examined, and there was no group for which the ratio was consistently below average. Differences in the pattern of variations as between the war and postwar periods appeared to be related, at least to some extent, to differences in the pattern of expansion of employment opportunities in the two periods. It is interesting to note, also, that there was a tendency for ratios of geographic shifts to be higher for nonmanual workers than manual workers, especially if we consider the data for the decade as a whole. If we compute ratios of geographic shifts to total shifts for those two broader groups, we find that, in the case of men, 30 percent of all job shifts made by nonmanual workers had been geographical in character, as compared with 22 percent of all shifts made by manual workers. Among the women, 30 percent of the shifts of nonmanual workers, as compared with 25 percent of the shifts of manual workers had been geographical. Thus, although nonmanual workers tended, on the average, to change jobs somewhat less frequently than manual workers, it was apparently more likely that, when they did change jobs, their shifts would be of a geographical character.

It was not always the occupation groups with the highest proportions of migrants that showed up with the highest ratios of geographic shifts to total shifts.<sup>2</sup> The male managerial group, for example, included comparatively few migrants, and yet the ratio of geographic shifts to total shifts for this group was about average over the decade as a whole and somewhat higher than average in each half of the decade considered separately.<sup>3</sup> On the other hand, the male craftsmen group included a relatively large percentage of migrants, but the ratio of geographic shifts to total shifts was also about average for this group. These examples simply serve to illustrate the fact that we must be careful to distinguish between the extent to which workers of a given category

1. The value of chi-square for men (7 degrees of freedom) was 34.14 and for women (6 degrees of freedom) was 13.78.

2. For percentages of migrants in each major occupation group, cf. ibid., Table A-3.

3. It must be remembered that the ratios for the three periods do not apply to precisely the same group of workers because of movement into and out of each occupation group.

participate in migration and the relative importance of geographic shifts among all shifts experienced by the workers in that category who have participated in shifts at all.

Still a third way of measuring occupational variations in geographic shifts is to compute the average number of geographic shifts experienced by workers in each major occupation group (see Table 15). By this measure, professional workers did not stand out as a group with higher than average geographic mobility nor did nonmanual workers appear, on the whole, to have experienced more geographic shifts, on the average, than manual workers. In fact, in the war period, there was a tendency for the reverse to be true.

It is clear, therefore, that we get a somewhat different picture of occupational variations in geographic mobility, depending on what type of statistical measure we choose to employ.

Turning to industrial variations in geographic mobility, we find that, for the men, male workers in the service industries stand out as a group with comparatively high ratios of geographic shifts to total shifts in all three periods, while both men and women in finance, insurance, and real estate were characterized by relatively low ratios of geographic shifts (see Table 16).<sup>4</sup> Again, there were certain differences in the pattern of variations in the war and postwar periods which seemed to be related to differences in economic conditions in the two periods.

Geographic shifts were more likely to have been of the complex (employer, occupation, and industry) type than was true of non-geographic shifts (see Table 17). This was especially true for men, although the relationship held, also, for women, especially in the war period. Less complex types of shifts tended to figure more prominently among nongeographic shifts. In other words, a geographic shift was likely to be accompanied by a sharper break with a worker's previous employment experience than was the case with a nongeographic shift. Unfortunately, it was not possible to determine whether this relationship held for all age, years of residence, and major occupation or industry groups, since the total number of geographic shifts was too small to justify this type of refined analysis.

1. Actually, industrial variations in the distribution of shifts between those of a geographic and nongeographic character were barely wide enough to be considered significant. The value of chi-square for men (7 degrees of freedom) was 15.51 and for women (6 degrees of freedom) was 12.82.

## CHAPTER IV

### SHORT-RUN FLUCTUATIONS IN MOBILITY 1940-1949

#### Fluctuations in Mobility Rates

If we are to arrive at an adequate understanding of the factors that influence gross and net mobility, we need to look into short-run fluctuations in gross mobility rates. Labor turnover data, which are collected on an establishment basis, indicate that turnover rates fluctuate markedly with changing economic conditions, but these data have been available only for manufacturing industries and for a few nonmanufacturing sectors of the economy.<sup>1</sup> The Occupational Mobility Survey provides an opportunity to explore the usefulness of data collected on a household basis and relating to the entire labor force as a source of information on short-run fluctuations in mobility. Obviously, the mobility rates which may be computed from such data will not be precisely equivalent to industrial turnover rates.

Briefly, the methods which we employed in developing measures of annual fluctuations in gross mobility rates were as follows:

1. The number of men and women in the San Francisco work history-sample who were in the civilian labor force in each year from 1940 to 1949 was determined (see Table A-23) from information entered on a worker card. For this purpose, a person was classified as having been in the civilian labor force in a given year if his work history indicated that he had been in the labor force for any period during the year, however short the period may have been.<sup>2</sup>
2. The number of job separations which occurred in each year was determined from information entered on an occupational assignment card.<sup>3</sup> (See Table A-24.)
3. The number of job accessions occurring in each year was determined

1. They are published currently in U.S. Bureau of Labor Statistics, Monthly Labor Review.

2. See the first quarterly report relating to the present project, in which coding and tabulating plans were outlined.

3. Although a card was prepared for each occupational assignment, the coding was carried out in such a way as to make it possible to distinguish between (1) actual job separations and (2) shifts to a different occupational assignment on the same job.

Table 17.

Geographic and Nongeographic Shifts by Type of Shift for  
Each Sex, January 1940 - December 1944,  
January 1945 - December 1949, and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Type of shift and sex	1940 - 1944		1945 - 1949		1940 - 1949	
	Number of shifts	Per- cent	Number of shifts	Per- cent	Number of shifts	Per- cent
Geographic shifts of men <sup>B</sup>	61,465	100	46,246	100	107,711	100
Employer shift only	9,013	15	9,604	21	18,617	17
Employer and occupation	1,921	3	2,069	4	3,989	4
Employer and industry	9,013	15	4,580	10	13,593	13
Employer, occupation, and industry	38,859	63	25,266	55	64,124	59
All other combinations of shifts	2,660	4	4,728	10	7,388	7
Nongeographic shifts of men <sup>B</sup>	150,116	100	173,756	100	323,872	100
Employer shift only	24,379	16	45,508	26	69,887	22
Employer and occupation	14,184	9	10,638	6	24,822	8
Employer and industry	19,947	13	27,925	16	47,872	15
Employer, occupation, and industry	78,456	53	83,037	48	161,493	49
All other combinations of shifts	13,150	9	6,649	4	19,799	6
Geographic shifts of women <sup>B</sup>	25,865	100	32,043	100	57,908	100
Employer shift only	3,592	14	6,611	21	10,202	18
Employer and occupation	1,293	5	1,581	5	2,874	5
Employer and industry	5,317	21	9,053	28	14,369	25
Employer, occupation, and industry	15,088	58	13,794	43	28,882	49
All other combinations of shifts	575	2	1,006	3	1,581	3
Nongeographic shifts of women <sup>B</sup>	61,788	100	85,928	100	147,715	100
Employer shift only	8,765	14	22,272	26	31,037	21
Employer and occupation	2,155	3	3,736	4	5,891	4
Employer and industry	16,668	27	21,410	25	38,078	26
Employer, occupation, and industry	30,032	49	35,205	41	65,236	44
All other combinations of shifts	4,167	7	3,305	4	7,472	5

<sup>A</sup>Excludes shifts of persons with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

Source: Occupational Mobility Survey, San Francisco, Tabulations 0-6, 0-10, and 0-25.

in the same manner.<sup>1</sup>

4. The number of job shifts occurring within each year was determined from a tabulation of annual job separations by year in which next job began (see Table A-26). If a job separation was followed by a new job which began in the same year, it was clear that a job shift had occurred wholly within the year.
5. Annual job separation rates were computed by dividing the total number of separations in each year by the total number of persons in the labor force in that year, treating men and women separately. Annual job accession and shift rates were computed in the same manner. Since information on age and years of residence (as of 1951) was available on both the worker card and the occupational assignment card, it was possible to compute annual separation and accession rates by age and years of residence. Any attempt to compute annual mobility rates by major occupation and industry group would have involved methodological complexities, since many of our workers changed occupational and industrial attachments several times during the course of the decade. While these difficulties were not insuperable, it seemed unwise to undertake the complex coding that would have been involved, in view of the probability that occupational and industrial variations in annual mobility rates, could not for the most part, have been regarded as significant in the light of considerations of sampling variability.<sup>2</sup>

The results of this work indicate clearly that there were marked annual fluctuations in gross mobility rates of both men and women during the decade of the forties (see Chart I and Table A-25, Appendix). The men in the sample who were in the labor force in 1940 experienced only about one-tenth of a shift, on the average, during the year, at a time when unemployment was still a serious problem and the defense production program was just beginning to get under way. The separations rate rose rapidly during the next two years, and by 1942 was about four times the 1940 rates. It is clear that a substantial percentage of the separations occurring in 1942 must have preceded entry into the Armed Forces, for the separations rate substantially exceeded the accessions rate in that year, and the number of men who were in the labor force dropped off sharply between 1942 and 1943. Nevertheless, 1942 was also the peak year for civilian

1. We have included a table presenting average job accessions per person in each year (A-27), but not a table presenting the actual estimated numbers of job accessions in each year.

2. An alternative type of annual mobility measure could have been derived by entering, on each worker card, information as to whether the worker had participated in a job separation, accession, or shift in each year of the period. From such information, we might have computed the percentage of workers who had participated in separations, etc., each year.

job shifts occurring wholly within the year (see Table 18). The stepping up of the war production program after Pearl Harbor, as well as the movement of workers into jobs left vacant by the men who were drafted, undoubtedly account for the high rate of job mobility in 1942. After 1942, separations, accessions, and shifts per worker all fell off sharply through 1944, but even in that year were above the 1940 level.

Between 1944 and 1945, all three mobility measures for men once again rose appreciably, but it was the accessions rate which showed the sharpest increase and which reached a peak for the decade in 1946, reflecting postwar demobilization. Separations and shifts were both comparatively high in 1945 and 1946, reflecting postwar reconversion, but in neither case was the postwar peak as high as the wartime peak of 1942. All three rates dropped off substantially after 1946, with the accessions rate drawing closer to the separations rate as the years passed. The low points reached in 1949, a year of mild economic recession, were close to the rates reached in 1944 but above the 1940 level.

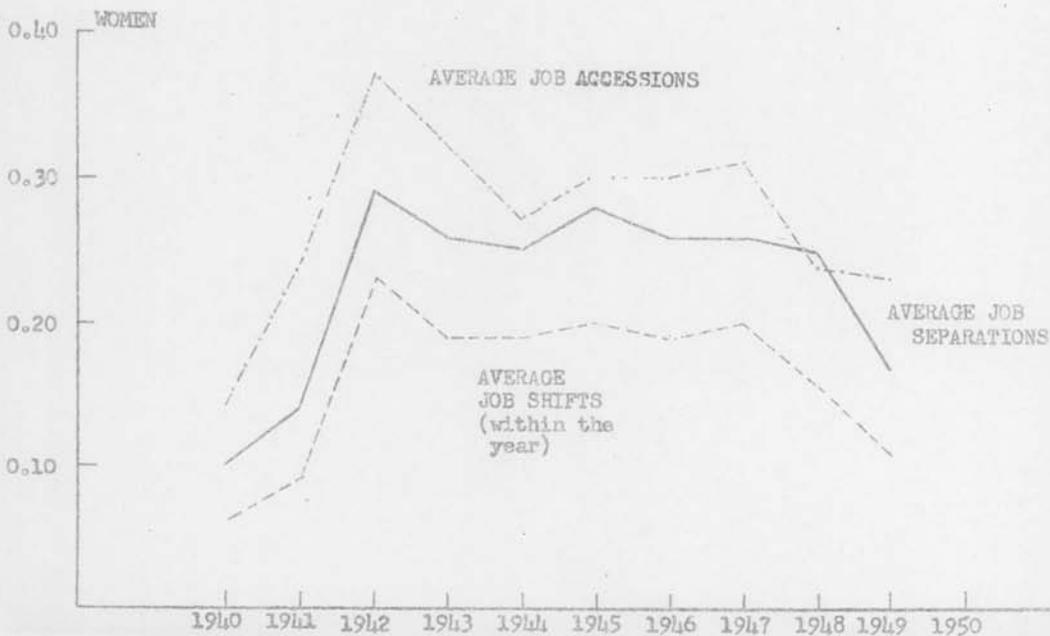
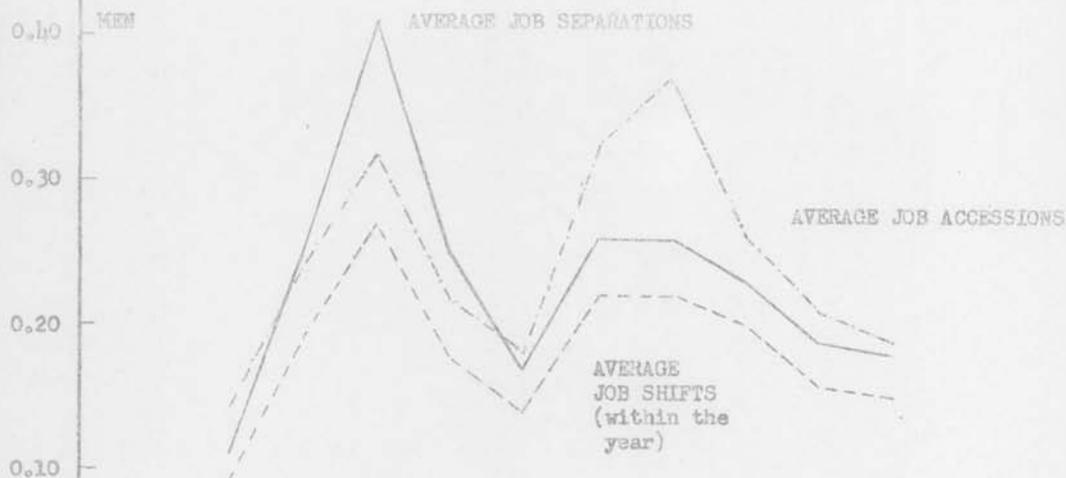
Fluctuations in the mobility rates of women were somewhat similar, but with interesting differences. All three mobility rates rose sharply between 1940 and 1942, but, as we should expect, the accessions rate exceeded the separations rate in each year, as the women in our sample moved into the labor force. The decline in mobility rates of women between 1942 and 1944 was not as sharp as in the case of men. In fact, it might almost be said that mobility rates of women reached a plateau in 1942 and stayed at substantially the same high level throughout the war and early postwar periods. Not until 1948 did accessions and shifts drop off materially, while separations fell off markedly in 1949. In the latter year, all three rates were still somewhat above the 1940 level, as in the case of men.

The fact that the accessions rate for women exceeded the separations rate in almost every year of the decade reflects, in part, the nature of our sample. (Movement of workers out of the labor force is not adequately reflected in a sample selected on the basis of employment in 1950.) Of greater interest is the fact that throughout most of the period, except for the peak mobilization and demobilization years, both the separations and accessions rates of women exceeded the rate of shifts by a wider margin than was true for men, reflecting the greater propensity of women to move into and out of the labor force.

The same phenomenon is brought out in Table A-26, which indicates that throughout most of the decade, except for the years 1942 and 1943, when men were entering the Armed Forces in large numbers, the percentage of job separations that were followed by new jobs begun in the same year was substantially higher for men than for women. In 1940 and again from 1944 on, roughly 85 per cent of the job separations experienced by men were followed by new jobs begun in the same year. In most of the remaining cases, the new job began in the following year. Probably most of these were cases in which the job separation had occurred in the closing months of the year. During the war years, of course, the situation was quite different. The proportion of separations which were followed by a new job in the same year dropped off to a low point of 64 per cent in 1942,

CHART I.

SELECTED MEASURES OF AVERAGE ANNUAL JOB MOBILITY FOR PERSONS  
IN THE CIVILIAN LABOR FORCE -- SAN FRANCISCO WORK HISTORY SAMPLE,  
1940-1949



and the new jobs which followed most of the remaining separations did not begin until 1945 or later.

In the case of women, the percentage of separations that were followed by a new job begun in the same year ranged (roughly) from 60 to 78 per cent and tended to be somewhat higher in the war and immediate postwar years than in the remaining years of the decade. Throughout the greater part of the decade, in some 10 to 15 per cent of the cases of job separations experienced by women, the new job did not begin until at least the second year following the separation or even later.

If we consider annual fluctuations in separation and accession rates by age (see Tables A-25 and A-27) we find that there was some tendency for the amplitude of fluctuations to be greatest for those in the 25-34 age bracket and to diminish with advancing age. Fluctuations were scarcely discernible in the data for men aged 55 or over but showed up quite clearly in the accession rates for women in the 55-64 age bracket. Among both men and women, younger workers were consistently more mobile than older workers throughout the decade.

Mobility also tended to vary with years of residence in the area throughout the decade, although we must be careful in interpreting the data to bear in mind the fact that the postwar migrants (those with 0-5 years of residence) were, for the most part, residing elsewhere during the war years. Annual fluctuations in mobility rates followed somewhat the same pattern for all years of residence groups, and, in general, it cannot be said that the amplitude of fluctuations was wider for the most recent years of residence groups, at least for men. It is interesting to note, however, that there were virtually no annual fluctuations in the separations rates for women in the 21 and over years of residence group, although there were fluctuations in the accessions rate for this group. It would appear that the production shifts of the war and immediate postwar years did not have much effect in inducing women with well-established roots in the area to leave jobs in order to take other jobs.

The postwar annual mobility rates of the wartime migrants (men and women in the 6-11 years of residence group) are of special interest. The fact that the mobility rates of this group of migrants tended to be higher throughout the postwar period than those of the 21 and over years of residence group suggests that a worker who does not have well-established roots in the community will tend to shift jobs more often than a resident of long standing for some considerable period following actual migration. A somewhat similar conclusion is suggested by the fact that the mobility rates of the 12-20 years of residence group tended to be somewhat higher than those of the 21 and over group throughout most of the decade, in the case of both sexes. Before we could establish this conclusion definitely, however, we should have to rule out the possibility that the higher mobility rates of these groups of migrants some years after migration were attributable largely to age and occupational characteristics.<sup>1</sup>

1. The analysis of factors in mobility which is being carried out at the University of Chicago will probably shed some light on this question.

TABLE 18.

Average Number of Civilian Job Shifts within Each Year, for  
Persons in the Civilian Labor Force by Sex, 1940-49 —San Francisco Work History Sample<sup>A</sup>

Year	Men	Women
1940	.09	.06
1941	.19	.09
1942	.27	.23
1943	.18	.19
1944	.14	.19
1945	.22	.20
1946	.22	.19
1947	.20	.20
1948	.16	.16
1949	.15	.11

Source: Computed from Tables A-23 and A-26, Appendix.

TABLE 19.

Percent of All Civilian Job or Assignment Shifts That Involved  
No Change in Major Occupation Group, by Major Occupation Group  
of New Job or Assignment and Sex, January 1940-December 1944,  
January 1945-December 1949, and January 1940-December 1949San Francisco Work History Sample<sup>A</sup>

Major occupation group of new job or assignment and sex	Shifts by men			Shifts by women		
	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
All shifts	45%	53%	49%	60%	68%	65%
Professional, technical, and kindred workers	61	64	62	62	67	64
Managers, officials, and proprietors, incl. farm	23	33	30	31	40	39
Clerical and kindred workers	35	48	43	74	77	76
Sales workers	34	45	40	44	50	47
Craftsmen, foremen, and kindred workers <sup>B</sup>	47	69	57	21	40	30
Operatives and kindred workers	47	55	50	45	75	61
Service workers, incl. private household	61	57	57	72	72	71
Laborers <sup>B</sup>	42	41	43	*	*	*

<sup>A</sup> Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.<sup>B</sup> No percentages shown for groups with fewer than 2,955 shifts (of men) or 2,874 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulations O-15, O-19, and O-33 (see Tables A-36, A-38, and A-39, Appendix).

The results of the statistical work which we have undertaken suggest that mobility data collected on a household basis could be used as a source of information on short-run fluctuations in mobility. Because of limitations of sample size, we have had to be cautious in interpreting our data and have refrained from developing measures for major occupation and industry groups, but these limitations would not apply so severely to a large nation-wide sample of urban workers. In developing plans for the collecting and processing of such data, it would obviously be desirable to determine the number of workers who participated in separations, accessions, or shifts in a given time period as well as the total numbers of separations, etc. for workers in the labor force.

Fluctuations in Separations and Accessions  
by Major Occupation and Industry Group

It would be extremely interesting, if the size of our sample permitted, to examine short-run fluctuations in channels of inter-occupational and inter-industrial movement. Unfortunately, this is not possible, but we have prepared a series of tables showing changes, by two-year periods, in the occupational and industrial distribution of job separations and accessions.

On the basis of our earlier finding that mobility rates tend to vary substantially between the top and bottom of the occupational ladder, we should expect to find that the occupational distribution of job separations for the decade as a whole would differ somewhat from the occupational distribution of workers in the sample. That this was the case becomes clear if we compare the first column of Table A-28 (Appendix) with the first table in our earlier report on the mobility of San Francisco workers.<sup>1</sup> Nonmanual workers (especially managerial workers) figured less prominently in the distribution of job separations than in the distribution of workers, while manual workers tended to account for disproportionately large percentages of job separations.

The fluctuations which occurred in the occupational distribution of job separations during the course of the decade were largely consistent with what we should have expected in the light of the production shifts that were taking place. In 1940-41, when the defense production program was just getting under way, the distribution of job separations for men was similar to that for the decade as a whole, except for the comparatively small percentage of separations from craftsmen's jobs. Between this period and the 1944-45 period, the proportion of separations from craftsmen's jobs increased sharply, while the relative importance of separations from managerial, clerical, sales, and service jobs declined. After the war, the occupational distribution of separations reverted to a pattern closely resembling that for the decade as a whole, and the distributions for 1946-47 and 1948-49 were remarkably similar.

1. The Mobility of San Francisco Workers: 1940-1949, Table 1.

In the case of women, separations from clerical and operative jobs tended to increase in relative importance between 1940-41 and 1944-45, while separations for most other types of jobs tended to decline. Postwar changes tended, on the whole, to be in the reverse direction.

It is clear that the distribution of separations in the 1944-45 period reflected the effects of cutbacks in war industries, which reached their peak shortly after V-J Day but had got under way considerably earlier.

If we consider only those job separations that were followed by a change in major occupation group within the same two-year period, we get a picture that differs in certain minor details. The occupational distribution of separations for the decade as a whole was somewhat different from that based on all separations. Separations from female clerical jobs, for example, figured much less prominently when separations to take jobs in the same occupation group were eliminated. This difference is consistent with our earlier finding relating to the role of inter-group shifts among all shifts made by female clerical workers.

Fluctuations in the occupational distribution of separations also showed a somewhat different pattern on this basis. Separations from male skilled craftsmen's jobs to take jobs in other occupation groups, for example, were relatively low through 1942-43 but increased sharply in relative importance in 1944-45. Separations from laborers' jobs also figured more prominently in 1944-45 and then fell off. Separations from male service jobs were comparatively high in 1942-43, when service workers were doubtless finding it possible to get more attractive jobs in war industries, but dropped off sharply in 1944-45. Separations from female clerical jobs to take jobs in other occupation groups were comparatively low in 1942-43, but increased markedly between then and 1946-47.

More interesting than the changes that occurred was the evidence of stability in the relative importance of separations from male operatives' jobs throughout this period of marked shifts in production. Whether we consider all separations or only those separations that were followed by a change in major occupation group, we find that separations from operatives' jobs represented an almost constant percentage of job separations throughout the decade.

It is also worth noting that, except in the years when the country was actually at war, (1942-45) there was a rather considerable degree of stability in the occupational distribution of job separations. It would require a study extending over a longer period and a larger area to reach a definite conclusion on this point, but the data are suggestive.

Fluctuations in the occupational distribution of accessions were likewise in line with the pattern we might have expected in the light of the production shifts that were occurring, and very little is needed by way of special comment on the data (see Tables A-30 and A-31). Accessions to jobs in occupation groups that played an important role in the war program (craftsmen, operatives, and laborers) tended to rise between 1940-41 and 1942-43 at the expense of accessions to other jobs, and then

a movement in the reverse direction took place. On the whole, the occupational distribution of accessions, particularly those from other occupation groups, appeared to be somewhat less stable than the distribution of separations. There was somewhat more evidence of sensitivity to changing economic conditions.

Turning to the industrial distribution of separations and accessions (Tables A-32 to A-35), we find a pattern of change that was dominated by the wartime and postwar shifts in production. Particularly if we examine the industrial distribution of those separations and accessions that involved changes in major industry groups, we are struck by the extent to which the distribution changed in response to shifts in production.

The data that we have been examining in the present chapter indicate that workers' movements were highly sensitive to changing economic conditions during the decade of the forties both in volume and character. Yet there were elements of stability in, for example, the occupational distribution of job separations, which are of great interest. We shall find further evidence of stability in the next chapter, when we examine inter-occupational movements in the two halves of the decade.

## CHAPTER V

### CHANNELS OF INTER-OCCUPATIONAL AND INTER-INDUSTRIAL MOVEMENT

In earlier mobility reports, we analyzed net changes in employment status and in major occupation or industry group in the two halves of the decade and over the course of the decade as a whole.<sup>1</sup> While the data on net changes gave us valuable insights into variations in degrees of occupational and industrial attachment, they did not permit an intensive analysis of channels of net inter-occupational and inter-industrial movement, because of limitations of sample size. The number of cases of net movement into each major occupation or industry group was relatively limited, since only a minority of workers in the sample was involved in net changes. Because the number of workers who experienced gross shifts was substantially larger than the number who experienced net shifts, and because the total number of gross shifts greatly exceeded the total number of net shifts, it has been possible to undertake a somewhat more intensive analysis of channels of gross inter-occupational and inter-industrial movement.

In analyzing gross inter-occupational and inter-industrial movement, we shall rely on tabulations based on occupational assignment cards rather than worker cards. The tables on inter-occupational movement compare each job or occupational assignment in the ten-year work histories with the previous job or assignment. No job or occupational assignment is included if it lasted throughout the entire period, i.e., the tables apply only to job or assignment shifts. Furthermore, no job or assignment is included if it ended before January, 1940, or began after December, 1949. Tables on inter-industrial movement were prepared in the same manner except that they apply to job shifts only, excluding shifts in occupational assignment on the same job.

#### "Closed" and "open" occupation groups

About half of all the shifts experienced by men and nearly two-thirds of all the shifts experienced by women during the course of the decade involved no change in major occupation group (see Table 19). For both sexes, the proportion of such shifts was somewhat higher in the postwar period than in the war period.

There was wide variation among major occupation groups, however, in the proportion of shifts that were from within the same group. In over 60 per cent of the shifts to professional jobs experienced by men, the previous job had also been a professional job. Craftsmen and service workers, too, had shifted from jobs in the same occupation group in the majority (57%) of cases, while there was about a 50-50 chance that a shift to a job

1. See The Mobility of San Francisco Workers, 1940-1949, Chapter III, and The Mobility of Migrants and Nonmigrants, 1940-1949: San Francisco, Chapter IV.

as an operative worker would have been from within the same group. But only in a minority (about 40%) of all cases did a clerical or sales worker or a laborer come from within the same group while, for managerial workers, the proportion of shifts that were from within the same group was lowest of all (about 30%).

Even wider variations prevailed for the women. Female clerical workers-- in marked contrast to male clerical workers--had shifted from within the same group in the great majority (76%) of cases, while female service workers were a close second (71%) in this respect. Over three-fifths of the shifts experienced by female professional workers and operatives had been from within the same group. On the other hand, sales workers, and to an even greater extent, managerial workers and female craftsmen were more likely to have shifted from a different group.

Similar occupational variations prevailed, for the most part, in the two halves of the decade. Both craftsmen and operatives, however, had shifted more frequently from a different group in the war period than in the postwar period.

From these data, we may characterize the various occupation groups as "closed" or "open" in character, but we must remember that the basis of classification is somewhat different from that used in an earlier report.<sup>1</sup> Not only are we dealing here with gross shifts rather than with net shifts, but, as already indicated, we are taking no account (1) of those cases in which a worker experienced no job or assignment shift during the decade, or (2) of cases in which a worker shifted from another employment status. Furthermore, we are dealing with shifts into jobs in the various groups rather than with shifts from such jobs. On this basis, female clerical workers constituted the most closed of all occupation groups, with female service workers a close second. Professional workers constituted a relatively closed group for both sexes. An intermediate position was occupied by male craftsmen and service workers, operatives of both sexes, and female sales workers, while male clerical and sales workers and laborers and managerial workers of both sexes were comparatively open groups.

#### Inter-group occupational movement

If we want to get a clear picture of channels of inter-group occupational movement, we must eliminate from our analysis those shifts that did not involve a change in occupation group. We must take into account, moreover, the fact that out of all the possible types of inter-group shifts that might occur, the probability of occurrence would be likely to vary for each type of shift because of (1) differences in the relative numbers of workers in the various occupation groups and (2) occupational variations in the propensities of these workers to participate in inter-group shifts.

If inter-group occupational movement were entirely random, there would be no reason to expect that for shifts into any given occupation group, the occupational distribution of previous jobs would differ significantly from the occupational distribution of previous jobs for all shifts experienced

1. See The Mobility of San Francisco Workers: 1940-1949, pp. 16-21.

by workers in the sample during the ten-year period. Jobs held prior to shifts into professional jobs, for example, would be distributed occupationally in substantially the same manner as all previous jobs. An objective statistical test may be carried out to determine whether such a relationship holds for each occupation group of new jobs considered separately and for all new jobs considered together. The test indicated that gross inter-group occupational movement could not be considered random.<sup>1</sup> Shifts into professional jobs, for example, were from previous jobs that were distributed quite differently from all previous jobs. This was true, also, for shifts into nearly every other occupation group and for shifts into all occupation groups considered together. It was not true, however, for shifts into female clerical or sales jobs.<sup>2</sup>

We may also ask the related question, "Were the jobs that workers with various previous occupational attachments entered distributed occupationally in a manner that was significantly different from the distribution of all new jobs entered by workers experiencing inter-group shifts in the ten-year period?" The answer is yes. Inter-occupational movement was not random in character if analyzed from this point of view. Again, however, there were certain exceptions. The new jobs taken by female managerial and sales workers were distributed in a manner that did not depart significantly from a random pattern.<sup>3</sup>

That inter-group occupational movement, in general, should not be random in character is scarcely a surprising result. Not all workers are equally well qualified for jobs at every level of skill. But we shall have a much better understanding of the manner in which inter-group occupational movements deviate from a random pattern if we carry the type of analysis that has been described above one step further and compare the actual distribution of previous jobs for each major occupation group with the distribution that would have been "expected" if movement had been random (see Table A-37). We shall also comment briefly on the extent to which the actual distribution of new jobs differed from a random pattern, although we have not included in the report the detailed statistical material on which these comments will be based. For purposes of manpower planning, it is probably more important to have an understanding of the sources of movement into each occupation group than of the destinations of workers who leave the group.

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1. A chi-square test showed decisively that, for all inter-group occupation shifts occurring in the 1940-1949 period, the occupation group of the new job could not be considered independent of the occupation group of the former job. This was true for both men and women, considered separately.

2. A chi-square test indicated that for inter-group shifts into female clerical and sales jobs, the distribution of previous jobs was not significantly different from the distribution of previous jobs for all inter-group shifts made by female workers. Values of chi-square (5 degrees of freedom) were 6.08 for female clerical workers and 3.90 for female sales workers.

3. Values of chi-square (5 degrees of freedom) were 5.72 for managerial workers and 8.92 for sales workers.

1. Professional workers. When workers succeeded in shifting into professional jobs from other occupation groups (a comparatively rare phenomenon), the chances were strong that their previous jobs would have been nonmanual (particularly managerial and clerical) in character. In the case of men, the actual proportion of previous jobs that were nonmanual was 72 per cent, as compared with an "expected" proportion of only 33 per cent. Previous jobs in manual occupations, on the other hand, were considerably less frequent than would have been expected on a chance basis, and this tended to become the more true, the farther down the occupational ladder the previous job had been. In the case of women, the great majority of previous jobs had been in one occupational group--the clerical group.

When workers left professional jobs (again a relatively rare phenomenon), the chances were strong that they would enter nonmanual occupations, particularly managerial jobs in the case of men and particularly clerical jobs in the case of women.

2. Managerial workers. The previous jobs of male managerial workers were somewhat more widely distributed, occupationwise, than was the case with male professional workers. Nonmanual jobs of every description (particularly sales jobs), as well as jobs in the craftsmen category, were somewhat more heavily represented among previous jobs than would have been expected on a chance basis, while semi-skilled and unskilled jobs (particularly laborers' jobs) were somewhat less frequently represented. Yet about a third of all the previous jobs had been semi-skilled or unskilled in character. Female managerial jobs were apparently somewhat less easily entered from previous manual jobs. Clerical jobs, in particular, figured considerably more prominently among the previous jobs of female managerial workers than would have been expected on a random basis.

A very similar pattern emerges if we consider the distribution of jobs entered from previous managerial jobs. For men, such jobs were more likely to be nonmanual in character (particularly sales jobs) than would have been expected on a random basis, but about as large a percentage were in the craftsmen category as would have been "expected". For women, they were especially likely to be clerical or sales jobs. But by no means negligible proportions of the jobs entered from former managerial jobs (about 30% in the case of both sexes) were in semi-skilled or unskilled manual categories.

3. Clerical workers. We have previously noted that when a male clerical worker experienced a shift, it was more likely to have been an inter-group occupation shift than in the case of a female clerical worker. Nevertheless, when workers of either sex entered clerical jobs from other occupation groups, their previous jobs were widely distributed throughout the occupational ladder. In fact, for female clerical workers, the distribution of previous jobs, as we have seen, did not deviate significantly from a random pattern. In the case of men, previous jobs in nonmanual categories figured somewhat more prominently than would have been expected on a chance basis, and manual jobs somewhat less prominently, but, even so, about three-fifths of the previous jobs had been manual.

The new jobs entered by workers who left clerical occupations followed a very similar pattern. For men, it was more likely that they would be nonmanual in character than would have been true on a purely random basis, but even so about 55 per cent of the jobs entered were manual. For women, it was more likely that they would be professional or managerial (particularly the former) than would have been true on a random basis, but 17 per cent were sales jobs and 41 per cent were in various manual categories (particularly service jobs).

4. Sales workers. Accessions to sales jobs from nonmanual occupations, and particularly from managerial jobs, were much more common in the case of men than would have been expected on a chance basis, while accessions from manual jobs were considerably less common. The actual proportion of previous jobs that were nonmanual in character was 63%, as compared with an "expected" proportion of only 30%. Female sales jobs, on the other hand, were entered from every occupational level in proportions not significantly different from those that would have been expected on a chance basis.

When male sales workers entered other occupation groups, it was considerably more likely that they would take nonmanual jobs (particularly managerial jobs) than would have been true on a random basis. While about 40 per cent of the jobs that they entered were manual in character, the proportion of jobs entered in the skilled (craftsmen) category was much smaller than would have been expected on a random basis. The jobs entered by female sales workers, on the other hand, were distributed in a manner not significantly different from a random pattern.

5. Craftsmen, foremen, and kindred workers (men only). Accessions to skilled jobs from less skilled manual occupations (except service jobs) were somewhat more common than would have been expected on a chance basis, but only for previous jobs in the semi-skilled (operatives) category was the actual percentage very much higher than the expected percentage. Accessions from managerial jobs were about as common as would have been expected on a chance basis, whereas previous jobs in other nonmanual occupations were somewhat less frequent than would have been expected.

When workers left a skilled job, it was somewhat more likely that they would enter a manual (particularly operative) job than would have been expected on a random basis, but the difference was not marked. About 61 per cent of the jobs entered were manual, as compared with an "expected" proportion of 53 per cent. It was not at all uncommon for skilled workers to enter nonmanual (particularly managerial) jobs. In fact, the percentage of new jobs that were in the managerial group was not significantly different from what would have been expected on a random basis.

6. Operatives and kindred workers. When a worker entered a job at the operative or semi-skilled level from another occupation group, it was more likely that he would have come from a manual job than would have been expected on a random basis, but no single manual occupation group stood out as the group in which operatives had been employed.

Even the movement from the skilled (craftsmen) category to the semi-skilled category was larger than would have been expected on a random basis. The movement into operatives jobs from nonmanual jobs, moreover, was by no means negligible. About 29 per cent of the actual former jobs were nonmanual, as compared with an "expected" proportion of 47 per cent. Patterns of movement into female operative jobs were somewhat similar, except for the almost complete nonexistence of any skilled female workers or laborers who could have moved into operative jobs, and except for the fact that the proportion of former jobs that were in the service category was distinctly larger than would have been expected. (This latter relationship largely reflected a wartime movement from service to operative jobs).

When male workers left operative jobs, it was more likely that they would enter other manual occupation groups (particularly the skilled group) than would have been expected on a random basis. But movement into nonmanual occupations was by no means negligible, representing about 29 per cent of the total movement as compared with an expected percentage of 47 per cent.<sup>1</sup> Patterns of movement out of female operative jobs were similar, except that movement into service jobs played a considerably more important role than would have been expected on a chance basis. Again, in the case of women, movement into nonmanual jobs was by no means negligible, representing 53 per cent of the total movement, as compared with 71 per cent on an expected basis.

7. Service workers, including private household. Accessions to service jobs were more likely to have been from manual jobs of every description than would have been expected on a random basis. In the case of men, 80 per cent of all previous jobs had been manual, as compared with an expected proportion of 61 per cent. For women, the corresponding percentages were 44 per cent (actual) and 29 per cent (expected). It can readily be seen, of course, that there was a substantial movement from nonmanual female occupation groups into service jobs, and, in fact, the movement from clerical jobs represented about as large a percentage of the total movement as would have been expected on a chance basis.

When male workers left service jobs, they were more likely to enter operative or laborers' jobs, particularly the former, than would have been expected on a random basis. Movement into nonmanual jobs (25 per cent of the total movement) and into skilled jobs (18 per cent of the total) was not negligible, however. Female service workers were more likely to enter other manual occupations (particularly operative) when they left service jobs than would have been expected on a random basis, but movement into nonmanual occupations (chiefly clerical work and sales) was not negligible, and, indeed, movement into clerical jobs was about as large as would have been expected on a random basis. For both sexes, movement from service jobs into professional jobs was negligible.

1. The reader will note that these happen to be the same percentages that prevailed for movement into operative jobs from nonmanual jobs.

8. Laborers (men only). Accessions to jobs as laborers were much more likely to have been from manual jobs (particularly operative and service jobs) than would have been expected on a random basis. Movement from nonmanual jobs (particularly those at the top of the occupational ladder) represented a considerably smaller proportion (25%) of the total movement than would have been expected (42%) on a random basis, but movement from one nonmanual group--clerical workers--was about as large as would have been expected.

Parallel statements could be made about movement out of laborers' jobs. Movement into manual jobs of every description (particularly semi-skilled) was considerably more common than would have been expected on a random basis, representing 61 per cent of the total movement, as compared with an expected proportion of 58 per cent. Movement into one nonmanual occupation--clerical work--was, however, about as large as would have been expected.

Before going on to comment further about the implications of these findings, let us inquire whether the picture appears to be substantially different for the two halves of the decade considered separately. This question can be answered only for selected male occupation groups (see Table A-40), since the number of inter-group occupation shifts by workers in certain male groups and by female workers in each half of the decade was too small to permit intensive analysis.

On the whole, the pattern of movement was substantially similar in the two halves of the decade, with the actual distribution of former jobs deviating from the expected distribution in approximately the same manner in both periods. There were a few differences, chiefly related to the fact that employment opportunities for skilled craftsmen were not expanding as much in the postwar period as they had in the war period. As a result, a larger percentage of the jobs left by workers in the postwar period were in the craftsmen category than was the case in the war period. Furthermore, in the war period, a larger percentage of the former jobs of managerial workers were in the craftsmen category than would have been expected on a random basis, whereas in the postwar period a larger percentage of the former jobs of both operatives and service workers were in the craftsmen category than would have been expected. Otherwise, differences between the two periods were scarcely worth mentioning. In spite of the marked contrasts in the direction of production shifts in the two halves of the decade, channels of inter-group occupational movement were substantially similar, suggesting that there are persisting patterns of movement that tend to prevail, in spite of changing economic conditions.

This examination of inter-group occupational movement indicates clearly that, while there are formidable barriers to certain types of movement, the barriers to other types of movements are penetrated with less difficulty. Professional jobs are not easily entered by workers in other occupation groups, and the farther down the occupational scale a worker's experience has been, the less likely is he to attain a professional job. The barriers to attainment of a sales job are fairly formidable, also, at least for men, who tend to hold higher paid and more responsible sales jobs than do women. Outside of these two groups, the barriers to entry seem to be somewhat less formidable, although there is clear evidence that the more radical the change from a worker's previous occupational experience, the

more difficult will it be for him to effect the change.

Shifts into every nonmanual occupation group were more likely to have been from previous nonmanual jobs than would have been expected on a random basis, while shifts into manual groups were more likely to have been from previous manual jobs. But the importance of movement across the barrier between nonmanual and manual occupations should not be underestimated. For men, half of all the inter-group shifts into nonmanual jobs were from manual jobs, as compared with an expected proportion of 65 per cent. On the other hand, about a quarter of the inter-group shifts into manual jobs were from nonmanual jobs, as compared with an expected proportion of 35 per cent.

One of the most interesting aspects of this analysis of gross inter-group occupational movement is its demonstration that the sources of movement into each group were quite similar to the destination of shifts out of the group. If it was unlikely that a laborer would shift into the professional group, it was equally unlikely that a professional worker would become a laborer. On the other hand, where the barriers to movement were relatively weak, they tended to be weak in both directions.

Once having established the fact that inter-group occupational movement is not random in character, it is of interest to determine to what extent the actual movement into the various occupation groups is concentrated from a few sources. If we examine Table A-37, we find that there were five male occupation groups and five female groups for which at least a third of the previous jobs had been held in a single outside group. In all of these cases, the outside group was either an adjacent group or a group only two steps removed in the occupational scale. If we include the two most important outside sources, we account for at least 50 per cent of the movement in nearly every case.

In evaluating these results, we must recognize that an analysis of gross inter-group occupation shifts tends to give an exaggerated picture of the amount of inter-occupational movement that actually occurs, for it ignores the workers who experienced no shifts and it also ignores the shifts that took place within each group. We must recognize, furthermore, that our data do not exclude shifts that were temporary or seasonal in character.

On the whole, however, these data on gross movement probably give us a reasonably accurate picture of the dominant patterns of inter-group occupational movement. The picture that emerges is in no wise inconsistent with the picture that emerged from our earlier analysis of net inter-group movement,<sup>1</sup> although the latter had to be sketched in much less detail.

#### "Closed" and "open" industry groups

Of the total job shifts experienced by workers during the course of the decade, only a minority did not involve a change in industry group. Some 44 per cent of the shifts experienced by men and 46 per cent of the shifts experienced by women were within the same group.<sup>2</sup> There were no industry groups--male or female--that were as "closed" as we found certain

1. See The Mobility of San Francisco Workers: 1940-1949, Chapter III.

2. Computed from Table A-41, Appendix.

occupation groups to be. Somewhat more than half of all job shifts by men in construction, by workers of both sexes in wholesale and retail trade, and by women in the service industries, however, did not involve a change in industry group. On the other hand, relatively few of the shifts by men and women in the transportation group, the finance group, and public administration, and by women in durable goods manufacturing, did not involve a change in industry group.

On the basis of similar data for the two halves of the decade (not presented in tabular form), we find that in both the war and postwar periods and over the decade as a whole, a relatively high percentage of all job shifts experienced by men in construction, by workers of both sexes in wholesale and retail trade, and by women in the service industries did not involve a change in industry group. On the other hand, a comparatively small percentage of the shifts by women in durable goods manufacturing and in the transportation group were of this character. Other groups occupied differing relative positions in this respect in the two halves of the decade.

#### Inter-group industrial movement

In attempting to determine whether inter-group industrial movement was random in character, or whether there were recognizable "channels" of movement, we used the same type of statistical test that was employed in analyzing inter-group occupational movement. We found that for the 1940-1949 period, inter-group industrial movement as a whole could not be considered random in character but that movement into many individual major industry groups did not depart significantly from a random pattern.<sup>1</sup>

In the case of men, only the shifts into the construction industry, "transportation, communication, and other public utilities", and wholesale and retail trade were from previous jobs that were distributed in a manner significantly different from that of all previous jobs held by men making inter-group shifts during the ten-year period. Even these relationships, moreover, did not hold consistently in the two halves of the decade. When tests were carried out for the war period alone, it was found that only the shifts into the transportation group and into wholesale and retail trade were from previous jobs that departed significantly from a random pattern of distribution, while, in the postwar period, there were no industry groups of which this was true (see Table A-45).<sup>2</sup>

These results may be given somewhat more meaning by comparing the actual distribution with the "expected" distribution of former jobs for the

1. For the period as a whole the value of chi-square for men (36 degrees of freedom) was 85.06, and, for women (25 degrees of freedom) was 74.29.

2. It was possible to perform a chi-square test for selected male groups only in the two halves of the decade--construction, durable goods manufacturing, the transportation group, wholesale and retail trade, service industries, and public administration. It is quite possible that if the total number of shifts into construction, for example, had been larger in each half of the decade, the tests would have shown somewhat different results.

groups in question (see Table A-42, Appendix). If we consider all inter-group shifts into the construction industry, for men, we find that previous jobs in durable goods manufacturing were relatively more important than would have been expected on a random basis, whereas previous jobs in most other major industry groups were somewhat less common than would have been expected. It will be recalled that the great majority of workers in the construction industry were skilled craftsmen (see Table A-11, Appendix), and it seems likely that many of the men who shifted from durable goods manufacturing to construction were workers whose skills could be utilized in either of these two major industry groups.<sup>1</sup> If we consider shifts (by men) into the transportation group, we find, likewise, that a larger proportion of the previous jobs in this case were in durable goods manufacturing than would have been expected on a random basis. Here again, rough similarities in the occupational composition of the two industry groups may have helped to account for the relationship--the great majority of men in both groups were craftsmen, operatives, or laborers. In fact, construction, durable goods manufacturing, and the transportation group were all characterized by unusually high percentages of manual workers.

In the case of women, only the shifts into durable goods manufacturing and the service industries were from previous jobs that were distributed in a manner significantly different from a random pattern. Movement into durable goods manufacturing from the trade and service industries (particularly the former) had assumed somewhat larger proportions than would have been expected on a random basis,<sup>2</sup> while movement into the service industries from public administration had taken place on a somewhat larger scale than might have been expected. Similarities in the occupational composition of these female industry groups cannot be said to have fully explained these relationships.

For purposes of manpower planning, the results of this analysis of inter-group industrial movement are highly significant. While such movement could not be characterized as wholly random, movement into a number of important industrial sectors of the economy did not depart significantly from a random pattern. Of all major industry groups, durable goods manufacturing is probably of greatest strategic importance in a period of mobilization, and yet we found that for men, the jobs held prior to shifts into this group from other industry groups were distributed in a manner not significantly different from all jobs held prior to inter-group shifts by men in the ten-year period. On the other hand, we have found that inter-group occupational movement does tend to follow certain "channels". These results suggest that, in the preparation of manpower estimates, we need to think in terms of the occupational requirements within the various industry groups and of the sources from which these requirements can be met, rather than in terms of inter-industry movement as such.

1. It is interesting to note also that, when workers left the construction industry, a larger percentage of their new jobs were in durable goods manufacturing than would have been expected on a random basis. (The data on which this statement is based are not presented in the present report.)

2. When women left durable goods manufacturing, moreover, their new jobs were more likely to have been in wholesale and retail trade than would have been expected.

## CHAPTER VI

### RATIOS OF GROSS TO NET MOVEMENT

#### Ratios of Gross to Net Shifts

Now that we have examined various aspects of inter-occupational and inter-industrial movement, we are ready to consider actual ratios of gross to net movement.

As one faces the problem of computing ratios of gross to net movement, it becomes apparent that there is a wide choice of ratios that might be selected. Among numerous possible ratios of gross to net shifts are the following:

1. The ratio of gross shifts in activity status to net shifts in activity status.
2. The ratio of gross shifts in activity status to net shifts in employment status or occupation.
3. The ratio of gross shifts in activity status to net shifts in employment status or industry.
4. The ratio of gross civilian job or assignment shifts to net shifts in employment status or major occupation group.
5. The ratio of gross occupation shifts to net occupation shifts.
6. The ratio of gross inter-group occupation shifts to net inter-group occupation shifts.
7. The ratio of gross civilian job or assignment shifts to net shifts in employment status or major industry group.
8. The ratio of gross industry shifts to net industry shifts.
9. The ratio of gross inter-group industry shifts to net inter-group industry shifts.

This list by no means exhausts the possibilities. Each of these ratios might be presented, moreover, for both halves of the decade as well as for the decade as a whole, and for age, years-of-residence, occupation, and industry groups (as well as for other possible categories of workers). It can readily be seen why we have been forced to make a limited selection, with a view to presenting those ratios which might be regarded as possessing the greatest potential usefulness in connection with the analysis of manpower problems.

Another type of choice which confronted us was whether to compute

ratios of (1) total gross shifts to total net shifts for various categories of workers or of (2) average gross shifts to average net shifts. Mathematically, ratios computed by either method will be identical, provided the totals and averages apply to precisely the same groups of persons. If ratios are computed from averages, however, and the averages are presented in tabular form, we shall gain greater insight into the reasons for variation in the ratios. In the case of net shifts, the average number of shifts of a given type is equivalent to the percentage of persons in the group who experienced shifts of that type, since by definition a person could experience only one net shift.

A major difficulty with which we were faced arose out of the fact that only a minority of persons in the sample experienced net shifts. For many individual occupation and industry groups, especially among the women, the percentage of workers who experienced net shifts in occupation or in occupation group was so small that it could not be regarded as even reasonably reliable, after taking account of the element of sampling variability. Since the use of unreliable percents as bases for the computation of ratios is a highly questionable statistical procedure, we have refrained from presenting ratios if the percent on which it would have been based had a co-efficient of variation greater than .15. Use of this standard resulted in the complete elimination of data relating to women in presenting some of the ratios.

#### Ratios of Gross Shifts in Activity Status to Net Shifts in Employment Status or Occupation

During the course of the decade of the forties, many of the workers in our sample shifted into or out of the labor force, as well as between occupation or industry groups. Our first and most general ratio of gross to net movement, therefore, relates gross shifts in activity status to net shifts in employment status or occupation between January, 1940, and December, 1949. Although shifts in activity status are not precisely equivalent to shifts in employment status or occupation, they are sufficiently similar to provide a meaningful measure of the ratio of gross to net movement.<sup>1</sup>

The men represented by the San Francisco work history sample

1. A worker was considered to have changed his activity status if he (1) entered or left the civilian labor force or experienced any other change in employment status, (2) experienced any change in job (other than a change in occupational assignment on the same job), or (3) experienced any change in activity status during periods out of the labor force, such as from student to member of the Armed Forces or vice versa. In computing net shifts in employment status or occupation, we did not attempt to distinguish between various types of changes in employment status, but we did include occupational assignments on the same job. It is believed that the ratios which we obtained would not be materially altered if these minor differences in measures of gross and net shifts could be eliminated.

experienced, on the average, about five shifts in activity status for every net shift in employment status or occupation during the decade of the forties (see Table 20).<sup>1</sup> For women, the ratio was slightly lower (about  $4\frac{1}{2}$  to 1), reflecting chiefly the fact that a somewhat larger percentage of women experienced net shifts. As we know, relatively more women than men experienced a net change in employment status during the course of the decade, although comparatively fewer women experienced a net change in occupation or in major occupation group.

There was a tendency for the ratio of gross to net shifts, as here defined, to decline appreciably with advancing age, although in the case of women a sharp decline set in earlier than in the case of men. That ratios were higher for younger persons than for older persons reflects the fact that, although both average gross shifts and average net shifts declined with advancing age, the decline in the former was much sharper than the drop in the latter. The youngest group of men in the sample had experienced, on the average, nearly three and a half times as many gross shifts as the men 55 and older, but less than two and a half times as many net shifts.

The ratio declined, also, with increasing years of residence in the area, for a similar reason. In other words, recent migrants differed more sharply from well-established residents with respect to gross than to net shifts.

We must bear in mind, in evaluating these results, that these ratios of gross to net shifts might very well have been lower in a decade that did not include a major war.

Ratios of Gross Civilian Job or Assignment Shifts to Net Shifts in Employment Status or Major Occupational Group

The men represented by the San Francisco work history sample experienced nearly five shifts in civilian job or occupational assignment, on the average, during the decade of the forties for every net shift in employment status or major occupation group (see Table A-50). For women, the corresponding ratio was considerably smaller -- about three to one. This difference between men and women reflected not so much the fact that men made more gross shifts as the fact that women experienced more net shifts (see Table A-48). Furthermore, if we break down the net shifts experienced by men and women, we find that women had experienced more net shifts in employment status, on the average, while men had experienced more net shifts in major occupation group.<sup>2</sup>

There were rather marked occupational variations in these ratios of

1. A worker who was not employed in either January, 1940, or in December, 1949, was classified as having experienced no net shift (see Table A-46).

2. Cf. The Mobility of San Francisco Workers: 1940-1949, Table A-15.

Table 20.

Ratio of Average Gross Shifts in Activity Status to Average  
Net Shifts in Employment Status or Occupation by Age  
and Sex, January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Age in 1951	Men			Women		
	Average gross shifts	Average net shifts	Ratio <sup>B</sup>	Average gross shifts	Average net shifts	Ratio <sup>B</sup>
Total	2.9	.58	5.1	3.0	.65	4.6
25-34 years	4.8	.88	5.5	4.7	.79	5.9
35-44 years	3.4	.62	5.5	3.1	.72	4.2
45-54 years	2.2	.45	4.9	2.3	.55	4.1
55 and over	1.4	.37	3.8	1.6	.44	3.6

<sup>A</sup>Averages and ratios computed from data which exclude persons with casual work only, 1940 - 1949. Persons with no civilian job in the period were also excluded from data on net shifts.

<sup>B</sup>Computed from unrounded data.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-53 (see Appendix, Table A-46) and Table W-26 (Census).

Table 21.

Ratio of Average Gross Shifts in activity Status to Average  
Net Shifts in Employment Status or Occupation by  
Years of Residence in San Francisco-Oakland Standard  
Metropolitan Area and Sex, January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Years of residence in Area (as of 1951)	Men			Women		
	Average gross shifts	Average net shifts	Ratio <sup>B</sup>	Average gross shifts	Average net shifts	Ratio <sup>B</sup>
Total	2.9	.58	5.1	3.0	.65	4.6
0-5 years of residence	4.8	.74	6.5	4.6	.73	6.2
6-11 years of residence	4.2	.79	5.3	4.0	.83	4.8
12-20 years of residence	2.5	.57	4.5	2.0	.59	3.5
21 years and over	1.9	.45	4.3	1.7	.51	2.8

<sup>A</sup>Averages and ratios computed from data which exclude persons with casual work only, 1940-1949. Persons with no civilian job in the period were also excluded from data on net shifts.

<sup>B</sup>Computed from unrounded data.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-54 (see Appendix, Table A-47) and P-55.

gross to net shifts. In the case of the men, the ratios were distinctly higher for all the manual occupation groups than for the nonmanual occupation groups. In the case of the women, the contrast between manual and non-manual workers was not so marked, but the ratio was highest for a manual group (service workers).

It will be helpful in interpreting these occupational variations in ratios if we recall that, at an earlier stage in this report, when we were attempting to explain differences in occupational variations in gross mobility rates in the two halves of the decade and over the decade as a whole, we computed co-efficients of rank correlation between gross mobility rates and rates of net shifts into the various occupation groups, i.e., between the measures of gross and net shifts that we are presently considering. It is clear that the results of this computation are relevant to the present problem, for, if there were perfect correlation between average gross and average net shifts by major occupation group, we should expect to find no occupational variation in ratios of gross to net shifts. The co-efficient of rank correlation, of course, is not a refined measure of correlation, but even so the results are indicative of the presence or absence of correlation. It will be recalled that in the case of men, we found a high degree of rank correlation only for the first half of the decade and no correlation whatever for the decade as a whole.

On the whole, it would appear that, in the case of men, variations in the ratios of gross to net shifts followed a pattern that conformed more closely with the pattern of variation of average gross shifts than of average net shifts, though the latter clearly exerted an influence. For women, variations in both average gross shifts and average net shifts clearly influenced the ratios. It does not appear that variations in the ratios for either sex was consistently related to differences in median ages of workers in the various major occupation groups.

During the war period, the ratio for men (2.8 to 1) was somewhat higher than that for women (1.8 to 1) for reasons identical with those that prevailed for the decade as a whole. In the postwar period, the relationship was the reverse, reflecting the fact that relatively fewer women moved into the labor force after the war, whereas demobilized men moved back into the labor force in large numbers. Occupational variations in the ratios for the postwar period tended to correspond with those for the decade as a whole. So far as the war period is concerned, too few reliable ratios are available to justify generalizations about the pattern of variation.

#### Ratios of Gross to Net Occupation Shifts

Before plunging into a discussion of ratios of gross to net occupation shifts, we need to say a few words about variations in net occupation shifts, which have not previously been discussed (see Table A-48).

A considerably larger percentage of men (40%) than of women (20%) had experienced a net occupation shift between the beginning of 1940 and the

end of 1949, while occupational variations in percentages with net occupation shifts followed quite a different pattern for the two sexes. In the case of men, the proportion that had experienced net shifts tended to increase gradually, though not quite regularly, between the top and bottom of the occupational ladder. There was very little difference between the various manual occupation groups, however, in the percentages who had experienced net occupation shifts. Variations among the women's groups were much less regular.

The men in the sample had experienced 3.7 gross occupation shifts for every net shift in occupation, whereas women, with their substantially lower rate of net shifts, had experienced over five gross shifts for every net shift.<sup>1</sup>

An analysis of occupational variations in these ratios is justified only for the men (see Table A-50). Such variations did not follow a regular pattern. Clerical workers, and, to a lesser extent, operatives stood out with high ratios of gross to net occupation shifts, while managerial workers stood out with a low ratio. Ratios for the other groups did not deviate materially from the ratio for all men in the sample.

In interpreting these variations in the ratios, it is interesting to note that a high co-efficient of rank correlation (.881) between average gross and average net occupation shifts was obtained only for the war period. For the decade as a whole, we obtained a very low rank correlation co-efficient (.381), and it is quite apparent that variations in ratios of gross to net shifts were influenced by differing patterns of variation in both average gross and average net shifts. These differing patterns of variation appeared to be explained in part by differences in the median ages (and in the age distributions) of the men in the various male occupation groups.<sup>2</sup>

We shall reserve discussion of the manner in which age differences exerted their influence until we come to discuss ratios of gross to net inter-group occupation shifts, where we shall be able to draw on more complete data to aid our interpretation.

The ratio of gross to net occupation shifts was somewhat lower (2.1 to 1) in the first half of the decade than in the second (2.5 to 1), reflecting chiefly the fact that relatively more men experienced net shifts in the first half of the decade. Occupational variations in the ratios appeared to follow a somewhat different pattern in the two halves of the decade, although detailed comparisons are not justified because of the insufficiency of our data.

1. The ratio for women does not appear in Table A-50.

2. See The Mobility of San Francisco Workers: 1940-1949, Tables 1, A-1, and A-2, for data on age by major occupation group.

### Ratios of Gross to Net Inter-Group Occupation Shifts

Turning to inter-group occupation shifts, we find that much the same remarks apply as in the case of occupation shifts, though with a few minor differences.

While about a third of the men in our sample had experienced a net inter-group occupation shift between the beginning and end of the decade, only 14 per cent of the women had experienced such a shift (see Table A-48). In the case of men, the proportion of professional workers, at the top of the occupational ladder, who had experienced such a shift was substantially lower than the proportion of laborers, at the bottom, but variations were by no means regular between the top and bottom of the ladder. There were certain rather marked differences in the pattern of variations in the two halves of the decade, moreover. In the case of the women, variation between the top and bottom of the occupational ladder was anything but regular, though there was greater similarity between the two halves of the decade than in the case of men.

The ratio of gross to net inter-group occupation shifts was lower for men (3.7 to 1) than for women (5.0 to 1).<sup>1</sup> Here again, the lower ratio for men is explained largely by the fact that men had experienced more net shifts of this type, on the average, than had women.

Male clerical workers and operatives stood out with relatively high ratios of gross to net inter-group occupation shifts over the decade as a whole, while male managerial workers stood out with a comparatively low ratio (see Table A-50). For other male occupation groups, the ratios did not vary greatly from that for all men.

Again, we obtained a high correlation of rank correlation (.905) between average gross and net shifts only for the first half of the decade. Clearly, variations in both average gross shifts and average net shifts exerted an influence on variations in the ratios (see Tables A-16 and A-48).

Once again, differences in median ages of workers in the various male occupational groups appeared to have had some influence on variations in the ratios. How did this work out? In the case of managerial workers, for whom a relatively low ratio of gross to net shifts was found, the median age of the group was comparatively high, and, as we have seen, managerial workers tended to occupy an increasingly important relative position in the occupational structure with advancing age.<sup>2</sup> Mature workers were apparently recruited into the group from other groups on a considerable scale, but relatively few young workers were recruited as they entered

1. The ratio for women does not appear in Table A-50.

2. See The Mobility of San Francisco Workers: 1940-1949, Table A-1.

the labor force.<sup>1</sup> This helps to explain the fact that average net inter-group occupation shifts for the group were relatively high, whereas average net shifts in employment status or occupation group were not. But average gross inter-group occupational shifts for managerial workers were relatively low, reflecting the comparatively elderly age composition of the group.<sup>2</sup> The situation was just the reverse for male clerical workers, whose relative importance in the occupational structure tended, on the whole, to decline with advancing age. In the case of male operatives, the situation was not so simple. While there was some tendency for the relative importance of this group in the employment structure to decline with advancing age, it was not a consistent tendency, and the median age of the group was not significantly lower than the median for all men in the sample. The fact that average net inter-group occupation shifts for the group were relatively low probably reflects primarily the fact that, over the decade as a whole, employment opportunities for operatives were not especially favorable in San Francisco. The operatives group lost ground as a percentage of total employed men between 1940 and 1950,<sup>3</sup> and there was a net decline in the number of men in our sample who were employed as operatives between January, 1940 and 1950.<sup>4</sup> On the other hand, the high rate of gross inter-group occupation shifts for male operatives tends to be consistent with everything that we have found about the mobility characteristics of this group. On the basis of our analysis of channels of inter-group occupational movement, it seems reasonable to infer that a substantial number of men, for example, shifted from the operatives to the craftsmen group during the war and back to the operatives group after the war.

Ratios of Gross Civilian Job or Assignment Shifts to Net Shifts in Employment Status or Major Industry Group

The men represented by our sample had experienced five civilian job or assignment shifts for every net shift in employment status or major industry group, whereas, for women, the corresponding ratio was three to one (see Table A-51). Here again, the main reason for the difference was the fact that a larger percentage of the women had experienced net shifts in employment status though not in major industry group.

Ratios of gross to net shifts by major industry group over the

1. Cf. ibid., Table A-15, which shows that the male managerial group included relatively few workers who had not been employed in January, 1940.

2. When we tabulated inter-group occupation shifts by age (not shown in this report), we found that average gross shifts of this type varied from 1.9 for men aged 25-34 to 0.3 for men aged 65 and older.

3. See Background Report and Preliminary Analysis of Household Data Relating to San Francisco, Table 7, and U.S. Census of Population: 1950, General Characteristics, California, 1950 Population Census Report P-B5, p. 5-171 (for final 1950 Census figures).

4. See Table A-52, Appendix.

decade as a whole varied widely for men. Male workers in construction and wholesale and retail trade stood out with unusually high ratios, while those in the finance group and in public administration stood out with relatively low ratios. In interpreting these differences, it will be useful to recall that we did not find a high degree of correlation between average gross civilian job or assignment shifts and average net shifts in employment status or industry group for the decade as a whole.<sup>1</sup> It is clear that variations in both average gross and average net shifts influenced variations in the ratios. In the case of the women, variations in the ratios were quite narrow, and it is worth recalling, in this connection, that industrial variations in mobility for women were not wide enough to be considered significant over the decade as a whole.

If we consider the ratios for the postwar period, we find that the pattern of industrial variations differs somewhat from that for the decade as a whole. In the case of the men, the ratio for durable goods manufacturing stood out above all the others in the postwar period, whereas that for construction was not significantly different from the ratio for all men. The ratios for the finance group and for public administration were, once again, relatively low, however. We cannot say much about the pattern of industrial variations in these ratios in the war period, but it is worth noting that the ratios for wholesale and retail trade tended to be relatively high for both men and women in all three periods, while that for public administration was relatively low in all three periods in the case of men.

We may tentatively conclude that the character of job attachments in certain industry groups, such as wholesale and retail trade, the finance group, and public administration may tend to give rise to consistently high or consistently low ratios of gross to net shifts (of the type here being discussed) while in other industry groups, such as construction and durable goods manufacturing, the ratios that are likely to prevail for any given period may depend on the particular circumstances prevailing in that period. There is no evidence that variations in the ratios were consistently related to age differences, though the relatively high median age of male workers in finance, insurance, and real estate probably helped to explain the low ratios for this industry group.

#### Ratios of Gross to Net Industry Shifts

A larger percentage of men (37%) than of women (23%) experienced net industry shifts between the beginning and end of the decade (see Table A-49). Industrial variations in percentages with net shifts followed, on the whole, a similar pattern for the two sexes over the decade as a whole, though with certain minor differences in detail. The pattern of industrial variations differed considerably in the two halves of the decade for both sexes, however, and in the case of men, variations were much wider in the

1. Cf. p.15, above.

war period than in the postwar period or over the decade as a whole.

The men represented by the sample experienced 3.7 gross industry shifts for every net industry shift while the corresponding ratio for the women, with their lower rate of net shifts, was 5.6 to 1.

An analysis of industrial variations in the ratios is justified only for the men. Over the decade as a whole, the construction industry stood out with a relatively high ratio of gross to net industry shifts, but otherwise industrial variations in the ratios that we were justified in computing fell within a relatively narrow range. In the postwar period even the ratio for the construction industry was not significantly different from the ratio for all men. Variations in the ratios appeared to be narrow in both the war and postwar periods, but the gaps in the data are too numerous to permit our reaching a positive conclusion.

In interpreting these variations in ratios of gross to net industry shifts, it is worth noting that, while the co-efficient of rank correlation between average gross and average net industry shifts of men was highest in the war period (.976), it was also moderately high in the postwar period (.786) and over the decade as a whole (.762).<sup>1</sup> This relationship undoubtedly helps to account for the fact that ratios of gross to net industry shifts varied only moderately.

#### Ratios of Gross to Net Inter-Group Industry Shifts

Over the decade as a whole, ratios of gross to net inter-group industry shifts, for men, showed somewhat wider variations than the ratios we have just been discussing. The ratio for men in the durable goods industry stood out as comparatively low, while ratios for construction and wholesale and retail trade were comparatively high. Very little can be said about the ratios for the war and postwar periods because of the gaps in the data.

In interpreting industrial variations in the ratios, it is interesting to note that industrial variations in average net inter-group industry shifts for men were considerably more marked in both the war and postwar periods than over the decade as a whole. The co-efficient of rank correlation between average gross and average net inter-group industry shifts, moreover, was high for the war period (.976), moderately high for the postwar period (.786), but considerably lower (.524) for the decade as a whole.

In other words, it is probable that in the war and postwar periods, patterns of industrial variation in both gross and net inter-group industry

<sup>1</sup> Unfortunately, the usual test of significance for a co-efficient of rank correlation cannot be applied when the number of pairs of observations is as low as eight.

shifts were being influenced predominantly by the production shifts that accompanied mobilization and subsequent demobilization. While the conflicting pattern of shifts in the two halves of the decade undoubtedly had certain cumulative effects on industrial variations in both gross and net shifts over the decade as a whole, they did not affect gross and net shifts in precisely the same manner.

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No broad or facile generalizations will serve to sum up our findings with respect to occupational and industrial variations in ratios of gross to net shifts. It is clear that patterns of both occupational and industrial variation will differ somewhat for each type of ratio. In interpreting these patterns of variation, moreover, we need to draw on everything that we have learned about occupational and industrial variations in the mobility characteristics of workers. Age differences, also, have been found to play a role in connection with occupational variations in certain of these ratios.

Before completing this discussion of ratios, we need to consider, briefly, an entirely different type of ratio from those considered thus far.

#### Ratios of Gross to Net Change

Up to this point, we have been analyzing ratios of gross to net shifts experienced during a given period by groups of men and women who were classified by occupational or industrial attachment at the end of the period.

There is another way of looking at the relationship of gross to net movement which we cannot afford to ignore in a study geared to the analysis of manpower problems.

If the number of workers who are employed in a given occupation or industry group changes between the beginning or end of a period of time, the change will probably have come about as a net result of movement both into and out of the group. A net addition of 5,000 workers might have resulted, for example, from a gross movement of 15,000 workers into the group and a gross movement of 10,000 workers out of the group. Thus we might say that in this case it required a gross addition of three workers to the group to bring about a net addition of one worker, or that the ratio of gross to net changes was three to one.

This concept will serve very well for an analysis of the relationship of gross to net changes over a very short period of time, say one or two months. It is essentially the concept used by the Census Bureau in its reports on gross changes in the labor force.<sup>1</sup> But if we

1. Current Population Reports: Labor Force, Series P-59 (now discontinued).

are concerned with the changes which occur over a longer period of time, say five or ten years, we immediately encounter difficulties in the use of this concept, for the workers who have moved into the group between the beginning and end of a five-year period, for example, may have made several shifts in employment status or in occupational or industrial attachment between the two dates. Furthermore, some of the workers who were employed in the group both at the beginning and end of the period may have moved out of the group and back into it in the interim. Thus, gross movement, as here conceived, merges into the concept of net shifts which we have employed in the earlier part of this chapter, if the time period is extended beyond one or two months.

Nevertheless, it is useful to ask the question, "How many workers had to be drawn into a given occupation or industry group over a given period of time in order to bring about a net addition of one worker?" Clearly, this will depend on the extent to which workers were needed, not merely to bring about net expansion, but also to replace those who moved out of the group. Tabulations which were available at the time earlier reports were prepared permit some analysis along these lines.

As Table A-52 (Appendix) indicates there were wide variations in net changes in the employment of workers represented by the San Francisco work history by major occupation group from 1940 to 1950. For men, net changes (expressed as a percentage of 1950 employment) ranged from -21 per cent for operatives to +32 per cent for professional and sales workers. For women, they ranged from +17 per cent for professional workers to +51 per cent for clerical workers, operatives, and service workers. These variations were clearly influenced by (1) trends in employment by major occupation group in San Francisco from 1940 to 1950 as indicated by decennial census data, and (2) variations in the rates at which the different major occupation groups in our work history sample lost workers over the course of the decade. The fact that we are dealing with a sample of workers who were growing older throughout the decade, moreover, influenced the manner in which these factors worked themselves out.

Analysis of the male operatives group will serve to illustrate the influence of these factors. The fact that there was a net decline in the number of men in the sample who were operatives reflects (1) a decline in the relative importance of this occupation group in San Francisco between 1940 and 1950, (2) a relatively weak degree of occupational attachment on the part of operatives, and (3) the fact that the percentage of men who are operatives tends to decline with advancing age.<sup>1</sup> These factors are clearly inter-related. Thus, the fact that there was a decline in the relative importance of operatives in San Francisco between 1940 and 1950 suggests that employment opportunities were not especially

1. See The Mobility of San Francisco Workers, Table A-1, Appendix. See also, 16th Census of the United States: 1940, Population, Volume III, The Labor Force, Part 1, Table 65, pp. 98-100.

favorable for workers in this group over the course of the decade as a whole, though they may have been temporarily favorable during the war period. This factor would tend to depress the rate of gross movement into the group (which was lower than for any other group) and to stimulate the rate of gross movement out of the group over the course of the decade. Secondly, if it is true that male workers tend to shift from operative (semi-skilled) jobs into craftsmen (skilled) or other types of jobs as they grow older -- and this hypothesis is consistent with everything that we have learned about inter-occupational movement -- we should expect to find a relatively small increase or an actual decrease in the number of operatives over the course of a ten-year period in a sample of persons who are growing older during that period. Thirdly, both of the above factors would lead us to expect a high rate of gross out-movement (suggesting a low degree of occupational attachment) for the group.

A similar type of analysis will explain most of the other variations in net changes by major occupation group. We need not trace all these inter-relationships in detail for every group, since our major problem is not to explain variations in net change, but to determine what factor or combination of factors seems to explain variations in the ratios of gross to net changes. In the case of a group with a net increase in number of workers, we have computed the ratio of gross in-movement to net change; in the case of a group with a net loss of workers, we have computed the ratio of gross out-movement to net change.<sup>1</sup> In other words, the ratios measure the amount of gross change in a given direction that was involved in bringing about a certain amount of net change in the same direction.

That the ratios varied substantially by major occupation group, especially for men, is clear. Obviously, a high rate of both gross in-movement and gross out-movement, combined with a small rate of net change, tended to produce a high ratio. But beyond this, can anything further be said about factors influencing these ratios? It would appear that the rate of gross out-movement had more influence on the ratios than other variables. This is scarcely surprising. Wherever gross out-movement was large, it would require a high rate of gross in-movement to bring about any given net change (except for a substantial net decline).

The crucial question for our purposes is whether these occupational variations in rates of gross out-movement reflected genuine occupational differences in degree of occupational attachment or merely particular developments in the San Francisco labor market in the forties? This question has been discussed somewhat in an earlier report,<sup>2</sup> but it needs some further attention here in relation to the objectives of the present project.

1. In this case, ratios were computed from the estimates of actual numbers of men and women, rather than from percentages or averages.

2. The Mobility of San Francisco Workers, 1940-1949, p. 20.

In the case of men, the rate of gross out-movement was comparatively low for professional workers, skilled craftsmen, and service workers. In view of the specialized training possessed by both professional workers and skilled craftsmen, it is relatively unlikely that workers in these groups could improve their economic position by shifting to other occupation groups. Hence, we may logically infer that the low rates of gross out-movement which prevailed for these groups probably reflected a relatively high degree of occupational attachment which is characteristic of workers in these groups. The data on types of job shifts analyzed in earlier mobility reports support this conclusion. The low rate of gross out-movement for service workers must be explained on somewhat different grounds. There is a good deal of evidence to suggest that opportunities for service workers to shift to other occupation groups are restricted for a variety of reasons -- they are too old for vigorous manual work, they belong to minority groups that face discrimination in the employment market, etc. These considerations suggest, however, that a low rate of gross out-movement for service workers may be characteristic of the group.

Among women, service workers had a relatively low rate of gross out-movement, as in the case of men. Female clerical workers also were characterized by a low rate of gross out-movement, in contrast to male clerical workers. We have found a good deal of additional evidence to suggest that female clerical workers have an unusually high degree of occupational attachment and that their mobility characteristics are quite different from those of male clerical workers.

We may tentatively conclude that there is some tendency for ratios of gross to net change to vary inversely with the degree of occupational attachment of workers in the various major occupation groups. To some extent, this conclusion may be regarded as a truism. But if it is to be at all useful, we must be in a position to identify with considerable assurance the groups that do possess a high degree of occupational attachment, and we must have some notion as to whether the relative strength of occupational attachment of workers in a given group may be expected to persist under a variety of economic conditions.

It is of considerable interest for our purposes to compare the ratios of gross to net change for San Francisco with those for the six cities. Unfortunately, the number of possible comparisons is limited to those occupation groups for which reasonably reliable ratios could be computed for both San Francisco and the six cities.<sup>1</sup> In the majority of such cases, differences between the ratios were small. For male managerial workers, however, the San Francisco ratio was considerably

1. There would be some advantages, from the point of view of careful statistical procedure, in comparing data for San Francisco with data for the other five cities rather than with data for all six cities. This point is not of great practical importance, however, since San Francisco is one of the smaller cities in the survey.

higher than that for the six cities. It is of interest to note in this case that the rate of net increase in workers attached to this group was lower in San Francisco than in the six cities, while the rate of gross out-movement was higher (supporting data for the six cities are not presented in the table). This suggests that workers may have been moving out of the managerial group on a somewhat larger scale in San Francisco than in the six cities, because employment opportunities for managerial workers were expanding less rapidly in San Francisco. In other words, the data suggest that occupational variations in rates of gross out-movement over a period as long as ten years may be influenced not only by relative degrees of occupational attachment but by relative rates of expansion of employment.

Unfortunately, a similar comparison for the two halves of the decade is not feasible, because there were too many occupation groups for which ratios could not be computed. One comment, however, is in order. During the war period, rates of gross out-movement from the various male occupation groups were affected by movement into the Armed Forces as well as by variations in degrees of occupational attachment. This factor tended to bring about a somewhat different pattern of variations in rates of gross out-movement and in ratios of gross to net movement in the war period.

It is clear that the rates of gross in-movement employed in this analysis correspond with the percentages of persons who shifted into each group between 1940 and 1950, i.e., with average net shifts in employment status or major occupation group as presented in Table A-48. In other words, these rates of gross in-movement (or of net shifts into each group) provide the connecting link between our ratios of gross to net change in major occupation group and of gross civilian job or assignment shifts to net shifts in employment status or occupation group. This raises the question as to whether it would be meaningful to combine these two ratios into one, which would then become a measure of the number of civilian job or assignment shifts involved in bringing about a net addition (or loss) of one worker to each major occupation group.

Let us see how this would work out. Over the course of the decade, it required a movement of 1.5 workers into the male professional group to bring about a net addition of one worker to the group (Table A-52). But there were 3.6 job or assignment shifts involved in bringing about the movement of 1.5 workers into the group (Table A-50), so there were actually 5.4 job or assignment shifts involved in bringing about a net addition of one worker to the professional group.

Now, it is clear immediately that we would be engaging in serious double-counting if we attempted to apply this type of reasoning to all occupation groups, for some of the workers who shifted into the professional group replaced workers who shifted from the professional group to other groups. Furthermore, it would be difficult to handle the groups that lost workers on net balance. For these reasons, it seems unwise to attempt to combine our two types of ratios. Both types are useful, for somewhat different purposes.

Ratios of gross to net change may also be computed for major industry groups. We have not attempted to include a table presenting the results of such computations in the present report, but a few comments may be in order as to what such data would show.

For the decade as a whole, ratios of gross to net change by major industry group for San Francisco differed substantially from corresponding data for the six cities. The differences appeared to be related to differences in employment trends, as between San Francisco and the six cities, which affected rates of gross in-movement and out-movement, as well as rates of net change. If, however, we considered the two halves of the decade separately, we found fewer differences between the ratios for San Francisco and the six cities (insofar as they could be computed) and fewer differences between rates of gross out-movement. It was clear that for the two sub-periods, changes in employment opportunities in all six cities were dominated by the production shifts which accompanied mobilization and subsequent demobilization of the economy.

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The discussion in the present chapter has served to emphasize the fact that there are many types of ratios of gross to net movement which may be derived from work history data. It has not been possible, within the time period available for preparation of the present report, to explore fully all the possible types or even to explore fully all the differing patterns of variation which we have found.

If gross and net mobility rates of workers varied occupationally and industrially in very much the same manner, variations in ratios of gross to net movement would either be nonexistent or would conform to a relatively simple pattern. But this is not the situation which we face. Gross and net mobility rates vary occupationally and industrially in quite different ways, and the relationships between the two will vary according to (1) the particular mobility measures employed and (2) economic conditions prevailing in the period under study. Thus, the interpretation of variations in ratios of gross to net movement becomes a complex problem.

The most important question that we must seek to answer in evaluating the significance of these ratios is whether -- granted the limitations of data for a single city -- ratios based on work history data for the decade of the forties could be projected into the future and used in connection with manpower estimates for the fifties or even later decades. On this point, our conclusions must be regarded as highly tentative and may be summarized as follows:

1. The ratios of gross to net movement which prevailed in the decade of the forties were probably unusually high because of the fact that a major war occurred in the first half of the decade. Hence we cannot assign much significance, for projective purposes, to

the absolute magnitudes of these ratios.

2. Patterns of occupational, and perhaps to a lesser extent, industrial variations in the ratios probably do have some predictive value, if interpreted with caution.
3. If ratios of this type were to be developed on the basis of a nation-wide sample of workers, it would be possible to undertake a more careful analysis of differences between the war and post-war periods. The limitations of the San Francisco data constituted a serious drawback in this respect.

## CHAPTER VII

### CONCLUSIONS

The Occupational Mobility Survey was designed primarily to test the following hypotheses:

- (1) that occupational and/or industrial differentials in mobility are sufficiently great to affect manpower requirements estimates at broad levels of occupational skill or industry groups and therefore affect total requirements under varying levels of production requirements,
- (2) that regional differentials in job shifts and in movement into and out of the labor force are sufficiently great to require assessment in the planning of industrial mobilization and manpower recruitment or controls,
- (3) that the patterns of and factors in mobility vary sufficiently in different occupations and industries to require variations in the procedures planned for recruitment of production workers in peacetime or in an emergency.

Of these three hypotheses, only the first and third can be tested through analysis of the data for a single city. In view of their emphasis on occupational and industrial differences in mobility, there is probably no better way to pull together the various threads of our analysis than to attempt, as we did in earlier reports, a summary of the mobility characteristics of the various major occupation groups, with particular emphasis on the aspects of mobility that have been examined in the present study. We shall not attempt a similar summary for major industry groups, in view of the absence of conclusive evidence that there are significant industrial differences in mobility except for a few groups.

Comments about the mobility characteristics of some of the female occupation groups must be regarded as inconclusive, because of the small numbers of women represented, but the data show a high degree of internal consistency and may be interpreted as somewhat suggestive.

Professional, technical, and kindred workers. On the basis of almost every mobility measure that we examined, professional workers of both sexes were relatively immobile. They changed jobs and occupations relatively infrequently, and when movement into or out of the professional group did occur, it was largely confined to interchange with a few other nonmanual groups. There appeared to be only one sense in which professional workers as a group<sup>1</sup> could be regarded as

1. Certain sub-groups of professional workers may be relatively mobile in other respects. Cf., for example, U. S. Bureau of Labor Statistics, The Mobility of Ph. D. Scientists (unpublished ms.).

relatively mobile---when they did shift jobs, the shift was somewhat more likely to have been geographical in character than was true of job shifts for the sample of men and women as a whole. Yet, with their low overall mobility, they had not experienced more geographic shifts, on the average, than had all the workers represented by our sample. Once a worker entered the professional group, he was not very likely to leave it, and the ratio of gross to net change for this group was relatively low. But since professional workers had, on the average, experienced both relatively few gross shifts and relatively few net shifts, ratios of gross to net shifts for the group were no lower than for some of the other occupation groups which had displayed greater average mobility.

Managers, officials and proprietors. Male managerial workers resembled male professional workers in that they were relatively immobile, on the average. As a group, they had experienced relatively few shifts in job, occupation, or geographical area of employment. While the evidence suggests that once a man becomes a managerial worker, he is not likely to shift jobs very often, it also suggests that a not inconsiderable proportion of the workers who enter the group (probably chiefly those who enter self-employment) fail to become satisfactorily established and later shift to other occupation groups, for both the rate of gross out-movement and the ratio of gross to net change for this group were relatively high. When the managerial workers in our sample were involved in job shifts, moreover, they were likely to have been complex, and an unusually large percentage of the job or assignment shifts to managerial jobs had been inter-group in character. Though there was some channelization of sources of movement into the group and of destinations of movement out of it, one is struck by the wide occupational range of jobs held prior to shifts into this group and following shifts out of it. Because average gross shifts for this comparatively elderly group were relatively low, and average net shifts were not unusually low, ratios of gross to net shifts tended to be lower for this group of men than for any other.

Female managerial workers had somewhat similar mobility characteristics but included, like all the female occupation groups, a large percentage of workers who had not been employed ten years earlier and an unusually large percentage of workers who had entered the group from other occupation groups. It was probably for this latter reason that all mobility rates---and particularly average inter-group occupation shifts---for female managerial workers tended to be higher in comparison with the rates for other female occupation groups than was true for male managerial workers in comparison with other men. In other words, we have no decisive evidence that female managerial workers tend to make frequent shifts once they have entered this group but only that a large percentage of the female managerial workers in our particular sample had not been in the group very long.

Clerical and kindred workers. The mobility characteristics of male and female clerical workers differed substantially. Male clerical workers were considerably less mobile in any sense, relatively, during the war period, when comparatively few workers were moving into the

group, than in the postwar period, when movement into the group was relatively more important. While net recruitments into this comparatively young group over the decade as a whole consisted to a larger extent, relatively, of men who had not been employed in 1940 than was true of any other male group, there was a substantial amount of movement into the group from other occupation groups and a very considerable amount of movement out of the group. Although we could not compute a reliable ratio of gross to net change for male clerical workers, it is clear that the ratio would be relatively high. Ratios of gross to net occupation shifts and of gross to net inter-group occupation shifts were also relatively high for this group. The job shifts experienced by male clerical workers were likely to have been complex in type and, during the war period, at least, included a relatively high proportion of geographic shifts. While there was a slight degree of channelization of movement into and out of the group, one is struck by the fact that jobs held prior to shifts into the group were widely distributed throughout the occupational range, as were the jobs entered by workers leaving the group.

Female clerical workers--by far the largest group of women in our sample--tended to change jobs about as often as the average woman in the sample. As we noted in an earlier report, a somewhat smaller proportion of their job shifts involved a change in occupation than was true for most other female groups, and a relatively large proportion involved a change in industry. When female clerical workers changed occupations, moreover, it was less likely that the shift would be inter-group in character than was true of any other occupation group, male or female. Over the decade as a whole, the rate of gross out-movement for this group was unusually low, as was the ratio of gross to net change. The ratio of gross civilian job or assignment shifts to net shifts in employment status or occupation, however, was close to the average ratio for all women. There was no significant degree of channelization of sources of movement into the group, and, though the new jobs entered by workers who left the group departed significantly from a random pattern, one is impressed by the fact that they were widely distributed throughout the occupational range.

Sales workers. The mobility characteristics of male and female sales workers also differed somewhat. Male sales workers tended to shift jobs and occupations about as often as the average man ~~and~~ the sample, and they did not stand out as a group with distinctive patterns of mobility. But movement into and out of the group tended to be channelized to a greater extent than for any other male group except professional workers.

Female sales workers also tended to have changed jobs and occupations about as often as the average woman represented by the sample, but--as in the case of female managerial workers--an unusually large percentage of the women employed as sales workers in 1950 had been employed in other occupation groups in 1940. It is not surprising to find, therefore, that average inter-group occupation shifts of female sales workers were comparatively high and that an unusually large percentage of all the job or assignment shifts experienced by women in this group had been inter-group in character. The rate of gross out-

movement, moreover, was relatively high for this female group, as was the ratio of gross to net change. Movement into and out of the group did not tend to be channelized to any significant degree, however.

Craftsmen, foremen, and kindred workers (men only). Skilled male workers had the highest mobility rate of any of the male occupation groups if measured by average number of civilian job or assignment shifts. But they had not experienced significantly more occupation shifts or inter-group occupation shifts, on the average, than had all the men represented by the sample. Similarly, the ratio of gross civilian job or assignment shifts to net shifts in employment status or occupation group was relatively high for this group, but ratios of gross to net occupation shifts and inter-group occupation shifts were about average.

As the M.I.T. research group found, once a man became a skilled craftsman or foreman, he was not very likely to change his occupation.<sup>1</sup> Thus, we find that the rate of gross out-movement for the group over the decade as a whole was comparatively low, as was the ratio of gross to net change. But movement out of skilled jobs in the immediate post-war years took on considerable proportions. While movement both into and out of skilled jobs was channelized to a certain extent, occupational sources from which workers were drawn and the destinations to which they moved were surprisingly varied.

Operatives and kindred workers. The mobility characteristics of male and female operatives differed in certain respects. Male operatives had changed jobs, occupations, and occupation groups relatively frequently. All of our ratios of gross to net shifts for this group were relatively high. The rate of gross out-movement for the group over the decade as a whole was considerably higher than for any other group, but the rate of gross in-movement was also substantial, and the ratio of gross to net change for the group was unusually high. While movement into and out of the group was channelized to a certain extent, there was substantial interchange with all the other manual groups and with some nonmanual groups. Job separations by workers in this group comprised a substantial and almost constant proportion of all job separations by two-year periods throughout the decade. All the evidence suggests a comparatively low degree of occupational attachment for male workers in this group, at least in San Francisco, where employment opportunities for operatives were apparently expanding relatively less rapidly than those for other groups over the course of the decade as a whole.

The mobility rates of female operatives were relatively lower than those of male operatives, and the ratio of gross civilian job or assignment shifts to net shifts in employment status or occupation was lower for this group than for any female group. While the rate of gross in-movement was quite high, the rate of gross out-movement was not particularly high, and the ratio of gross to net change for this group was only about average, among the female groups for which we

1. Massachusetts Institute of Technology, Industrial Relations Section, Patterns of Mobility of Skilled Workers and Factors Affecting Their Occupational Choice, Six Cities, 1940-1951, p. viii.

could compute ratios, in San Francisco. Interchange with the service workers group played a considerably more important role in inter-group movement into and out of the female operatives group than was the case with the corresponding male group. All in all, the data suggest that opportunities for female operatives to improve their positions by shifting to other groups were considerably more restricted than in the case of male operatives.

Service workers, including private household. Male service workers tended to shift jobs about as frequently as most other groups of manual workers, but it was somewhat less likely that their shifts would involve a change in occupation or in occupation group than was true of operatives or laborers. Ratios of gross to net shifts for this group did not tend to deviate very far from the ratios for all men, but the rate of gross out-movement from the group was comparatively low, as was the ratio of gross to net change. Movement into the group was predominantly from the other three manual groups, while shifts out of the group were more frequently into operative or laborers jobs than would have been expected on a random basis.

Female service workers had changed jobs more frequently than any other group of women represented by our sample, and average occupation shifts were relatively high for this group, also. But a comparatively small percentage of the shifts experienced by female service workers had involved a change in major occupation group. Thus, it is not surprising that the ratio of gross job or assignment shifts to net shifts in employment status or occupation group was unusually high for this group. Nor is it surprising that both the rate of gross out-movement and the ratio of gross to net change, in San Francisco at least, were comparatively low. Movement both into and out of the group took the form chiefly of interchange with other manual groups and with the clerical group.

Laborers (men only). Laborers were highly mobile by almost every mobility measure that we examined. They had changed jobs, occupations, and occupation groups relatively frequently. The ratio of gross to civilian job or assignment shifts was relatively high for the group, but since both average gross and average net occupation shifts had been relatively high for the group, the ratio of gross to net occupation shifts was not unusually high. Nor was the ratio of gross to net inter-group occupation shifts particularly high, for similar reasons. On the other hand, as in the case of the other groups with high inter-group occupational mobility, the rate of gross out-movement for this group was comparatively high. While we could not compute a reliable ratio of gross to net change, it is clear that such a ratio would have been relatively high. Movement into and out of the group took the form chiefly of interchange with other manual groups, particularly the operative group.

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C.2

[California University, Institute of Industrial Relations (Berkeley)  
= Survey of Occupational Mobility, =

The Relation of Gross to Net Changes  
in the Inter-Occupational and Inter-Industrial  
Movements of the Urban Labor Force

[Part 2]

APPENDIX TABLES

Institute of Industrial Relations  
= University of California  
Berkeley, California  
March, 1953

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## A Note on Statistical Procedures

A brief note on the statistical procedures used in the preparation of the present report is in order. In general, these procedures were identical with those used in earlier reports prepared by our research group and are described in The Mobility of San Francisco Workers: 1940-1949, Appendix.

The present project differs from earlier studies based on the Occupational Mobility Survey data for San Francisco in one important respect. We used both a worker card and an occupational assignment card in this project. Tables A-1 to A-18, A-23, and A-46 to A-51 are based on worker cards, while Tables A-19 to A-22 and A-24 to A-45 are based on occupational assignment cards. Table A-52 is based on tabulations prepared by the Bureau of the Census, as are portions of Tables A-48 and A-49.

It was not possible to include all our tabulations in full detail in this Appendix. Most of the basic tabulations are, however, presented in detail, while a few are presented merely in summary form as text tables. In a few cases, we have referred in the text to tables which were not included at all in the report.

In the present report, we made rather extensive use of a chi-square test as a means of testing the statistical significance of variations. This method offered a number of advantages -- particularly in connection with some of our tabulations which were based on occupational assignment cards -- since (1) it is applicable to a situation in which the distribution of observations departs from normality and (2) it permitted us to reach conclusions about the significance of occupational or industrial variations as a whole, i.e., we were not limited to deductions based on testing the significance of differences between particular pairs of averages or percentages.

Table A - 1

Number of Civilian Jobs Held by Number of Occupational Assignments and Sex, January 1940 - December 1949 - San Francisco Work History Sample

Number of occupational assignments and sex	Total Persons	Number of Civilian Jobs Held, 1940-1949 <sup>B</sup>																		
		1		2		3		4		5		6		7		8		9 or more		
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	
Total Men	212,025	100	62,351	100	44,473	100	35,460	100	28,072	100	16,991	100	10,785	100	5,762	100	4,284	100	3,842	100
1 assignment	53,338	24	53,338	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 assignments	45,655	22	7,239	12	38,416	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 assignments	35,608	17	1,182	2	4,728	11	29,698	84	0	0	0	0	0	0	0	0	0	0	0	0
4 assignments	28,959	14	296	0	1,182	3	4,875	14	22,506	80	0	0	0	0	0	0	0	0	0	0
5 assignments	16,400	8	148	0	148	0	739	2	3,593	4	1,182	4	11,672	69	0	0	0	0	0	0
6 assignments	13,593	6	148	0	0	0	148	0	1,182	4	3,842	23	8,274	77	0	0	0	0	0	0
7 assignments	6,501	3	0	0	0	0	0	0	0	0	591	3	1,625	15	4,137	72	0	0	0	0
8 assignments	5,319	3	0	0	0	0	0	0	0	0	591	3	443	4	887	15	2,955	69	0	0
9 or more assignments	6,649	3	0	0	0	0	0	0	0	0	296	2	443	4	739	13	1,330	31	3,842	100
Total Women	112,942	100	37,503	100	26,152	100	21,697	100	10,490	100	6,179	100	4,454	100	2,730	100	1,724	100	2,012	100
1 assignment	33,049	29	33,049	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 assignments	26,152	23	3,305	9	22,847	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 assignments	22,991	20	862	2	3,018	12	19,111	88	0	0	0	0	0	0	0	0	0	0	0	0
4 assignments	10,345	9	287	1	287	1	1,580	7	8,190	78	0	0	0	0	0	0	0	0	0	0
5 assignments	7,903	7	0	0	0	0	1,005	5	2,011	19	4,886	79	4,023	90	0	0	0	0	0	0
6 assignments	5,173	5	0	0	0	0	0	0	287	3	862	14	431	10	2,443	90	0	0	0	0
7 assignments	3,305	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 assignments	1,724	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 or more assignments	2,300	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

<sup>A</sup>Excludes persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation P - 1.

Table A - 2.

Number of Civilian Job or Assignment Shifts by Sex and Net Shift in Employment Status or Occupation, January 1940 - December 1944 - San Francisco Work History Sample<sup>A</sup>

Sex and net shift in employment status or occupation	Total persons	Number of civilian job or assignment shifts <sup>B</sup>									Total shifts per person			
		0	1	2	3	4	5	6	7	8		9	10 or more	
Total men	203,011 <sup>C</sup>	70,921	63,952	36,051	16,400	5,467	2,955	1,182	739	296	147	—	242,762	1.2
Employed, 1944	152,129	70,921	45,506	23,196	10,934	4,138	2,215	1,182	592	296	142	—	167,268	1.1
In same occupation 1940	88,947	67,079	13,297	4,875	1,773	591	738	413	148	—	—	—	38,114	0.4
In different occupation but same occupation	63,182	—	6,353	1,773	1,182	387	148	148	148	—	—	—	19,657	1.8
Group 1940	10,638	—	—	—	—	—	—	—	—	—	—	—	—	—
In different occupation	46,245	—	20,685	14,479	6,797	2,364	1,182	148	296	148	143	—	90,876	2.0
Group 1940	13,298	3,312	5,171	2,069	1,182	296	148	143	148	148	143	—	18,621	1.4
Not employed 1940	43,882	—	23,315	12,353	5,467	1,330	739	—	—	—	—	—	75,503	1.7
Not employed 1944	33,540	—	13,321	9,160	4,433	387	591	—	—	—	—	—	57,479	1.7
Employed 1940	10,343	—	5,024	3,693	1,034	443	148	—	—	—	—	—	13,024	1.7
Not employed 1940	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total women	98,860	41,671	32,474	14,944	5,604	2,586	1,293	144	144	—	—	—	97,355	1.0
Employed 1944	84,203	41,671	24,136	11,207	4,023	2,012	861	144	144	—	—	—	72,848	0.9
In same occupation 1940	36,929	27,445	6,609	1,858	718	144	144	—	—	—	—	—	13,795	0.4
In different occupation but same occupation	5,604	—	2,873	1,968	431	431	—	—	—	—	—	—	9,626	1.7
Group 1940	11,208	—	5,173	3,592	718	1,150	431	—	144	—	—	—	22,274	2.0
In different occupation	30,463	14,226	9,483	3,879	2,155	287	287	144	144	—	—	—	27,153	0.9
Group 1940	14,657	—	8,334	3,736	1,580	575	431	—	—	—	—	—	25,001	1.7
Not employed 1940	7,472	—	5,173	1,150	862	287	—	—	—	—	—	—	11,494	1.5
Employed 1940	7,185	—	3,161	2,586	718	575	144	—	—	—	—	—	13,507	1.9
Not employed 1940	—	—	—	—	—	—	—	—	—	—	—	—	—	—

<sup>A</sup> Excludes persons with no civilian job or with casual work only, 1940-1944.

<sup>B</sup> Individual items do not always add to totals because of rounding.

<sup>C</sup> Excludes 296 men not reporting relevant information.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-2.

Table A - 3.

Number of Civilian Job or Assignment Shifts by Sex and Net Shift in  
Employment Status or Occupation, January 1945 - December 1949 -  
San Francisco Work History Sample<sup>a</sup>

Sex and net shift in employment status or occupation	Total persons <sup>B</sup>	Number of civilian job or assignment shifts <sup>a</sup>										Average number per person		
		0	1	2	3	4	5	6	7	8	9		10 or more	Total shifts
Total men	210,251 <sup>C</sup>	94,561	54,225	28,812	15,366	8,274	5,910	1,478	296	591	443	296	244,096	1.2
Employed 1949 in same occupation 1945	202,125	94,562	51,121	26,889	14,185	7,536	5,318	1,331	448	296	444	296	223,426	1.1
In different occupation but same occupation group 1945	103,111	75,797	15,218	4,580	4,137	1,695	1,034	591	-	148	-	-	53,109	0.5
In different occupation group 1945	10,638	-	5,910	2,069	591	739	1,034	296	-	-	-	-	21,723	2.0
Not employed 1949	8,127	-	3,103	1,921	1,182	739	591	448	296	448	296	-	20,694	2.5
Employed 1945 not employed 1949	44,075	-	17,139	11,523	6,206	3,103	2,216	296	-	448	296	296	90,587	2.2
Not employed 1945	47,281	18,765	12,854	8,717	3,251	2,069	1,034	448	448	448	448	-	57,927	1.2
Employed 1945 not employed 1945	5,024	-	1,921	1,330	739	443	296	443	296	443	296	-	11,673	2.3
Total women	3,103	-	1,182	591	443	296	443	296	443	296	443	-	9,021	2.9
Employed 1949	111,649	48,712	30,319	14,944	10,346	3,736	2,155	575	431	287	144	-	127,023	1.1
Employed 1945	100,728	48,423	25,865	12,069	8,334	3,303	1,580	575	287	144	144	-	104,028	1.0
In same occupation 1945	55,752	36,928	11,208	3,879	2,586	862	287	-	-	-	-	-	31,607	0.6
In different occupation but same occupation group 1945	8,765	-	3,018	2,155	1,868	1,293	287	-	-	-	144	-	20,835	2.4
In different occupation group 1945	14,226	-	5,604	3,592	2,730	1,006	575	-	-	144	-	-	32,479	2.3
Not employed 1945	21,985	11,495	6,035	2,443	1,150	443	431	-	287	144	-	-	19,107	0.9
Not employed 1949	10,921	287	4,454	2,873	2,012	431	575	-	144	144	-	-	22,997	2.1
Employed 1945	6,035	144	2,299	1,368	862	287	431	-	-	144	-	-	13,076	2.2
Not employed 1945	4,886	144	2,155	1,006	1,150	144	144	-	-	144	-	-	9,921	2.0

A Excludes persons with no civilian job or with casual work only, 1945 - 1949.

B Individual items do not always add to totals because of rounding.

C Excludes 296 men not reporting relevant information.

Source: Occupation Mobility Survey, San Francisco, Tabulation P - 15.

Table A - 4.

Number of Civilian Job or Assignment Shifts by Sex and Net Shift in  
Employment Status or Occupation, January 1940 - December 1949 -  
San Francisco Work History Sample<sup>a</sup>

Sex and net shift in employment status or occupation	Total persons <sup>B</sup>	Number of civilian job or assignment shifts <sup>B</sup>										Total shifts <sup>B</sup>	Average number per person	
		0	1	2	3	4	5	6	7	8	9			10 or more
Total men	211,433 <sup>C</sup>	51,565	45,951	35,017	29,806	16,548	13,002	7,092	5,615	3,103	887	2,807	487,872	2.3
Employed 1949	201,976	51,565	44,176	33,214	27,482	15,662	10,638	6,205	4,876	2,955	739	2,365	451,691	2.2
In same occupation 1940	86,878	16,837	16,400	6,648	6,501	4,728	2,216	1,113	1,773	443	148	739	108,743	1.3
In different occupation but same occupation group 1940	16,696	-	4,284	3,103	3,546	1,478	1,921	739	443	1,034	-	148	54,376	3.3
In different occupation group 1940	68,542	-	16,400	17,878	14,775	6,353	6,501	3,693	1,478	739	443	591	204,484	3.0
Not employed 1940	29,550	4,728	7,092	5,615	2,660	3,103	2,669	1,330	1,182	739	148	887	84,088	2.8
Employed 1940	9,456	-	1,774	1,773	2,364	887	296	887	739	148	148	444	35,223	3.8
Not employed 1940	6,353	-	1,478	1,182	1,330	887	739	148	148	148	148	296	23,214	3.7
Not employed 1940	3,103	-	296	591	1,034	-	296	148	591	-	-	148	13,009	4.2
Total women	112,942	29,888	27,301	22,129	12,214	7,759	5,891	3,305	2,012	1,293	575	575	225,590	2.0
Employed 1949	100,872	29,743	24,139	19,829	9,332	6,609	4,740	3,016	1,581	1,006	287	287	188,079	1.9
In same occupation 1940	32,905	17,099	7,615	4,167	1,006	1,868	718	144	144	-	-	144	33,773	1.0
In different occupation but same occupation group 1940	7,041	-	1,293	2,730	1,293	575	718	144	287	-	-	-	19,395	2.8
In different occupation group 1940	15,950	-	4,886	3,592	2,586	1,581	718	1,437	144	718	287	287	47,699	3.0
Not employed 1940	44,976	12,644	10,345	9,340	4,454	2,586	2,586	1,293	1,005	287	287	144	87,212	1.9
Not employed 1949	12,070	144	3,161	2,299	2,874	1,149	1,150	287	431	287	-	287	37,513	3.1
Employed 1940	5,029	-	2,012	718	431	431	575	144	287	287	-	144	16,381	3.3
Not employed 1940	7,041	144	1,150	1,581	2,443	718	575	144	144	-	-	144	21,132	3.0

A. Excludes persons with no civilian job or with casual work only, 1940 - 1949.  
B. Individual items do not always add to totals because of rounding.  
C. Excludes 591 men not reporting relevant information.  
Source: Occupational Mobility Survey, San Francisco, Tabulation P - 28.

Table A-5  
 Number of Civilian Job or Assignment Shifts by Sex and Net Shift in Industry, January 1940-December 1944, January 1945-December 1949, and January 1940-December 1949, for Persons Employed at Beginning and End of Each Period—  
 San Francisco Work History Sample<sup>A</sup>

Period, sex, and net shift in industry	Total persons <sup>B</sup>	Number of civilian job or assignment shifts <sup>B</sup>										Average number per person		
		0	1	2	3	4	5	6	7	8	9		10 or more	Total shifts
January 1940-December 1944 Total men employed both dates	115,536 <sup>C</sup>	67,079	140,336	20,919	9,751	3,695	2,069	710	591	148	148	—	117,765	1.0
In same industry	90,129	67,079	15,809	4,261	1,625	296	739	148	148	—	—	—	36,055	0.4
In different industry, but same industry group	6,501	—	2,512	2,216	1,034	148	296	296	—	—	—	—	13,894	2.1
In different industry group	18,905	—	22,015	14,479	7,092	3,251	1,034	296	143	148	148	—	97,816	2.0
Total women employed both dates	53,711	27,145	14,657	7,328	1,868	1,721	575	—	141	—	—	—	45,696	0.9
In same industry	35,492	27,145	6,179	1,580	287	—	—	—	—	—	—	—	10,200	0.3
In different industry, but same industry group	3,449	—	1,721	862	575	—	141	—	141	—	—	—	6,901	2.0
In different industry group	14,800	—	6,754	4,886	1,006	1,721	431	—	—	—	—	—	28,595	1.9
January 1945-December 1949 Total men employed both dates	154,549 <sup>C</sup>	75,797	38,120	18,173	10,786	5,466	4,285	1,183	—	148	296	296	164,907	1.1
In same industry	102,540	75,797	17,435	4,580	2,660	739	887	296	—	—	—	148	45,666	0.4
In different industry, but same industry group	8,570	—	4,728	1,034	1,478	443	591	—	—	148	148	—	18,473	2.2
In different industry group	43,439	—	15,957	12,559	6,618	4,284	2,807	887	—	—	148	148	100,768	2.3
Total women employed both dates	78,713	36,928	19,829	9,628	7,181	3,161	1,150	575	—	144	144	—	84,929	1.1
In same industry	51,729	36,928	8,765	3,305	1,580	862	141	144	—	—	—	—	25,217	0.5
In different industry, but same industry group	6,322	—	3,305	1,150	718	1,006	141	—	—	—	—	—	12,503	2.0
In different industry group	20,692	—	7,759	5,173	4,886	1,293	862	431	—	141	141	—	47,279	2.3

(Continued on next page)

Table A-5. (Continued)

Period, sex, and net shift in industry	Total persons <sup>B</sup>	Number of civilian job or assignment shifts <sup>B</sup>										Average number per person		
		0	1	2	3	4	5	6	7	8	9		10 or more	Total shifts
January 1940-December 1949 Total men employed both dates	172,131 <sup>D</sup>	46,837	37,086	27,481	21,574	12,558	10,638	4,876	3,695	2,217	591	1,478	366,882	2.1
In same industry In different industry, but same industry group	93,379	46,837	22,458	9,012	6,944	3,693	1,625	591	1,330	443	478	591	296,643	1.1
In different industry In different industry group	14,923	---	2,512	3,103	3,842	1,625	1,330	443	478	148	---	443	53,341	3.6
Total women employed both dates	63,829	---	12,116	15,366	13,886	7,240	7,683	3,842	887	1,478	591	739	207,898	3.3
In same industry In different industry, but same industry group	55,896	17,099	13,794	10,490	4,886	4,023	2,155	1,721	575	718	287	144	100,884	1.8
In different industry In different industry group	30,319	17,099	7,185	3,448	575	1,150	287	---	431	---	---	144	26,732	0.9
Total men employed both dates	6,754	---	2,155	1,293	1,293	718	287	718	---	144	144	---	19,683	2.9
Total women employed both dates	18,824	---	4,454	5,748	3,018	2,155	1,581	1,066	144	575	144	---	54,469	2.9

<sup>A</sup> Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup> Individual items do not always add to totals because of rounding.

<sup>C</sup> Excludes 591 persons not reporting relevant information.

<sup>D</sup> Excludes 887 men not reporting relevant information.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-3, P-16, and P-29.

Table A-6:  
Number of Civilian Job or Assignment Shifts by Number of Months in Civilian Labor Force and Sex,  
January 1940-December 1944 and January 1945-December 1949--  
San Francisco Work History Sample<sup>A</sup>.

Period, months in civilian labor force, and sex	Total persons <sup>B</sup>	Number of civilian job or assignment shifts <sup>B</sup>										10 or more	Total Shifts	Average num- ber per person		
		0	1	2	3	4	5	6	7	8	9					
January 1940- December 1944																
Total men	203,307	70,921	69,118	36,051	16,400	5,166	2,955	1,182	739	296	148	---	243,054	1.2		
0-12 months	5,166	591	3,398	1,478	---	---	---	---	---	---	---	---	6,354	1.2		
13-24 months	13,888	443	3,989	3,989	1,330	443	---	---	---	---	---	---	21,423	1.5		
25-36 months	22,458	591	12,854	4,580	3,398	591	---	148	296	---	---	---	37,532	1.7		
37-48 months	12,116	443	4,728	4,137	1,773	591	148	148	148	148	---	---	23,940	2.0		
49-60 months	119,377	68,852	40,484	21,867	9,899	4,284	2,364	887	443	148	---	---	153,810	1.0		
Total women	98,860	41,670	32,474	14,944	5,604	2,586	1,293	144	144	---	---	---	97,855	1.0		
0-12 months	7,903	3,879	3,018	718	287	---	---	---	---	---	---	---	5,315	0.7		
13-24 months	10,777	3,592	3,879	2,443	431	---	---	---	---	---	---	---	11,782	1.1		
25-36 months	13,219	4,023	4,454	2,299	1,724	287	431	---	---	---	---	---	17,527	1.3		
37-48 months	9,053	1,005	5,316	1,580	718	144	287	---	---	---	---	---	12,641	1.4		
49-60 months	57,907	29,169	15,805	7,903	2,443	1,724	575	144	144	---	---	---	50,584	0.9		
January 1945- December 1949																
Total men	210,547	94,561	54,225	29,107	15,366	8,274	5,910	1,478	296	591	443	296	244,686	1.2		
0-12 months	2,660	739	1,330	591	---	---	---	---	---	---	---	---	2,512	*C		
13-24 months	4,137	1,478	1,625	443	296	148	148	---	---	---	---	---	4,731	1.1		
25-36 months	8,126	3,546	2,364	887	443	296	148	148	296	---	---	---	10,943	1.3		
37-48 months	28,220	7,535	9,160	6,944	2,660	739	739	---	---	---	---	---	41,379	1.5		
49-60 months	167,403	81,263	39,745	20,242	11,966	7,092	5,024	1,330	---	296	148	296	185,149	1.1		
Total women	111,649	48,712	30,319	14,944	10,345	3,736	2,155	575	431	287	144	---	127,023	1.1		
0-12 months	7,041	4,023	2,443	431	144	---	---	---	---	---	---	---	3,737	0.5		
13-24 months	5,604	1,868	2,299	862	575	---	---	---	---	---	---	---	5,718	1.0		
25-36 months	8,334	2,012	3,161	1,580	575	287	718	---	---	---	---	---	12,784	1.5		
37-48 months	11,351	2,012	2,873	3,018	2,012	718	575	---	144	---	---	---	21,700	1.9		
49-60 months	79,318	38,796	19,542	9,053	7,041	2,730	862	575	287	287	144	---	83,052	1.0		

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the two periods, respectively.  
<sup>B</sup>Individual items do not always add to totals because of rounding.  
<sup>C</sup>No averages shown for groups with fewer than 2,955 men or 2,874 women.  
Source: Occupational Mobility Survey, San Francisco, Tabulations P-4 and P-17.

Table A - 7.

Number of Civilian Job or Assignment Shifts, January 1940 - December 1944 and January 1945 - December 1949, by Years of Residence in San Francisco - Oakland Standard Metropolitan Area in 1951 and Sex - San Francisco Work History Sample A

Period, years of residence in Area (as of 1951), and sex	Total persons	Number of civilian job or assignment shifts										Total shifts	Average number per person	
		0	1	2	3	4	5	6	7	8	9			10 or more
January 1940-December 1944	203,307	70,921	69,148	36,051	16,400	5,466	2,955	1,182	739	296	148	-	243,054	1.2
Total men														
0-5 years of residence	40,189	7,830	15,662	9,456	3,546	1,625	1,034	443	296	148	148	-	64,128	1.6
6-11 years of residence	28,663	2,663	11,081	6,501	5,319	1,773	739	296	296	-	-	-	54,675	1.9
12-20 years of residence	31,028	10,194	10,194	6,797	2,364	887	296	296	-	-	-	-	37,684	1.2
21 years and over	103,425	50,236	32,210	13,297	5,171	1,182	887	148	148	148	-	-	86,588	0.8
Total women														
0-5 years of residence	98,860	11,670	32,474	14,944	5,604	2,586	1,293	144	144	-	-	-	97,855	1.0
6-11 years of residence	28,307	6,754	11,495	6,035	2,299	1,006	718	-	-	-	-	-	38,076	1.3
12-20 years of residence	17,817	4,886	5,029	4,598	1,724	1,150	413	-	-	-	-	-	26,150	1.5
21 years and over	14,081	6,897	4,598	1,437	575	287	144	144	-	-	-	-	12,072	0.9
Total men														
January 1945-December 1949	210,547	94,561	54,225	29,107	15,366	8,274	5,910	1,478	296	591	443	296	244,686	1.2
0-5 years of residence	42,700	7,239	12,706	9,456	5,319	3,546	2,364	1,034	296	443	148	148	88,645	2.1
6-11 years of residence	29,698	9,899	8,274	5,024	2,660	1,625	1,625	148	-	148	296	-	45,663	1.5
12-20 years of residence	31,914	16,105	8,126	3,842	2,216	887	443	148	-	-	-	-	31,033	1.0
21 years and over	106,234	61,317	25,117	10,785	5,171	2,216	1,478	148	-	-	-	-	79,242	0.7
Total women														
0-5 years of residence	111,649	48,712	30,319	14,944	10,345	3,736	2,155	575	431	287	144	-	127,023	1.1
6-11 years of residence	33,049	6,466	9,627	6,035	6,322	2,299	1,150	575	287	144	144	-	63,516	1.9
12-20 years of residence	20,979	7,328	6,466	3,736	2,012	718	431	-	144	144	-	-	27,161	1.3
21 years and over	15,375	8,622	5,029	1,150	287	287	-	-	-	-	-	-	9,338	0.6
Total	42,245	26,295	9,196	4,023	1,724	431	575	-	-	-	-	-	27,013	0.6

A Excludes persons with no civilian job or with casual work only in each of the two periods, respectively.

B Individual items do not always add to totals because of rounding.

Source: Occupational Mobility Survey, San Francisco, Tabulations P - 8 and P - 21.

Table A - 8.

Number of Civilian Job or Assignment Shifts, January 1940-December 1944,  
by Major Occupation Group of Employment, December 1944, and Sex—  
San Francisco Work History Sample<sup>A</sup>

Major occupation group and sex	Total Persons <sup>B</sup>	Number of civilian job or assignment shifts										Total Shifts	Average number per person	
		0	1	2	3	4	5	6	7	8	9			10 or more
Total men employed, December 1944	159,277	70,773	45,803	23,197	10,934	4,137	2,216	1,192	591	296	148	—	157,553	1.1
Professional, technical, and kindred workers Managers, officials, and Proprietors, incl. farm Clerical and kindred workers	11,377	7,830	2,069	443	443	443	—	448	—	—	—	—	6,944	0.6
Sales workers Craftsmen, foremen, and kindred workers Operatives and kindred workers	31,175	17,582	8,421	2,216	1,773	148	887	—	—	148	—	—	24,383	0.8
Service workers, incl. private household Laborers	11,229	5,615	3,546	1,478	591	—	—	—	—	—	—	—	8,275	0.7
December 1944	9,752	5,910	2,216	1,478	148	—	—	—	—	—	—	—	5,616	0.6
Professional, technical, and kindred workers Managers, officials, and Proprietors, incl. farm Clerical and kindred workers	39,007	10,490	12,854	7,979	4,433	1,773	739	443	148	—	—	—	57,924	1.5
Sales workers Craftsmen, foremen, and kindred workers Operatives and kindred workers	27,186	10,047	9,603	4,433	1,773	591	448	296	296	—	—	—	30,740	1.1
Service workers, incl. private household Laborers	17,435	9,308	3,989	2,364	887	443	—	296	148	—	—	—	15,962	0.9
Total women employed, December 1944	12,116	3,939	3,103	2,907	887	739	443	—	148	—	—	—	17,723	1.5
Professional, technical, and kindred workers Managers, officials, and Proprietors, incl. farm Clerical and kindred workers	84,060	41,240	24,284	11,352	4,023	2,012	862	444	244	—	—	—	73,283	0.9
Sales workers Craftsmen, foremen, and kindred workers Operatives and kindred workers	9,627	5,891	2,299	862	431	444	—	—	—	—	—	—	5,892	0.6
Service workers, incl. private household Laborers	7,135	3,592	2,299	1,150	444	—	—	—	—	—	—	—	5,031	0.7
December 1944	35,205	16,912	10,921	4,886	1,580	575	287	444	—	—	—	—	30,032	0.9
Professional, technical, and kindred workers Managers, officials, and Proprietors, incl. farm Clerical and kindred workers	4,742	2,443	862	575	444	287	431	—	—	—	—	—	5,747	1.2
Sales workers Craftsmen, foremen, and kindred workers Operatives and kindred workers	2,012	718	431	—	575	287	—	—	—	—	—	—	3,304	*C
Service workers, incl. private household Laborers	11,783	6,179	2,586	1,724	862	287	444	—	—	—	—	—	10,488	0.9
December 1944	12,501	5,460	4,886	1,580	444	287	—	—	—	—	—	—	10,634	0.9
Total	1,006	444	—	575	444	287	—	—	—	—	—	—	2,158	*C

A Excludes persons with no civilian job or with casual work only, 1940-1944.

B Individual items do not always add to totals because of rounding.

C Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-6.

Table A - 9.

Number of Civilian Job or Assignment Shifts, January 1945-December 1949,  
by Major Occupation Group of Employment, December 1949, and Sex--  
San Francisco Work History Sample<sup>A</sup>

Major occupation group and sex	Total Persons	Number of civilian job or assignment shifts										10 or more	Total shifts	Average number per person
		0	1	2	3	4	5	6	7	8	9			
<b>Total men employed, December 1949</b>	202,125 <sup>C</sup>	94,561	51,270	26,891	14,184	7,388	5,319	1,630	148	296	443	296	222,958	1.1
Professional, technical, and kindred workers	17,730	9,399	4,137	1,473	1,034	591	591	--	--	--	--	--	15,514	0.9
Managers, officials, and proprietors, incl. farm	41,371	22,163	12,263	3,398	2,512	739	448	--	--	--	--	--	31,179	0.8
Clerical and kindred workers	15,514	7,383	3,546	1,635	1,330	739	296	443	--	--	--	--	19,212	1.2
Sales workers	13,096	7,535	4,375	3,251	1,625	296	448	--	--	--	--	--	20,988	1.2
Craftsmen, foremen, and kindred workers	37,925	15,514	11,524	5,024	2,364	1,625	1,182	448	--	448	448	448	46,402	1.2
Operatives and kindred workers	23,664	13,445	5,319	4,560	2,364	1,182	1,625	--	--	448	--	--	35,608	1.2
Service workers, incl. private household laborers	29,107	12,263	7,387	4,433	1,921	1,330	1,034	443	448	--	448	--	37,532	1.3
Total women employed, December 1949	13,889	6,353	2,216	3,103	1,034	887	296	--	--	--	--	--	16,552	1.2
Professional, technical, and kindred workers	100,584	48,424	25,865	11,926	8,334	3,305	1,581	575	287	444	444	444	103,738	1.0
Managers, officials, and proprietors, incl. farm	10,490	7,041	3,437	1,150	431	431	--	--	--	--	--	--	6,754	0.6
Clerical and kindred workers	9,340	4,167	2,873	862	287	862	444	--	--	--	--	--	10,490	1.1
Sales workers	40,809	12,255	11,064	5,029	3,592	1,005	575	--	--	--	--	--	41,097	1.0
Craftsmen, foremen, and kindred workers	7,759	3,161	2,443	862	862	444	444	--	--	444	--	--	8,913	1.1
Operatives and kindred workers	1,868	287	431	431	431	--	444	--	--	--	--	--	4,170	*D
Service workers, incl. private household laborers	11,495	6,035	2,730	1,724	1,005	--	--	--	--	--	--	--	9,193	0.8
	17,962	7,759	4,741	1,868	1,724	862	575	444	444	444	444	444	22,996	1.3
	962	718	141	--	--	--	--	--	--	--	--	--	444	*D

A Excludes persons with no civilian job or with casual work only, 1945-1949.

B Individual items do not always add to totals because of rounding.

C Excludes 296 men not reporting occupation.

D Averages not shown for groups with fewer than 2,955 men or 2,871 women.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-19.

Table A - 10.

Number of Civilian Job or Assignment Shifts, January 1940-December 1949,  
by Major Occupation Group of Longest Job in 1950 and Sex—  
San Francisco Work History Sample<sup>A</sup>

Major occupation group and sex	Total, Persons	Number of civilian job or assignment shifts <sup>B</sup>										Total or more	Total shifts	Average number of shifts
		0	1	2	3	4	5	6	7	8	9			
Total men	211,876	51,565	116,216	35,017	23,816	16,696	13,002	7,092	5,615	3,103	887	2,807	188,767	2.3
Professional, technical, and kindred workers	19,060	6,501	5,021	2,512	1,773	1,478	739	443	118	118	—	296	33,700	1.8
Managers, officials, and proprietors, incl. farm	40,927	14,479	12,115	4,728	4,580	2,216	1,330	116	1,334	296	—	—	61,319	1.5
Clerical and kindred workers	16,814	3,516	4,433	2,907	1,625	1,031	837	591	296	296	—	—	40,199	2.4
Sales workers	19,502	4,281	4,133	2,660	4,284	1,034	1,478	887	296	—	—	—	43,149	2.2
Craftsmen, foremen, and kindred workers	39,892	6,353	8,126	7,535	6,501	3,812	2,069	1,773	1,478	739	296	1,182	113,338	2.8
Operatives and kindred workers	29,816	6,797	4,580	5,910	4,433	2,216	2,364	1,182	887	387	118	443	77,871	2.6
Service workers, incl. private household laborers	31,471	6,501	5,762	6,353	4,728	3,103	1,773	887	739	118	739	—	81,275	2.6
	14,332	3,103	1,773	2,512	1,921	1,773	1,921	887	443	—	—	—	37,680	2.6
Total women	112,367	29,714	27,158	21,995	12,070	7,759	5,891	3,305	2,012	1,293	575	575	224,736	2.0
Professional, technical, and kindred workers	11,783	4,711	3,305	1,293	718	718	718	114	—	114	—	—	16,523	1.4
Managers, officials, and proprietors, incl. farm	9,484	2,443	2,586	2,012	431	862	431	575	114	—	—	—	17,965	1.9
Clerical and kindred workers	45,981	12,501	10,202	8,765	6,322	2,873	2,443	1,150	1,006	431	114	114	90,963	2.0
Sales workers	8,622	2,155	2,012	1,581	1,150	575	575	287	—	—	—	—	17,817	2.1
Craftsmen, foremen, and kindred workers	1,721	287	287	287	114	287	—	—	—	114	—	114	6,329	*E
Operatives and kindred workers	12,501	3,161	3,879	3,161	862	718	114	431	114	—	—	—	19,973	1.6
Service workers, incl. private household laborers	21,410	4,167	4,886	4,454	2,443	1,721	1,437	575	718	287	431	287	53,586	2.5
	862	287	—	431	—	114	—	—	—	—	—	—	1,582	*E

A Excludes persons with no civilian job or with casual work only, 1940-1949.

B Individual items do not always add to totals because of rounding.

C Excludes 148 men not reporting occupation.

D Excludes 575 women who were in the Armed Forces in 1950.

E Averages not shown for groups with fewer than 2,955 men or 2,874 women.  
Sources: Occupational Mobility Survey, San Francisco, Tabulation P-30.

Table A - 11.

Number of Civilian Job or Assignment Shifts, January 1940 - December 1944,  
by Major Industry Group of Employment, December 1944, and Sex--  
San Francisco Work History Sample

Major industry group and sex	Total persons	Number of civilian job or assignment shifts										Total shifts	Average number per person
		0	1	2	3	4	5	6	7	8	9		
Total men employed, December 1944	153,981 <sup>C</sup>	70,625	45,803	23,197	10,934	3,989	2,216	1,182	591	296	148	166,951	1.1
Extractive industries	2,007	1,330	1,182	148	148	739	148	148	148	148	148	1,922	.8 <sup>D</sup>
Construction	7,979	3,693	1,478	337	443	443	148	148	148	148	148	11,676	1.5
Manufacturing	46,837	12,559	18,517	9,160	4,284	1,478	296	148	148	148	60,298	1.3	
Durable goods	34,426	5,910	14,923	7,979	1,478	148	148	148	148	148	50,534	1.5	
Non-durable goods	12,411	6,608	3,693	1,182	591	148	148	148	148	148	9,751	0.8	
Transportation, communication, and other													
Public utilities	21,720	8,569	5,762	3,546	1,921	887	591	148	296	148	28,075	1.3	
Wholesale and retail trade	35,165	18,321	10,194	4,580	1,182	443	148	296	148	148	27,186	0.8	
Finance, insurance, and real estate	9,752	7,535	1,773	--	443	--	--	--	--	--	3,102	0.3	
Service industries	21,276	13,888	3,398	1,921	887	591	296	148	148	148	16,251	0.8	
Public administration	13,445	4,728	3,398	2,955	1,330	148	739	148	148	148	18,473	1.4	
Total women employed, December 1944	84,060	44,240	24,384	11,352	4,023	2,012	862	144	144	144	73,283	0.9	
Extractive industries	431	144	144	144	--	--	--	--	--	--	432	.8 <sup>D</sup>	
Construction	575	--	287	287	--	--	--	--	--	--	861	.8 <sup>D</sup>	
Manufacturing	20,548	10,633	5,029	2,586	1,137	862	--	--	--	--	17,960	0.9	
Durable goods	9,484	3,735	2,730	1,437	1,150	431	--	--	--	--	10,778	1.1	
Non-durable goods	11,064	6,897	2,299	1,150	287	431	--	--	--	--	7,181	0.6	
Transportation, communication, and other													
Public utilities	5,317	2,874	1,293	718	207	--	144	--	--	--	4,310	0.8	
Wholesale and retail trade	19,542	9,627	5,173	2,443	862	718	431	144	144	144	19,544	1.0	
Finance, insurance, and real estate	5,410	3,736	1,868	575	287	--	144	--	--	--	4,599	0.7	
Service industries	31,311	11,495	7,328	2,155	575	287	144	144	144	144	14,511	0.7	
Public administration	9,196	2,730	3,161	2,443	144	144	144	144	144	144	11,068	1.2	

A Excludes persons with no civilian job or with casual work only, 1940-1944.  
 B Individual items do not always add to totals because of rounding.  
 C Excludes 296 non-reporting industry.  
 D Averages not shown for groups with fewer than 2,955 men or 2,874 women.  
 Source: Occupational Mobility Survey, San Francisco, Tabulation P-7.

Table A - 12.

Number of Civilian Job or Assignment Shifts, January 1945-December 1949,  
by Major Industry Group of Employment, December 1949, and Sex--  
San Francisco Work History Sample A

Major Industry Group and sex	Total persons	Number of civilian job or assignment shifts										Total shifts	Average number person	
		0	1	2	3	4	5	6	7	8	9			10 or more
<b>Total men employed,</b> December 1949	201,977	94,561	51,270	26,091	14,036	7,388	5,319	1,330	148	296	443	296	222,511	1.1
<b>Extractive Industries</b>	2,069	887	443	148	296	296	443	148	296	443	296	2,812	1.4	
Construction	17,139	5,466	4,875	2,660	1,773	1,625	591	148	296	443	296	25,857	1.5	
Manufacturing	36,051	18,321	9,012	3,989	1,773	1,182	1,034	296	296	443	296	37,683	1.0	
Durable goods	18,617	8,865	5,466	1,773	739	591	591	296	296	443	296	20,692	1.1	
Non-durable goods	17,435	9,456	3,546	2,216	1,034	591	443	296	296	443	296	16,991	1.0	
Transportation, com- munication, and other	24,379	14,627	5,319	2,866	739	296	591	296	443	296	443	18,919	0.8	
Public utilities	54,225	20,538	14,775	9,603	5,319	2,216	1,034	443	296	443	296	69,886	1.3	
Wholesale & retail trade	15,366	9,751	3,693	1,330	296	296	296	296	296	443	296	8,425	0.5	
Finance, insurance, and real estate	33,540	14,627	10,047	3,942	2,009	887	1,478	296	148	296	443	39,020	1.2	
Service industries	19,208	10,342	3,103	2,660	1,773	591	443	296	296	443	296	19,949	1.0	
Public administration	100,584	48,424	25,865	11,926	8,334	3,305	1,581	575	287	148	148	103,738	1.0	
<b>December 1949</b>	287	---	148	---	148	287	---	---	---	---	---	576	1.0	
<b>Extractive Industries</b>	862	148	148	287	148	287	---	---	---	---	---	1,866	*D	
Construction	18,393	9,340	4,454	2,012	2,012	287	148	148	---	---	---	17,246	0.9	
Manufacturing	5,743	2,730	1,437	575	862	148	148	---	---	---	---	5,749	1.0	
Durable goods	12,645	6,609	3,018	1,437	1,150	148	148	---	---	---	---	11,502	0.9	
Non-durable goods	7,185	3,449	1,581	1,006	862	148	---	---	---	---	---	7,472	1.0	
Transportation, com- munication, and other	26,583	11,352	7,328	2,874	2,443	1,293	287	148	148	148	148	33,630	1.3	
Public utilities	9,771	5,029	3,161	713	148	575	---	---	---	---	---	8,337	0.9	
Wholesale & retail trade	30,319	15,375	7,759	3,592	2,155	718	575	148	---	---	---	28,019	0.9	
Finance, insurance, and real estate	7,185	3,738	1,293	1,437	575	148	---	---	---	---	---	6,612	0.9	
Service industries	9,771	5,029	3,161	713	148	575	---	---	---	---	---	8,337	0.9	
Public administration	30,319	15,375	7,759	3,592	2,155	718	575	148	---	---	---	28,019	0.9	
<b>A</b>	7,185	3,738	1,293	1,437	575	148	---	---	---	---	---	6,612	0.9	

Excludes persons with no civilian job or with casual work only, 1945-1949.

B Individual items do not always add to totals because of rounding.

C Excludes 443 men not reporting industry.

D Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-20.

Table A - 13.

Number of Civilian Job or Assignment Shifts, January 1940 - December 1949, by Major Industry Group of Longest Job in 1950 and Sex--  
San Francisco Work History Sample\*

Major Industry Group and sex	Total persons	Number of civilian job or assignment shifts										Total or more shifts	Average number per person	
		0	1	2	3	4	5	6	7	8	9			10
<b>Total men</b>	211,433	51,565	46,246	35,017	29,698	16,548	12,354	7,092	5,615	3,103	887	2,807	486,991	2.3*
<b>Extractive industries</b>	2,659	443	591	296	296	148	111	296	148	739	148	143	4,439	1.6
<b>Construction</b>	18,026	3,398	2,216	2,216	3,251	2,069	1,478	807	1,182	739	148	443	58,666	3.3
<b>Manufacturing</b>	37,086	8,126	9,456	7,535	4,433	2,512	1,921	887	739	591	148	739	83,640	2.3
<b>Durable goods</b>	19,355	3,251	5,467	4,205	2,069	1,034	1,034	887	296	296	148	591	49,324	2.5
<b>Nondurable goods</b>	17,730	4,876	3,989	3,251	2,364	1,478	887	---	443	296	---	148	35,323	2.0
<b>Transportation, and other</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>public utilities</b>	25,118	5,910	5,910	5,615	3,398	1,773	1,034	143	591	296	---	443	52,748	2.1
<b>Wholesale and retail trade</b>	57,032	11,525	14,036	7,979	8,126	5,467	4,530	2,660	1,330	443	443	443	137,700	2.4
<b>Finance, insurance, and real estate</b>	16,696	7,092	3,939	1,921	2,216	296	296	591	296	---	---	---	22,761	1.4
<b>Service industries</b>	35,756	10,490	6,649	6,206	4,480	2,364	2,364	387	739	887	---	591	79,351	2.2
<b>Public administration</b>	19,651	4,500	3,398	3,251	3,398	1,921	1,432	739	739	148	148	148	47,735	2.4
<b>Total women</b>	112,367	29,744	27,158	21,905	12,070	7,159	5,091	3,305	2,012	1,293	575	575	224,736	2.0
<b>Extractive industries</b>	431	---	---	---	---	---	287	---	---	---	---	---	1,867	1.6
<b>Construction</b>	1,437	---	144	144	207	575	287	---	---	---	---	---	5,028	1.9
<b>Manufacturing</b>	19,398	5,317	5,317	4,167	2,012	1,437	431	---	287	431	---	144	36,071	1.9
<b>Durable goods</b>	9,322	1,437	1,450	1,581	862	575	---	---	287	287	---	---	14,223	2.2
<b>Nondurable goods</b>	13,076	3,880	4,023	2,586	1,150	862	287	---	---	---	---	---	21,940	1.7
<b>Transportation, communication, and other</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>public utilities</b>	6,897	2,412	1,724	1,581	718	---	144	431	287	---	---	---	12,355	1.8
<b>Wholesale &amp; retail trade</b>	30,032	6,897	7,759	4,598	3,880	2,012	1,581	1,437	718	431	431	287	67,958	2.3
<b>Finance, insurance, and real estate</b>	10,202	3,880	2,299	1,581	718	575	431	287	---	---	---	---	15,952	1.6
<b>Service industries</b>	34,630	9,627	8,478	6,754	3,305	2,730	2,299	718	144	144	---	---	63,801	1.8
<b>Public administration</b>	9,340	2,012	1,581	3,161	1,006	431	431	---	---	---	---	---	21,706	2.3

A Excludes persons with no civilian job or with casual work only, 1940-1949.

B Individual items do not always add to totals because of rounding.

C Excludes 591 men not reporting industry.

D Excludes 575 women who were in the Armed Forces in 1950.

E Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-50.

Table A - 11.

Major Industry Group of Longest Job in 1950 by Major Occupation Group and Sex—  
San Francisco Work History Sample

Major industry group of longest job in 1950 and sex	Total persons <sup>A</sup>	Major occupation group of longest job in 1950								Total manual workers
		Professional, technical, & kindred workers	Managers, officials, & props., incl. farm	Clerical & kindred workers	Sales workers	Craftsmen, foremen, & kindred workers	Operatives & kindred workers	Service workers incl. priv. household	Laborers	
Total men	216,013 <sup>B</sup>	19,503	40,927	17,287	19,503	41,666	29,994	32,062	15,070	118,792
Percent	100	9	19	8	9	19	14	15	7	55
Extractive industries <sup>C</sup>	2,216	—	591	296	—	—	—	—	—	1,330
Construction	19,947	443	2,512	188	—	13,150	1,234	148	2,512	16,844
Percent	100	2	13	1	—	65	5	1	13	84
Manufacturing	37,529	2,069	5,171	1,221	1,182	12,116	10,934	1,182	2,955	27,197
Percent	100	6	14	5	3	32	29	3	8	72
Durable goods	19,503	1,142	2,364	887	148	7,535	4,728	443	2,216	14,922
Percent	100	6	12	5	1	39	24	2	11	76
Nondurable goods	18,026	887	2,807	1,034	1,034	4,580	6,206	739	739	12,264
Percent	100	5	16	6	6	25	34	4	4	67
Transportation, communication, and other public utilities	26,004	1,330	2,364	3,103	—	4,728	8,274	1,921	4,285	19,203
Percent	100	5	9	12	—	18	33	7	16	71
Wholesale and retail trade	57,476	1,625	18,765	3,694	12,854	5,762	3,939	3,865	1,921	20,537
Percent	100	3	34	6	22	10	7	15	3	35
Finance, insurance, and real estate	16,844	1,330	5,171	1,625	5,171	1,034	296	1,921	296	3,547
Percent	100	8	31	10	31	6	2	10	2	20
Service industries	36,199	10,048	4,877	1,626	296	2,308	4,286	11,525	739	19,358
Percent	100	28	13	4	1	8	12	32	2	54
Public administration	19,799	2,660	1,478	4,876	—	2,069	1,102	6,501	1,034	10,786
Percent	100	13	7	25	—	10	6	34	5	55

(Continued on next page)

Table A - 14 (Continued)

Major industry group of longest job in 1950 and sex	Total persons <sup>A</sup>	Major occupation group of longest job in 1950								Total manual workers
		Professional, technical, & kindred workers	Managers, officials, & profs., incl. farm	Clerical & kindred workers	Sales workers	Craftsmen, foremen, & kindred workers	Operatives & kindred workers	Service workers, incl. priv. household	Laborers	
Total women	115,816 <sup>C</sup> 100	12,789 11	9,627 8	46,700 41	8,765 8	1,724 1	13,076 11	22,129 19	1,006 1	37,935 32
Extractive industries <sup>D</sup>	431	—	—	287	—	—	—	—	144	144
Construction <sup>D</sup>	1,437	431	—	1,006	—	—	—	—	—	—
Manufacturing	20,117	575	1,293	7,041	287	1,150	9,196	—	575	10,921
Durable goods	6,610	—	575	3,018	—	287	2,299	—	431	3,017
Non-durable goods	109	—	9	45	—	4	35	—	7	46
Transportation, communication, and other public utilities	13,507	575	718	4,023	287	862	1,897	—	144	4,903
Wholesale and retail trade	100	4	5	30	2	6	52	—	1	59
Finance, insurance, and real estate	6,754	287	575	5,317	—	—	431	144	—	575
Service industries	100	4	9	79	—	—	6	2	—	8
Public administration	30,319	—	3,449	10,202	7,041	287	2,155	7,041	144	9,627
	100	—	11	35	23	1	7	23	8	31
	11,352	575	1,724	7,185	1,150	—	—	718	—	718
	100	5	15	64	10	—	—	6	—	6
	36,065	10,490	2,155	7,759	287	287	1,150	13,938	—	15,375
	100	29	6	22	1	1	3	38	—	42
	9,340	431	431	7,903	—	—	144	287	144	575
	100	5	5	83	—	—	2	3	2	7

<sup>A</sup>Individual items do not always add to totals because of rounding.

<sup>B</sup>Excludes 591 men not reporting industry.

<sup>C</sup>Excludes 575 women who were in the Armed Forces in 1950.

<sup>D</sup>Percent not shown for groups with fewer than 2,955 men or 2,874 women.

Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Table W-57 (Census).

Table A-15.  
Occupation Shifts by Major Occupation Group or Other Employment  
Status at End of Period and Sex, January 1940-December 1944,  
January 1945-December 1949, and January 1940-December 1949--  
San Francisco Work History Sample<sup>A</sup>

Major occupation group at end of period and sex	1940-1944			1945-1949			1940-1949		
	Total Persons	Total shifts	Aver- age shifts	Total persons	Total shifts	Aver- age shifts	Total persons <sup>C</sup>	Total shifts	Aver- age shifts
Total men <sup>B</sup>	203,011 <sup>D</sup>	167,257	0.8	210,251 <sup>D</sup>	146,282	0.7	211,433 <sup>E</sup>	311,630	1.5
Employed at end of period	158,981	116,279	0.7	202,125	132,237	0.7	211,433	311,630	1.5
Professional, technical, and kindred workers	11,377	3,696	0.3	17,730	7,541	0.4	19,060	18,917	1.0
Managers, officials, and proprietors, incl. farm	31,175	20,395	0.7	41,371	21,718	0.5	40,927	43,438	1.1
Clerical and kindred workers	10,934	6,500	0.6	15,514	13,895	0.9	16,548	30,741	1.9
Sales workers	9,752	3,991	0.4	18,026	11,824	0.7	19,503	28,661	1.5
Craftsmen, foremen, and kindred workers	39,007	37,675	1.0	37,825	22,315	0.6	39,893	60,723	1.5
Operatives and kindred workers	27,186	22,023	0.8	28,664	23,200	0.8	29,846	54,233	1.8
Service workers, incl. private household	17,435	8,867	0.5	29,107	20,982	0.7	31,471	49,208	1.6
Laborers	12,116	13,153	1.1	13,889	10,786	0.8	14,184	25,716	1.8
Not employed at end of period	44,030	50,978	1.2	8,126	14,045	1.7	---	---	---
Total women <sup>B</sup>	98,860	57,767	0.6	111,649	63,082	0.6	112,367 <sup>F</sup>	119,173	1.1
Employed at end of period	84,060	44,116	0.5	100,584	51,871	0.5	112,367	119,173	1.1
Professional, technical, and kindred workers	9,627	2,443	0.3	10,490	3,879	0.4	11,783	7,905	0.7
Managers, officials, and proprietors, incl. farm	7,184	4,457	0.6	9,340	5,891	0.6	9,483	11,353	1.2
Clerical and kindred workers	35,205	17,819	0.5	40,809	20,261	0.5	45,981	47,852	1.0
Sales workers	4,741	3,306	0.7	7,759	4,021	0.5	8,622	10,055	1.2
Craftsmen, foremen, and kindred workers	2,011	2,299	* <sup>G</sup>	1,868	2,876	* <sup>G</sup>	1,724	4,363	* <sup>G</sup>
Operatives and kindred workers	11,783	7,042	0.6	11,495	3,880	0.3	12,501	9,916	0.8
Service workers, incl. private household	12,501	5,032	0.4	17,962	10,920	0.6	21,410	26,875	1.3
Laborers	1,005	1,726	* <sup>G</sup>	862	144	* <sup>G</sup>	862	862	* <sup>G</sup>
Not employed at end of period	14,800	13,651	0.9	11,064	11,211	1.0	---	---	---

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>For this period persons are classified by major occupation group of longest job in 1950.

<sup>D</sup>Excludes 296 men not reporting relevant information.

<sup>E</sup>Excludes 591 men not reporting relevant information.

<sup>F</sup>Excludes 575 women who were in the Armed Forces in 1950.

<sup>G</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-9, P-22, and P-31.

Table A-16.  
 Inter-Group Occupation Shifts by Major Occupation Group or Other  
 Employment Status at End of Period and Sex, January 1940-December 1944,  
 January 1945-December 1949, and January 1940-December 1949--  
 San Francisco Work History Sample<sup>A</sup>

Major occupation group at end of period and sex	1940-1944			1945-1949			1940-1949		
	Total persons	Total shifts	Aver- age shifts	Total persons	Total shifts	Aver- age shifts	Total persons <sup>C</sup>	Total shifts	Aver- age shifts
Total men <sup>B</sup>	203,011 <sup>D</sup>	137,558	0.7	210,251 <sup>D</sup>	114,805	0.5	211,433 <sup>E</sup>	250,599	1.2
Employed at end of period	158,981	96,630	0.6	202,125	103,723	0.5	211,433	250,599	1.2
Professional, technical, and kindred workers	11,377	2,957	0.3	17,730	6,059	0.3	19,060	14,040	0.7
Managers, officials, and proprietors, incl. farm	31,175	18,323	0.6	41,371	19,506	0.5	40,927	37,536	0.9
Clerical and kindred workers	10,934	5,468	0.5	15,514	9,455	0.6	16,548	23,494	1.4
Sales workers	9,752	3,843	0.4	18,026	10,197	0.6	19,503	24,966	1.3
Craftsmen, foremen, and kindred workers	39,007	32,361	0.8	37,825	16,695	0.4	39,893	48,607	1.2
Operatives and kindred workers	27,186	15,813	0.6	28,664	16,548	0.6	29,846	40,638	1.4
Service workers, incl. private household	17,435	6,798	0.4	29,107	15,515	0.5	31,471	38,718	1.2
Laborers	12,116	11,083	0.9	13,889	9,751	0.7	14,184	22,609	1.6
Not employed at end of period	44,030	40,928	0.9	8,126	11,082	1.4	---	---	---
Total women <sup>B</sup>	98,860	39,082	0.4	111,649	40,955	0.4	112,367 <sup>F</sup>	78,604	0.7
Employed at end of period	84,060	29,453	0.4	100,584	32,623	0.3	112,367	78,604	0.7
Professional, technical, and kindred workers	9,627	1,870	0.2	10,490	2,586	0.2	11,783	5,174	0.4
Managers, officials, and proprietors, incl. farm	7,184	3,736	0.5	9,340	5,173	0.6	9,483	9,340	1.0
Clerical and kindred workers	35,205	8,336	0.2	40,809	9,771	0.2	45,981	25,573	0.6
Sales workers	4,741	3,162	0.7	7,759	4,021	0.5	8,622	8,622	1.0
Craftsmen, foremen, and kindred workers	2,011	2,011	* <sup>G</sup>	1,868	2,445	* <sup>G</sup>	1,724	4,173	* <sup>G</sup>
Operatives and kindred workers	11,783	5,748	0.5	11,495	3,016	0.3	12,501	8,192	0.7
Service workers, incl. private household	12,501	3,018	0.2	17,962	5,458	0.3	21,410	16,812	0.8
Laborers	1,005	1,581	* <sup>G</sup>	862	144	* <sup>G</sup>	862	719	* <sup>G</sup>
Not employed at end of period	14,800	9,629	0.7	11,064	8,332	0.8	---	---	---

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>For this period, persons are classified by major occupation group of longest job in 1950.

<sup>D</sup>Excludes 296 men not reporting relevant information.

<sup>E</sup>Excludes 591 men not reporting relevant information.

<sup>F</sup>Excludes 575 women who were in the Armed Forces in 1950.

<sup>G</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-11, P-24, and P-33.

Table A-17.  
 Industry Shifts by Major Industry Group of Employment at End  
 of Period and Sex, January 1940-December 1944, January 1945-  
 December 1949, and January 1940-December 1949--  
 San Francisco Work History Sample<sup>A</sup>

Major industry group at end of period and sex	1940-1944			1945-1949			1940-1949		
	Total persons	Total shifts	Average shifts	Total persons	Total shifts	Average shifts	Total persons <sup>C</sup>	Total shifts	Average shifts
Men employed at end of period <sup>B</sup>	158,095 <sup>D</sup>	103,574	0.7	201,386 <sup>E</sup>	126,778	0.6	209,365 <sup>F</sup>	286,041	1.4
Extractive industries	2,807	1,331	* <sup>H</sup>	2,069	2,217	* <sup>H</sup>	2,069	2,955	* <sup>H</sup>
Construction	7,979	5,320	0.7	17,139	13,007	0.8	17,730	28,226	1.6
Manufacturing	46,837	41,520	0.9	35,904	21,873	0.6	36,790	51,275	1.4
Durable goods	34,426	35,904	1.0	18,617	11,822	0.6	19,208	31,039	1.6
Nondurable goods	12,411	5,616	0.5	17,287	10,051	0.6	17,582	20,247	1.2
Transportation, communication, and other public utilities	21,424	15,960	0.7	24,379	11,380	0.5	24,526	31,918	1.3
Wholesale and retail trade	35,165	15,664	0.4	53,782	40,045	0.7	56,589	80,378	1.4
Finance, insurance, and real estate	9,752	1,331	0.1	15,366	5,025	0.3	16,696	14,340	0.9
Service industries	21,128	10,346	0.5	33,540	21,274	0.6	35,608	47,436	1.3
Public administration	13,002	12,115	0.9	19,208	11,970	0.6	19,355	29,557	1.5
Women employed at end of period <sup>B</sup>	84,060	50,006	0.6	100,584	66,096	0.7	111,936 <sup>G</sup>	143,543	1.3
Extractive industries	431	431	* <sup>H</sup>	287	576	* <sup>H</sup>	431	1,580	* <sup>H</sup>
Construction	575	861	* <sup>H</sup>	862	1,866	* <sup>H</sup>	1,437	4,599	* <sup>H</sup>
Manufacturing	20,548	13,650	0.7	18,393	9,772	0.5	19,255	21,701	1.1
Durable goods	9,484	7,898	0.8	5,748	4,025	0.7	6,179	9,345	1.5
Nondurable goods	11,064	5,752	0.5	12,645	5,747	0.5	13,076	12,360	0.9
Transportation, communication, and other public utilities	5,317	3,587	0.7	7,185	5,892	0.8	6,897	7,468	1.1
Wholesale and retail trade	19,542	14,078	0.7	26,583	22,419	0.8	29,888	46,698	1.6
Finance, insurance, and real estate	6,610	2,723	0.4	9,771	5,606	0.6	10,202	11,202	1.1
Service industries	21,841	7,326	0.3	30,319	16,228	0.5	34,630	36,924	1.1
Public administration	9,196	7,326	0.8	7,185	3,737	0.5	9,196	13,357	1.5

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>For this period, persons are classified by major industry group of longest job in 1950.

<sup>D</sup>Excludes 1626 men not reporting relevant information.

<sup>E</sup>Excludes 1035 men not reporting relevant information.

<sup>F</sup>Excludes 2660 men not reporting relevant information.

<sup>G</sup>Excludes 1006 women who were in the Armed Forces in 1950 or did not report relevant information.

<sup>H</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-12, P-25, and P-34.

Table A-18  
 Inter-Group Industry Shifts by Major Industry Group of Employment  
 at End of Period and Sex, January 1940 - December 1944,  
 January 1945 - December 1949, and January 1940 - December 1949 --  
 San Francisco Work History Sample<sup>A</sup>

Major industry group at end of period and sex	1940-1944			1945-1949			1940-1949		
	Total persons	Total shifts	Average shifts	Total persons	Total shifts	Average shifts	Total persons <sup>C</sup>	Total shifts	Average shifts
Men employed at end of period <sup>B</sup>	158,095 <sup>D</sup>	90,132	0.6	201,386 <sup>E</sup>	103,575	0.5	209,365 <sup>F</sup>	240,544	1.1
Extractive industries	2,807	1,331	*H	2,069	1,923	*H	2,069	2,516	*H
Construction	7,979	4,581	0.6	17,139	11,970	0.7	17,730	25,412	1.4
Manufacturing	46,837	35,312	0.8	35,904	15,367	0.4	36,790	38,273	1.0
Durable goods	34,426	30,437	0.9	18,617	6,798	0.4	19,208	20,390	1.1
Nondurable goods	12,411	4,879	0.4	17,287	8,569	0.5	17,582	17,885	1.0
Transportation, communication, and other public utilities	21,424	14,627	0.7	24,379	9,307	0.4	24,526	27,485	1.1
Wholesale and retail trade	35,165	13,004	0.4	53,782	31,029	0.6	56,589	65,899	1.2
Finance, insurance, and real estate	9,752	1,034	0.1	15,366	4,876	0.3	16,696	13,299	0.8
Service industries	21,128	8,870	0.4	33,540	18,616	0.6	35,608	41,071	1.2
Public administration	13,002	11,378	0.9	19,208	10,491	0.5	19,355	26,595	1.4
Women employed at end of period <sup>B</sup>	84,060	39,806	0.5	100,584	47,132	0.5	111,936 <sup>G</sup>	108,634	1.0
Extractive industries	431	431	*H	287	576	*H	431	1,293	*H
Construction	575	717	*H	862	1,436	*H	1,437	4,165	*H
Manufacturing	20,548	11,351	0.6	18,393	8,192	0.4	19,255	18,538	1.0
Durable goods	9,484	7,182	0.8	5,748	3,449	0.6	6,179	8,049	1.3
Nondurable goods	11,064	4,165	0.4	12,645	4,746	0.4	13,076	10,492	0.8
Transportation, communication, and other public utilities	5,317	3,587	0.7	7,185	5,313	0.7	6,897	6,609	1.0
Wholesale and retail trade	19,542	10,199	0.5	26,583	12,933	0.5	29,888	30,891	1.0
Finance, insurance, and real estate	6,610	2,153	0.3	9,771	5,030	0.5	10,202	9,769	1.0
Service industries	21,841	5,171	0.2	30,319	10,345	0.3	34,630	26,576	0.8
Public administration	9,196	6,177	0.7	7,185	3,308	0.5	9,196	10,775	1.2

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>For this period, persons are classified by major industry group of longest job in 1950.

<sup>D</sup>Excludes 1626 men not reporting relevant information.

<sup>E</sup>Excludes 1035 men not reporting relevant information.

<sup>F</sup>Excludes 2660 men not reporting relevant information.

<sup>G</sup>Excludes 1006 women who were in the Armed Forces in 1950 or did not report relevant information.

<sup>H</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-14, P-27, and P-36.

Table A - 19.

Civilian job shifts by Type of Shift for each Age and Sex Group, January 1940-December 1944,  
and January 1945-December 1949--  
San Francisco Work History Sample<sup>A</sup>

Age in 1951 and sex	Total job shifts	1940-1944					1945-1949					
		Type of shift					Type of shift					
		Employer shift only	Employer and occupa- tion	Employer and industry	Employer, occupa- tion, and industry	All other combi- nations of shifts	Total job shifts	Employer shift only	Employer and occupa- tion	Employer and industry	Employer occupa- tion, and industry	All other combinations of shifts
Total men	211,581	33,392	16,105	28,959	117,315	15,809	220,003 <sup>D</sup>	55,111	12,707	32,505	108,302	11,377
Percent	100	16	8	14	55	7	100	25	6	15	49	5
25-34 years	53,214	7,093	5,763	4,137	36,199	5,023	63,409	13,445	3,694	9,603	38,858	2,807
Percent	100	12	10	7	62	9	100	20	5	14	57	4
35-44 years	80,968	13,001	5,320	11,966	43,439	7,240	72,989	19,650	4,433	9,308	35,608	3,989
Percent	100	16	7	15	53	9	100	27	6	13	49	5
45-54 years	45,803	3,274	3,103	6,206	25,265	2,955	51,713	11,968	3,398	9,751	24,230	2,364
Percent	100	18	7	14	55	6	100	23	7	19	46	5
55-64 years	21,572	3,694	1,478	5,467	10,786	1,448	21,129	7,535	739	3,842	7,240	1,774
Percent	100	17	7	25	50	1	100	36	3	18	35	8
65 and over	5,024	1,330	443	1,182	1,625	9	5,762	2,512	443	--	2,364	443
Percent	100	26	9	24	32	9	100	43	8	--	41	8
Total women	87,652 <sup>D</sup>	12,358	3,449	21,985	45,119	4,742	117,971 <sup>D</sup>	28,882	5,317	30,463	48,999	4,311
Percent	100	14	4	25	52	5	100	24	5	26	41	4
25-34 years	32,474	3,161	1,293	7,041	19,829	1,150	47,418	10,490	2,873	11,927	20,260	1,868
Percent	100	10	4	22	60	4	100	22	6	25	43	4
35-44 years	31,756	4,742	1,149	7,471	16,074	2,299	36,644	6,321	1,006	11,639	16,512	862
Percent	100	15	4	24	50	7	100	17	3	32	46	2
45-54 years	15,950	2,442	718	5,460	6,322	1,006	24,428	7,903	1,148	5,891	8,765	718
Percent	100	15	5	34	40	6	100	32	5	24	36	3
55-64 years	5,891	1,293	144	1,367	2,298	287	7,759	3,448	144	1,006	2,730	431
Percent	100	22	2	32	39	5	100	44	2	13	35	6
65 and over	1,581	718	144	144	575	--	1,724	718	144	--	431	431

A Excludes shifts of persons with no civilian job or with casual work only in each of the two periods, respectively.

B Excludes 5,762 shifts for which relevant information was not reported.

C Excludes 3,398 shifts for which relevant information was not reported.

D Excludes 2,012 shifts for which relevant information was not reported.

E No percentages shown for groups with fewer than 2,955 shifts (of men) or 2,074 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulations 0-5 and 0-9.

Civilian Job Shifts by Type of Shift for Each Years-of-Residence and Sex Group,  
 January 1940-December 1944 and January 1945-December 1949—  
 San Francisco Work History Sample<sup>A</sup>

Years of resi- dence in San Francisco-Oak Land Standard Metro Area (as of 1951) and sex	1940-1944						1945-1949					
	Total		Type of shift		Total		Type of shift		Total		Type of shift	
	Job shifts	Employer shift only	Employer and occupa- tion	Employer and industry	Employer, occupa- tion, and industry	ALL other combina- tions of shifts	Job shifts	Employer shift only	Employer and occupa- tion	Employer, occupa- tion, and industry	ALL other combina- tions of shifts	
Total men	211,581 <sup>B</sup>	33,392	16,105	28,959	117,315	15,309	220,033 <sup>C</sup>	55,111	12,707	32,505	108,302	11,377
Percent	100	16	8	14	55	7	100	25	6	15	49	5
0-5 years of residence	57,328	7,979	5,024	8,717	32,209	3,399	78,900	19,502	3,546	9,457	40,632	5,762
Percent	100	14	9	15	56	6	100	25	4	12	52	7
6-11 years of residence	148,463	8,421	3,399	7,239	27,038	2,364	140,484	9,456	2,217	7,682	19,799	1,330
Percent	100	17	7	15	56	5	100	23	5	19	50	3
12-20 years of residence	32,358	5,910	2,069	3,841	17,878	2,660	23,368	8,126	2,069	3,842	12,706	1,626
Percent	100	18	6	12	56	8	100	29	7	14	44	6
21 and over years of residence	73,433	11,081	5,615	9,160	40,189	7,387	72,251	18,026	4,875	11,525	35,165	2,660
Percent	100	15	8	12	55	10	100	25	7	16	48	4
Total women	87,652 <sup>D</sup>	12,358	3,449	21,985	45,119	4,742	117,971 <sup>D</sup>	28,882	5,317	30,463	48,999	4,311
Percent	100	14	4	25	52	5	100	24	5	26	41	4
0-5 years of residence	34,055	5,460	1,724	8,765	16,237	1,868	60,494	12,788	3,017	17,099	25,290	2,298
Percent	100	16	5	26	48	5	100	21	5	28	42	4
6-11 years of residence	24,715	2,443	431	4,454	16,093	1,293	25,002	6,322	362	5,461	11,639	718
Percent	100	10	2	18	65	5	100	25	3	22	47	3
12-20 years of residence	10,346	1,868	862	2,155	5,316	144	9,340	3,448	431	2,299	3,016	144
Percent	100	18	9	21	52	1	100	36	5	25	32	2
21 and over years of residence	18,536	2,586	431	6,610	7,472	1,437	23,134	6,322	1,006	5,603	9,053	1,150
Percent	100	14	2	35	40	8	100	27	5	24	40	5

- A Excludes shifts of persons with no civilian job or with casual work only in each of the two periods, respectively.  
 B Excludes 5,762 shifts for which relevant information was not reported.  
 C Excludes 3,398 shifts for which relevant information was not reported.  
 D Excludes 2,011 shifts for which relevant information was not reported.  
 Source: Occupational "Ability Survey, San Francisco, Tabulations O-8 and O-12.

Table A - 21.

Civilian Job Shifts by Type of Shift by Major Occupation Group or Other Employment Status at End of Period and Sex, January 1940-December 1944, and January 1945-December 1949--  
San Francisco Work History Sample<sup>A</sup>

Period, major occupation group or other employment status at end of period, and sex	Total job shifts	Type of shift				
		Employer shift only	Employer and occupation	Employer and industry	Employer, occupation, and industry	All other combinations of shifts
Total shifts of men, January 1940-December 1944	211,581 <sup>C</sup>	33,392	16,105	23,959	117,315	15,809
Percent	100	16	8	11	55	7
Professional, technical, and kindred workers	6,206	1,330	739	1,478	2,069	591
Percent	100	21	12	24	33	10
Managers, officials, and proprietors, incl. farm	18,912	1,182	3,103	1,478	11,968	1,182
Percent	100	6	16	8	64	6
Clerical and kindred workers	5,910	591	296	739	4,137	1,182
Percent	100	10	5	13	70	2
Sales workers	4,376	739	296	591	2,956	296
Percent	100	15	6	12	61	6
Craftsmen, foremen, and kindred workers	46,690	11,081	3,251	8,422	23,344	591
Percent	100	24	7	18	50	1
Operatives and kindred workers	27,482	4,136	1,921	4,137	16,547	739
Percent	100	15	7	15	60	3
Service workers, incl. private household	14,332	3,251	443	2,512	7,535	591
Percent	100	23	3	18	52	4
Laborers	16,253	2,216	296	2,364	11,080	296
Percent	100	14	2	15	67	2
Not employed, December 1944	70,921	8,865	5,762	7,240	37,677	11,376
Percent	100	12	8	10	54	16
Total shifts of men, January 1945-December 1949	219,559 <sup>D</sup>	55,111	12,559	32,357	108,154	11,377
Percent	100	25	6	15	49	5
Professional, technical, and kindred workers	13,593	4,876	591	2,512	4,727	887
Percent	100	36	4	18	35	7
Managers, officials, and proprietors, incl. farm	25,709	3,546	2,660	2,512	13,150	3,841
Percent	100	14	10	10	51	15
Clerical and kindred workers	15,218	2,512	739	2,512	8,866	591
Percent	100	17	5	17	57	4
Sales workers	19,503	5,171	739	2,364	10,342	887
Percent	100	27	4	12	52	5
Craftsmen, foremen, and kindred workers	42,109	15,218	3,103	8,126	14,332	1,330
Percent	100	37	7	19	34	3
Operatives and kindred workers	32,505	7,387	1,182	4,433	18,321	1,182
Percent	100	23	4	14	55	4
Service workers, incl. private household	35,608	11,081	1,182	4,285	18,172	887
Percent	100	31	3	12	52	2
Laborers	15,514	2,364	591	3,103	9,161	296
Percent	100	15	4	20	59	2
Not employed, December 1949	19,799	2,955	1,773	2,512	11,081	1,478
Percent	100	15	9	13	56	7

(Continued on next page)

Table A - 21 (Continued)

Period, major occupation group or other employment status at end of period, and sex	Total job shifts	Type of shift				All other combinations of shifts
		Employer shift only	Employer and occupation	Employer and industry	Employer occupation and industry	
Total shifts of women, January 1940-December 1944	87,652 <sup>A</sup>	12,358	3,449	21,985	45,119	4,742
Percent	100	14	4	25	52	5
Professional, technical, and kindred workers	5,460	718	287	1,863	1,724	862
Percent	100	13	5	34	32	16
Managers, officials, and proprietors, incl. farm	4,886	431	575	431	3,161	286
Percent	100	9	12	9	64	6
Clerical and kindred workers	24,571	2,873	862	8,477	11,352	1,006
Percent	100	12	4	34	46	4
Sales workers	4,454	718	287	1,006	2,442	—
Percent	100	16	6	23	55	—
Craftsmen, foremen, and kindred workers	3,018	862	287	144	1,724	—
Percent	100	29	9	5	57	—
Operatives and kindred workers	10,202	1,006	—	2,299	6,897	—
Percent	100	10	—	23	67	—
Service workers, incl. private household	9,771	3,448	575	1,581	4,167	—
Percent	100	35	6	16	43	—
Laborers <sup>F</sup>	2,012	—	—	431	1,581	—
Not employed, December 1944	23,278	2,300	575	5,746	12,069	2,586
Percent	100	10	2	25	52	11
Total shifts of women, January 1945-December 1949	117,971	28,882	5,317	30,463	48,999	4,311
Percent	100	24	5	26	41	4
Professional, technical, and kindred workers	6,179	1,436	144	1,149	3,305	144
Percent	100	23	2	19	54	2
Managers, officials, and proprietors, incl. farm	9,196	2,299	362	2,012	3,593	431
Percent	100	25	9	22	39	5
Clerical and kindred workers	36,498	5,029	2,155	15,374	13,506	431
Percent	100	14	6	42	37	1
Sales workers	8,765	2,299	287	2,586	3,592	—
Percent	100	26	3	30	41	—
Craftsmen, foremen, and kindred workers	3,736	862	144	—	2,298	431
Percent	100	23	4	—	61	12
Operatives and kindred workers	8,765	2,586	144	1,581	3,735	718
Percent	100	30	2	18	42	8
Service workers, incl. private household	22,560	9,340	862	2,874	9,052	431
Percent	100	41	4	13	40	2
Laborers <sup>F</sup>	144	—	—	—	144	—
Not employed, December 1949	22,129	5,029	718	4,886	9,771	1,723
Percent	100	23	3	22	44	8

A Excludes shifts of persons with no civilian job or with casual work only in each of the two periods, respectively.

B Individual items do not always add to totals because of rounding.

C Excludes 5,762 shifts for which relevant information was not reported.

D Excludes 3,250 shifts for which relevant information was not reported.

E Excludes 2,012 shifts for which relevant information was not reported.

F Percentages not shown for groups with fewer than 2,955 shifts (of men) or 2,874 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulations O-6 and O-10.

Table A - 22.

Civilian Job Shifts by Type of Shift by Major Industry Group of Employment  
at End of Period and Sex, January 1940-December 1944 and January  
1945-December 1949—  
San Francisco Work History Sample<sup>A</sup>

Major industry group at end of period and sex	Total job shifts <sup>F</sup>	Type of shift				
		Employer shift only	Employer and occupation	Employer and industry	Employer occupation and industry	All other combination of shifts
Total shifts of men, January 1940- December 1944	140,217 <sup>C</sup>	24,379	10,343	21,720	79,343	4,434
Percent	100	17	7	15	58	3
Extractive industries <sup>F</sup>	1,773	443	148	—	1,182	—
Construction	10,343	5,467	296	1,182	3,398	—
Percent	100	53	3	11	33	—
Manufacturing	50,974	6,353	2,365	9,604	31,619	1,034
Percent	100	12	5	19	62	2
Durable goods	43,291	4,875	2,069	7,978	27,431	337
Percent	100	11	5	18	64	2
Nondurable goods	7,683	1,478	296	1,625	4,138	148
Percent	100	19	4	21	54	2
Transportation, communication, and other public utilities	21,367	3,546	2,217	2,807	12,706	591
Percent	100	16	10	13	58	3
Wholesale and retail trade	23,345	4,581	1,921	3,841	11,967	1,035
Percent	100	20	8	16	52	4
Finance, insurance, and real estate <sup>F</sup>	2,512	591	296	—	1,330	296
Service industries	14,627	2,660	2,364	2,512	6,944	148
Percent	100	18	16	17	48	1
Public administration	14,775	739	739	1,773	10,195	1,330
Percent	100	5	5	12	69	9
Total shifts of men, January 1945- December 1949	199,469 <sup>D</sup>	52,009	10,786	29,846	96,925	9,899
Percent	100	26	5	15	49	5
Extractive industries <sup>F</sup>	2,807	296	—	148	2,069	296
Construction	25,413	9,752	2,660	4,727	8,126	148
Percent	100	38	10	19	32	1
Manufacturing	32,801	7,797	1,921	6,206	15,217	1,478
Percent	100	24	6	19	46	5
Durable goods	18,617	4,581	1,183	4,138	7,535	1,183
Percent	100	25	6	22	41	6
Nondurable goods	14,184	3,398	739	2,068	7,683	296
Percent	100	24	5	15	54	2
Transportation, communication, and other public utilities	15,514	2,660	1,330	1,034	9,751	739
Percent	100	17	9	7	62	5
Wholesale and retail trade	62,351	14,628	2,512	9,899	31,027	4,285
Percent	100	23	4	16	50	7
Finance, insurance, and real estate	7,092	1,921	148	148	4,876	—
Percent	100	27	2	2	69	—
Service industries	37,677	12,854	1,330	4,876	16,991	1,625
Percent	100	34	4	13	45	4
Public administration	15,809	1,921	387	2,808	8,865	1,330
Percent	100	12	6	18	56	8

(Continued on next page)

Table A-22 (Continued)

Major industry group at end of period and sex	Type of shift					
	Total job shifts <sup>B</sup>	Employer shift only	Employ- er and occupa- tions	Employer and in- dustry	Employer occupa- tions & industry	All other combina- tions of shifts
Total shifts of women, January 1940-December 1944	64,373 <sup>E</sup>	10,058	2,874	16,237	33,049	2,155
Percent	100	16	4	25	52	3
Extractive industries <sup>F</sup>	431	-	-	287	144	-
Construction <sup>F</sup>	862	-	-	718	144	-
Manufacturing	15,662	1,293	431	4,311	9,484	144
Percent	100	8	3	28	60	1
Durable goods	9,053	718	287	2,299	5,747	-
Percent	100	8	3	25	64	-
Nondurable goods	6,610	575	144	2,012	3,736	144
Percent	100	9	2	30	57	2
Transportation, communication, and other public utilities	4,023	287	144	575	3,018	-
Percent	100	7	4	14	75	-
Wholesale and retail trade	16,956	2,155	1,006	4,598	9,195	-
Percent	100	13	6	27	54	-
Finance, insurance, and real estate	3,161	431	-	1,581	1,149	-
Percent	100	14	-	50	36	-
Service industries	13,507	4,454	862	2,442	4,598	1,149
Percent	100	33	6	18	34	9
Public administration	9,771	1,437	431	1,724	5,316	862
Percent	100	15	4	18	54	9
Total shifts of women, January 1945-December 1949	95,843 <sup>E</sup>	23,853	4,598	25,577	39,228	2,585
Percent	100	25	5	27	40	3
Extractive industries <sup>F</sup>	575	-	-	144	431	-
Construction <sup>F</sup>	1,868	-	-	431	1,437	-
Manufacturing	15,231	3,880	431	4,454	5,461	1,006
Percent	100	25	3	29	36	7
Durable goods	4,598	144	144	2,154	1,868	287
Percent	100	3	3	47	41	6
Nondurable goods	10,633	3,736	287	2,298	3,592	718
Percent	100	35	3	22	33	7
Transportation, communication, and other public utilities	6,610	287	431	1,150	4,453	287
Percent	100	44	7	17	68	4
Wholesale and retail trade	31,900	7,615	1,867	9,627	12,070	718
Percent	100	24	6	30	38	2
Finance, insurance, and real estate	7,328	1,725	-	1,293	4,310	-
Percent	100	24	-	18	58	-
Service industries	26,870	9,339	1,149	5,460	10,488	431
Percent	100	35	4	20	39	2
Public administration	5,460	1,006	718	3,017	575	144
Percent	100	18	13	55	11	3

A Excludes shifts of persons with no civilian job or with casual work only in each of the two periods, respectively.

B Individual items do not always add to totals because of rounding.

C Excludes 5,619 shifts for which relevant information was not reported.

D Excludes 3,102 shifts for which relevant information was not reported.

E Excludes 2,011 shifts for which relevant information was not reported.

F Percentages not shown for groups with fewer than 2,955 shifts (of men) or 2,874 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulations O-7 and O-11.

Table A-23.  
 Number of Persons in Civilian Labor Force by Age,  
 Years of Residence in San Francisco-Oakland Standard  
 Metropolitan Area, and Sex, Yearly, 1940-1949--  
 San Francisco Work History Sample<sup>A</sup>

Sex and year	Total persons <sup>B</sup>	Age in 1951					Years of residence in area (as of 1951)			
		25-34	35-44	45-54	55-64	65 and over	0-5	6-11	12-20	21 and over
Total men represented by sample <sup>A</sup>	212,024	44,769	61,760	56,294	36,938	12,263	43,587	29,994	32,062	106,381
1940	189,123	26,447	59,987	54,225	36,495	11,968	35,313	25,708	29,402	98,698
1941	192,816	30,141	59,691	54,520	36,347	12,115	36,790	26,152	29,698	100,175
1942	191,782	31,766	57,180	54,520	36,199	12,115	35,608	26,890	30,141	99,142
1943	169,028	23,493	47,420	49,940	36,199	11,968	26,743	25,266	26,595	90,424
1944	162,970	18,617	45,212	50,974	36,199	11,968	24,231	24,675	26,447	87,617
Percentage change, 1940-1944	-14	-30	-25	-6	-1	-	-31	-4	-10	-11
1945	177,893	25,266	50,383	54,077	36,199	11,968	28,368	25,856	28,368	95,300
1946	200,795	38,711	58,658	54,964	36,347	12,115	38,268	29,254	30,437	102,835
1947	203,602	40,041	59,691	55,850	35,904	12,115	39,302	29,254	31,175	103,869
1948	205,966	41,666	60,282	55,555	36,642	11,820	40,484	29,402	31,323	104,756
1949	207,739	43,144	60,135	55,703	36,938	11,820	41,222	29,550	31,914	105,051
Percentage change, 1944-1949	+27	+132	+33	+9	+2	-1	+70	+20	+21	+20
Total women represented by sample <sup>A</sup>	112,942	28,307	35,205	30,606	13,938	4,886	33,768	21,266	15,375	42,533
1940	67,535	10,490	22,847	19,685	10,490	4,023	18,105	10,202	11,064	28,163
1941	75,438	13,651	25,290	21,266	10,921	4,311	21,123	11,495	11,495	31,324
1942	83,341	17,243	27,158	23,422	11,208	4,311	22,991	13,651	11,639	35,060
1943	89,376	20,116	27,588	25,290	11,782	4,598	24,715	15,231	13,363	36,066
1944	89,951	20,548	27,588	25,146	11,782	4,886	23,565	16,380	13,794	36,210
Percentage change, 1940-1944	+33	+96	+21	+28	+12	+21	+30	+61	+25	+29
1945	92,825	22,129	28,020	25,577	12,213	4,886	23,709	18,105	13,794	37,216
1946	96,705	23,565	29,169	26,152	12,932	4,886	25,577	18,967	13,938	38,222
1947	100,584	24,715	30,031	27,732	13,219	4,886	27,445	19,685	14,226	39,228
1948	102,740	25,720	30,606	28,020	13,507	4,886	29,169	19,398	14,512	39,659
1949	106,045	26,439	32,331	28,595	13,938	4,741	30,606	18,967	15,375	41,096
Percentage change, 1944-1949	+18	+29	+17	+14	+18	-3	+30	+16	+11	+13

<sup>A</sup>Excludes persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

Source: Occupational Mobility Survey, San Francisco, Tabulations P-37 and P-38.

Table A-24.

Number of Job Separations by Age, Years of Residence in  
San Francisco - Oakland Standard Metropolitan Area, and Sex,  
Yearly, 1940 - 1949 ---  
San Francisco Work History Sample<sup>A</sup>

Sex and year	Total separations <sup>B</sup>	Age in 1951					Years of residence in Area (as of 1951)			
		25-34	35-44	45-54	55-64	65 and over	0-5	6-11	12-20	21 and over
Total separations by men	441,483 <sup>C</sup>	129,431	157,504	100,324	43,439	10,786	141,842	90,424	61,613	147,604
1940	21,720	4,875	9,603	4,433	2,216	591	6,648	4,728	2,807	7,535
1941	47,281	13,888	18,469	8,421	5,319	1,182	13,888	9,161	6,648	17,582
1942	79,343	21,572	29,698	19,060	7,239	1,773	22,753	13,741	14,332	28,516
1943	42,257	13,297	15,809	7,978	4,137	1,034	10,047	12,559	5,615	14,036
1944	27,039	6,057	9,899	7,535	3,103	443	6,648	9,752	3,842	6,797
1945	46,246	11,820	16,696	12,411	4,137	1,182	12,854	10,638	7,092	15,662
1946	53,191	17,730	18,617	10,490	4,137	2,216	18,321	9,013	5,615	20,242
1947	47,133	16,105	15,218	10,342	4,728	739	18,321	9,161	5,615	14,036
1948	39,745	13,150	13,593	8,569	3,251	1,182	16,844	5,024	6,206	11,672
1949	37,529	10,933	9,899	11,081	5,171	443	15,514	6,649	3,842	11,524
Total separations by women	211,371	82,767	70,122	41,240	13,794	3,449	98,429	51,154	19,829	41,958
1940	6,610	2,155	3,161	862	287	144	2,155	1,724	1,006	1,724
1941	11,208	4,311	3,018	2,299	1,437	144	4,167	3,448	1,437	2,155
1942	24,715	7,759	10,633	4,454	1,580	287	10,345	5,747	3,161	5,460
1943	23,853	10,490	7,328	4,023	1,293	718	9,771	6,897	2,155	5,029
1944	23,278	9,196	8,047	4,454	1,293	287	9,340	7,184	2,856	4,167
1945	26,583	12,213	7,328	5,173	1,580	287	11,783	7,472	2,299	5,029
1946	25,577	10,921	7,184	5,173	2,012	287	12,644	5,747	1,724	5,460
1947	26,152	9,196	8,334	6,609	1,724	287	13,938	3,879	2,873	5,460
1948	25,433	9,483	9,196	5,029	1,150	575	13,507	5,460	1,150	5,316
1949	17,962	7,041	5,891	3,161	1,437	431	10,777	3,592	1,437	2,155

<sup>A</sup>Excludes job separations of persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 148 job separations for which year of occurrence was not reported.

Source: Occupational Mobility Survey, San Francisco, Tabulations O-1 and O-3.

Table A-25.

Average Number of Job Separations for Persons in the Civilian Labor Force, by Age, Years of Residence in San Francisco-Oakland Standard Metropolitan Area and Sex, Yearly, 1940-1949 —  
San Francisco Work History Sample<sup>A</sup>

Sex and year	Total	Age in 1951					Years of residence in Area (as of 1951)			
		25-34	35-44	45-54	55-64	65 and over	0-5	6-11	12-20	21 and over
Separations by men										
1940	.11	.2	.2	.1	.1	-B	.2	.2	.1	.1
1941	.25	.5	.3	.2	.1	.1	.4	.4	.2	.2
1942	.41	.7	.5	.3	.2	.1	.6	.5	.5	.3
1943	.25	.6	.3	.2	.1	.1	.4	.5	.2	.2
1944	.17	.3	.2	.1	.1	.1	.3	.4	.1	.1
1945	.26	.5	.3	.2	.1	.1	.5	.4	.2	.2
1946	.26	.5	.3	.2	.1	.2	.5	.3	.2	.2
1947	.23	.4	.3	.2	.1	.1	.5	.3	.2	.1
1948	.19	.3	.2	.2	.1	.1	.4	.2	.2	.1
1949	.18	.3	.2	.2	.1	-B	.4	.2	.1	.1
Separations by women										
1940	.10	.2	.1	-B	-B	-B	.1	.2	.1	.1
1941	.15	.3	.1	.1	.1	-B	.2	.3	.1	.1
1942	.30	.4	.4	.2	.1	.1	.4	.4	.3	.2
1943	.27	.5	.3	.2	.1	.2	.4	.5	.2	.1
1944	.26	.4	.3	.2	.1	.1	.4	.4	.2	.1
1945	.29	.6	.3	.2	.1	.1	.5	.4	.2	.1
1946	.26	.5	.2	.2	.2	.1	.5	.3	.1	.1
1947	.26	.4	.3	.2	.1	.1	.5	.2	.2	.1
1948	.25	.4	.3	.2	.1	.1	.5	.3	.1	.1
1949	.17	.3	.2	.1	.1	.1	.4	.2	.1	.1

<sup>A</sup>Excludes persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Average not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco. Computed from Tables A-23 and A-24.



Table A-27.  
Average Number of Job Accessions for Persons in the Civilian  
Labor Force by Age, Years of Residence in San Francisco-Oakland  
Standard Metropolitan Area, and Sex, Yearly, 1940-1949--  
San Francisco Work History Sample<sup>A</sup>

Sex and year	Total	Age in 1951					Years of residence in area (as of 1951)			
		25-34	35-44	45-54	55-64	65 and over	0-5	6-11	12-20	21 and over
<u>Accessions by men</u>										
1940	.14	.3	.2	.1	.B	.1	.2	.2	.1	.1
1941	.24	.5	.3	.1	.1	.1	.4	.4	.2	.2
1942	.32	.5	.3	.3	.2	.1	.4	.5	.4	.2
1943	.22	.4	.3	.2	.1	.1	.3	.5	.2	.1
1944	.18	.3	.2	.2	.1	.B	.3	.4	.2	.1
1945	.32	.6	.4	.3	.1	.1	.5	.4	.3	.2
1946	.37	.8	.5	.2	.1	.1	.7	.4	.2	.3
1947	.26	.5	.3	.2	.1	.1	.5	.3	.2	.2
1948	.21	.3	.2	.2	.1	.1	.5	.2	.2	.1
1949	.19	.3	.2	.2	.1	.1	.4	.2	.2	.1
<u>Accessions by women</u>										
1940	.14	.3	.2	.1	.1	.1	.2	.2	.1	.1
1941	.24	.5	.2	.2	.2	.1	.3	.4	.2	.2
1942	.37	.7	.4	.3	.2	.1	.5	.6	.3	.2
1943	.32	.6	.3	.2	.1	.2	.4	.6	.3	.2
1944	.27	.5	.3	.2	.2	.1	.4	.5	.2	.1
1945	.30	.6	.2	.2	.2	.1	.5	.5	.2	.2
1946	.30	.5	.3	.2	.3	.1	.6	.3	.1	.2
1947	.31	.5	.3	.3	.1	-	.6	.3	.2	.2
1948	.24	.4	.3	.2	.1	.1	.5	.2	.1	.1
1949	.23	.3	.3	.2	.1	.1	.5	.2	.1	.1

<sup>A</sup>Excludes persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Average not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco. Computed from Tables  
A-23 and A-26.

Table A-28.

Job Separations in Each Two-Year Period, 1940-1949,  
by Major Occupation Group of Job and Sex ---  
San Francisco Work History Sample<sup>A</sup>

Major occupation group of job and sex	Total separations		1940- 1941		1942- 1943		1944- 1945		1946- 1947		1948- 1949	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Separations by men	441,335	100	69,000	100	121,304	100	73,433	100	100,324	100	77,274	100
Professional, technical, and kindred workers	25,561	6	3,989	6	7,388	6	4,285	6	4,728	5	5,171	7
Manager, officials, and proprietors, incl. farm	48,906	11	9,161	13	12,263	10	6,501	9	12,559	13	8,422	11
Clerical and kindred workers	35,608	8	6,649	10	10,934	9	4,876	7	9,013	9	4,137	5
Sales workers	27,925	6	4,728	7	6,944	6	2,807	4	7,388	7	6,058	8
Craftsmen, foremen, and kindred workers	105,643	24	11,525	17	27,038	22	24,527	32	24,379	24	18,173	23
Operatives and kindred workers	92,788	21	15,662	22	27,038	22	13,889	19	20,094	20	16,105	21
Service workers, incl. private household	55,555	13	8,570	12	14,627	12	6,501	9	14,480	14	11,377	15
Laborers	49,349	11	8,719	13	15,071	13	10,047	14	7,683	8	7,831	10
Separations by women	211,371	100	17,818	100	48,568	100	49,861	100	51,729	100	43,395	100
Professional, technical, and kindred workers	20,261	10	2,874	16	5,460	11	4,167	8	3,161	6	4,598	11
Managers, officials, and proprietors, incl. farm	13,938	7	1,293	7	2,586	5	3,018	6	4,454	9	2,586	6
Clerical and kindred workers	77,594	36	5,460	31	17,243	37	18,967	39	21,266	41	14,657	34
Sales workers	17,818	8	1,150	6	5,173	11	3,305	7	4,167	8	4,023	9
Craftsmen, foremen, and kindred workers	5,748	3	287	2	718	1	2,730	5	1,006	2	1,006	2
Operatives and kindred workers	29,169	14	1,150	6	7,328	15	9,196	18	6,322	12	5,173	12
Service workers, incl. private household	44,688	21	5,604	32	9,340	19	7,328	15	11,208	22	11,208	26
Laborers	2,155	1	-	-	718	1	1,150	2	144	<sup>D</sup>	144	<sup>D</sup>

<sup>A</sup>Excludes separations of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 296 separations for which occupation was not reported.

<sup>D</sup>Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-27.

Table A-29.  
Job Separations Followed by Change in Major Occupation  
Group in Each Two-Year Period, 1940-1949,  
by Major Occupation Group of Job and Sex--  
San Francisco Work History Sample<sup>A</sup>

Major occupation group of job and sex	Total separations <sup>B</sup>		1940- 1941		1942- 1943		1944- 1945		1946- 1947		1948- 1949	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Separations by men	175,086 <sup>C</sup>	100	29,994	100	45,360	100	33,096	100	40,336	100	26,300	100
Professional, technical, and kindred workers	7,388	4	1,182	4	1,625	4	2,069	6	1,921	5	591	2
Managers, officials, and proprietors, incl. farm	26,152	15	6,206	21	6,058	13	2,807	8	6,353	16	4,728	18
Clerical and kindred workers	17,140	10	3,103	10	5,319	12	2,216	7	3,842	10	2,660	10
Sales workers	12,264	7	2,364	8	3,842	8	887	3	2,216	5	2,955	11
Craftsmen, foremen, and kindred workers	31,915	18	3,546	12	5,615	12	9,899	30	8,570	21	4,285	16
Operatives and kindred workers	37,972	22	6,944	23	10,047	22	6,501	20	8,422	21	6,058	24
Service workers, incl. private household	17,140	10	2,216	7	6,649	15	1,773	5	5,024	12	1,478	6
Laborers	25,118	14	4,433	15	6,206	14	6,944	21	3,989	10	3,546	13
Separations by women	56,183	100	4,023	100	15,519	100	14,800	100	14,800	100	7,041	100
Professional, technical, and kindred workers	6,178	11	1,006	25	1,724	11	1,724	12	862	6	862	12
Managers, officials, and proprietors, incl. farm	5,747	10	431	11	1,437	9	718	5	2,299	16	862	12
Clerical and kindred workers	12,645	23	718	17	2,299	15	3,449	22	4,886	32	1,293	19
Sales workers	7,472	13	431	11	2,586	17	1,293	9	2,012	13	1,150	16
Craftsmen, foremen, and kindred workers	3,017	5	144	4	287	2	1,581	11	718	5	287	4
Operatives and kindred workers	8,909	16	287	7	2,730	18	3,161	21	1,581	11	1,150	16
Service workers, incl. private household	10,777	19	1,006	25	4,167	26	2,012	14	2,299	16	1,293	19
Laborers	1,437	3	---	---	287	2	862	6	144	1	144	2

<sup>A</sup>Excludes separations of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding; total separations include only those separations which were followed by a shift to a different major occupation group within the same two-year period.

<sup>C</sup>Excludes 443 jobs for which relevant information was not reported.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-28.

Table A-30.  
Job Accessions in Each Two-Year Period, 1940-1949,  
by Major Occupation Group of Job and Sex--  
San Francisco Work History Sample<sup>A</sup>

Major occupation group of job and sex	Total accessions <sup>B</sup>		1940- 1941		1942- 1943		1944- 1945		1946- 1947		1948- 1949	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Accessions by men	462,168 <sup>C</sup>	100	71,512	100	96,925	100	86,139	100	126,771	100	80,820	100
Professional, technical, and kindred workers	28,812	6	4,728	7	5,024	5	4,137	5	7,683	6	7,240	9
Managers, officials, and proprietors, incl. farm	47,576	10	5,615	8	6,501	7	11,968	14	13,150	10	10,343	13
Clerical and kindred workers	38,120	8	8,717	12	6,649	7	5,762	7	13,002	10	3,989	5
Sales workers	33,096	7	4,433	6	2,364	2	5,171	6	14,923	12	6,206	8
Craftsmen, foremen, and kindred workers	106,381	24	15,071	21	27,777	29	22,606	25	22,902	18	18,026	22
Operatives and kindred workers	92,936	20	13,880	19	23,493	24	17,878	21	23,640	19	14,036	17
Service workers, incl. private household laborers	62,942	14	9,013	13	9,604	10	11,968	14	18,765	15	13,593	17
	52,304	11	10,047	14	15,514	16	6,649	8	12,707	10	7,388	9
Accessions by women	249,449	100	27,589	100	59,488	100	52,448	100	60,925	100	48,999	100
Professional, technical, and kindred workers	18,967	8	3,161	11	2,874	5	3,736	7	4,167	7	5,029	10
Managers, officials, and proprietors, incl. farm	16,237	7	1,868	7	2,443	4	3,018	6	5,173	8	3,736	8
Clerical and kindred workers	96,561	38	9,196	33	25,146	52	20,979	40	23,853	40	17,387	36
Sales workers	22,847	9	2,586	9	3,880	7	4,742	9	5,891	10	5,748	12
Craftsmen, foremen, and kindred workers	5,460	2	144	1	2,443	4	1,293	2	1,150	2	431	1
Operatives and kindred workers	34,917	14	2,586	9	12,501	21	7,328	14	6,897	11	5,604	11
Service workers, incl. private household laborers	51,729	21	7,903	29	8,765	15	10,490	20	13,651	22	10,921	22
	2,730	1	144	1	1,437	2	862	2	144	---	144	---

<sup>A</sup>Excludes accessions of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 443 jobs for which relevant information was not reported.

<sup>D</sup>Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation, C-29.

Table A-31.  
Job Accessions Involving Change in Major Occupation Group  
in Each Two-Year Period, 1940-1949, by Major  
Occupation Group of Job and Sex--  
San Francisco Work History Sample<sup>A</sup>

Major occupation group of job and sex	Total accessions <sup>B</sup>		1940-1941		1942-1943		1944-1945		1946-1947		1948-1949	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
Accessions by men	175,086 <sup>C</sup>	100	29,994	100	45,360	100	33,096	100	40,336	100	26,300	100
Professional, technical, and kindred workers	6,649	4	1,034	3	1,330	3	1,625	5	867	2	1,773	7
Managers, officials, and proprietors, incl. farm	24,822	14	3,989	13	3,694	8	7,092	21	5,171	13	4,876	18
Clerical and kindred workers	14,924	9	3,546	12	3,842	8	1,330	4	4,433	11	1,773	7
Sales workers	13,741	8	2,364	8	1,034	2	1,478	4	5,762	14	3,103	12
Craftsmen, foremen, and kindred workers	32,801	18	6,797	24	12,559	29	4,580	14	4,137	10	4,728	18
Operatives and kindred workers	37,972	22	5,762	19	11,525	25	7,683	24	8,570	22	4,433	17
Service workers, incl. private household	19,798	11	2,807	9	3,103	7	5,171	16	5,762	14	2,955	11
Laborers	24,380	14	3,694	12	8,274	18	4,137	12	5,615	14	2,660	10
Accessions by women	56,183	100	4,023	100	15,519	100	14,800	100	14,800	100	7,041	100
Professional, technical, and kindred workers	3,160	6	287	7	862	6	862	6	718	5	431	6
Managers, officials, and proprietors, incl. farm	7,184	13	862	21	718	5	1,293	9	3,018	20	1,293	18
Clerical and kindred workers	15,519	27	575	14	3,736	24	5,029	33	4,167	27	2,012	30
Sales workers	7,903	14	718	18	1,581	10	1,868	13	2,155	15	1,581	22
Craftsmen, foremen, and kindred workers	2,731	5	144	4	1,581	10	431	3	575	4	--	--
Operatives and kindred workers	8,908	16	718	18	4,598	30	1,581	11	1,724	12	287	4
Service workers, incl. private household	9,052	16	718	18	1,293	8	3,449	23	2,299	16	1,293	18
Laborers	1,725	3	--	--	1,152	7	287	2	144	1	144	2

<sup>A</sup>Excludes accessions of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding; total accessions include only those accessions which were preceded by a separation from a different major occupation group within the same two-year period.

<sup>C</sup>Excludes 443 jobs for which relevant information was not reported.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-28.

Job Separations in Each Two-Year Period, 1940-1949,  
by Major Industry Group of Job and Sex—  
San Francisco Work History Sample<sup>A</sup>

Major industry group of job and sex	Total separations		1940-1941		1942-1943		1944-1945		1946-1947		1948-1949	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
Separations by men	439,414 <sup>C</sup>	100	8,557	100	120,861	100	73,137	100	100,176	100	76,683	100
Extractive industries	10,343	2	3,694	5	2,512	2	1,330	2	1,625	2	1,182	2
Construction	46,394	11	8,422	12	14,036	12	4,876	7	8,717	9	10,343	13
Manufacturing	126,476	28	14,184	21	36,790	30	30,880	42	26,004	26	18,617	24
Durable goods	93,675	21	5,353	9	26,004	21	27,630	38	20,242	20	13,445	17
Nondurable goods	32,801	7	7,831	12	10,786	9	3,251	4	5,762	6	5,171	7
Transportation, communication, and other public utilities	49,054	11	6,649	10	14,036	12	7,979	11	13,445	13	6,944	9
Wholesale and retail trade	99,880	23	15,662	23	25,413	21	14,775	20	23,640	24	20,390	27
Finance, insurance, and real estate	12,559	3	2,807	4	3,546	3	739	1	2,955	3	2,512	3
Service industries	64,715	15	13,523	20	14,332	12	6,944	9	16,400	16	13,445	18
Public administration	29,994	7	3,546	5	10,195	8	5,615	8	7,388	7	3,251	4
Separations by women	210,652 <sup>D</sup>	100	17,674	100	48,568	100	49,861	100	51,298	100	43,251	100
Extractive industries	718	— <sup>E</sup>	—	—	144	— <sup>E</sup>	287	1	—	—	287	1
Construction	2,012	1	—	—	575	1	718	1	575	1	144	— <sup>E</sup>
Manufacturing	41,814	20	1,868	10	9,915	20	14,657	29	8,334	16	7,041	16
Durable goods	17,674	8	575	3	3,880	8	9,053	18	3,161	6	1,006	2
Nondurable goods	24,140	12	1,293	7	6,035	12	5,604	11	5,173	10	6,035	14
Transportation, communication, and other public utilities	11,926	6	1,150	7	2,874	6	2,443	5	3,736	7	1,724	4
Wholesale and retail trade	60,351	29	5,029	28	12,070	25	12,789	26	17,243	34	13,220	31
Finance, insurance, and real estate	10,202	5	287	2	1,724	4	2,730	5	2,874	6	2,586	6
Service industries	64,230	30	8,622	49	17,243	36	9,915	20	11,783	23	16,668	38
Public administration	19,398	9	718	4	4,023	8	6,322	13	6,754	13	1,581	4

<sup>A</sup>Excludes separations of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 2216 separations for which industry was not reported.

<sup>D</sup>Excludes 718 separations for which industry was not reported.

<sup>E</sup>Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-30.

Table A-33.  
 Job Separations Followed by Change in Major Industry Group  
 in Each Two-Year Period, 1940-49, by Major Industry  
 Group of Job and Sex--  
 San Francisco Work History Sample<sup>A</sup>

Major industry group of job and sex	Total separations <sup>B</sup>		1940- 1941		1942- 1943		1944- 1945		1946- 1947		1948- 1949	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
<b>Separations by men</b>	<b>203,454<sup>C</sup></b>	<b>100</b>	<b>34,426</b>	<b>100</b>	<b>54,077</b>	<b>100</b>	<b>37,825</b>	<b>100</b>	<b>46,246</b>	<b>100</b>	<b>30,880</b>	<b>100</b>
Extractive industries	7,093	3	2,069	6	1,330	2	1,330	4	1,330	3	1,034	3
Construction	15,809	8	3,398	10	5,762	11	1,921	5	2,216	5	2,512	8
Durable goods manu- facturing	45,212	22	2,955	9	7,831	14	16,400	43	10,934	23	7,092	23
Nondurable goods manufacturing	17,731	9	4,728	14	6,206	11	2,216	6	2,512	5	2,069	7
Transportation, com- munication, and other public util- ities	26,003	13	4,137	12	6,353	12	4,580	12	6,944	15	3,989	13
Wholesale and retail trade	37,973	19	7,092	20	11,525	21	4,433	12	8,717	19	6,206	20
Finance, insurance, and real estate	6,798	3	1,921	6	1,921	4	148	---	1,625	4	1,182	4
Service industries	29,994	15	6,501	18	7,979	15	3,103	8	7,240	16	5,171	17
Public administra- tion	16,843	8	1,625	5	5,171	10	3,694	10	4,728	10	1,625	5
<b>Separations by women</b>	<b>88,514<sup>D</sup></b>	<b>100</b>	<b>5,460</b>	<b>100</b>	<b>24,284</b>	<b>100</b>	<b>23,853</b>	<b>100</b>	<b>21,841</b>	<b>100</b>	<b>13,076</b>	<b>100</b>
Extractive industries	287	---	---	---	---	---	---	---	---	---	287	2
Construction	1,149	1	---	---	287	1	431	2	287	1	144	1
Durable goods manu- facturing	11,495	13	287	5	1,868	8	6,610	28	2,299	11	431	3
Nondurable goods manufacturing	10,490	12	575	11	3,305	14	2,874	12	1,724	8	2,012	15
Transportation, com- munication, and other public util- ities	7,185	8	575	11	1,724	7	1,006	4	2,874	13	1,006	8
Wholesale and retail trade	21,267	24	2,012	36	6,179	25	4,023	17	5,891	27	3,161	25
Finance, insurance, and real estate	5,891	7	---	---	1,293	5	1,437	6	1,724	8	1,437	11
Service industries	20,547	23	1,868	34	7,759	32	4,023	17	2,874	13	4,023	31
Public administra- tion	10,203	12	144	3	1,868	8	3,449	14	4,167	19	575	4

<sup>A</sup> Excludes separations of persons with casual work only, 1940-1949.

<sup>B</sup> Individual items do not always add to totals because of rounding; total separations include only those separations which were followed by a shift to a different major industry group within the same two-year period.

<sup>C</sup> Excludes 3250 separations for which relevant information was not reported.

<sup>D</sup> Excludes 1293 separations for which relevant information was not reported.

<sup>E</sup> Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-31.

Table A-34.  
 Job Accessions in Each Two-Year Period, 1940-1949,  
 by Major Industry Group of Job and Sex ---  
 San Francisco Work History Sample<sup>A</sup>

Major industry group of job and sex	Total accessions <sup>B</sup>		1940- 1941		1942- 1943		1944- 1945		1946- 1947		1948- 1949	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Accessions by men	458,918	100	70,773	100	96,334	100	85,844	100	125,885	100	80,082	100
Extractive industries	7,093	2	2,512	4	1,625	2	591	1	1,478	1	887	1
Construction	49,793	11	7,535	11	9,161	10	7,979	9	13,889	11	11,229	14
Manufacturing	124,851	28	22,311	31	39,745	42	23,345	27	26,448	21	13,002	16
Durable goods	94,413	21	14,775	20	37,086	39	16,696	19	17,730	14	8,126	10
Nondurable goods	30,437	7	7,535	11	2,660	3	6,649	8	8,717	7	4,876	6
Transportation, communication and other public utilities	50,827	11	6,058	9	13,741	14	10,934	13	14,627	12	5,467	7
Wholesale and retail trade	106,530	23	12,707	18	14,923	15	22,902	27	31,767	25	24,231	31
Finance, insurance, and real estate	15,663	3	2,216	3	2,069	2	2,069	2	6,206	5	3,103	4
Service industries	65,898	14	10,195	14	6,058	6	12,707	15	19,947	16	16,991	21
Public administration	38,268	8	7,240	10	9,013	9	5,319	6	11,525	9	5,171	6
Accessions by women	248,155	100	27,445	100	59,488	100	52,304	100	60,063	100	48,855	100
Extractive industries	862	<sup>E</sup>	-	-	144	<sup>E</sup>	287	1	287	<sup>E</sup>	144	<sup>E</sup>
Construction	3,449	1	287	1	1,150	2	575	1	862	1	575	1
Manufacturing	46,844	19	4,311	16	16,094	27	9,915	19	9,196	15	7,328	15
Durable goods	20,547	8	2,155	8	10,202	17	3,880	7	2,586	4	1,724	4
Nondurable goods	26,295	11	2,155	8	5,891	10	6,035	12	6,610	11	5,604	11
Transportation, communication and other public utilities	13,939	6	1,006	4	3,018	5	3,449	7	4,742	8	1,724	4
Wholesale and retail trade	71,849	29	7,185	26	12,789	21	17,388	33	17,962	31	16,525	34
Finance, insurance, and real estate	14,513	6	1,150	4	2,155	4	3,592	7	3,880	6	3,736	8
Service industries	70,553	28	11,783	43	13,076	22	10,058	19	19,255	33	16,381	33
Public administration	26,152	11	1,724	6	11,064	19	7,041	13	3,880	6	2,443	5

<sup>A</sup>Excludes accessions of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 3694 accessions for which relevant information was not reported.

<sup>D</sup>Excludes 1293 accessions for which relevant information was not reported.

<sup>E</sup>Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-32.

Table A-35.

Job Accessions Involving Change in Major Industry Group in  
Each Two-Year Period, 1940-1949, by Major Industry  
Group of Job and Sex -----  
San Francisco Work History Sample<sup>A</sup>

Major industry group of job and sex	Total accessions <sup>B</sup>		1940- 1941		1942- 1943		1944- 1945		1946- 1947		1948- 1949	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Accessions by men	203,451 <sup>C</sup>	100	34,426	100	54,077	100	37,825	100	46,246	100	30,880	100
Extractive industries	3,694	2	1,034	3	739	1	443	1	739	2	739	2
Construction	18,618	9	2,512	7	3,694	7	3,546	9	5,615	12	3,251	11
Durable goods manufacturing	45,656	23	9,604	27	23,493	44	4,433	12	5,762	12	2,364	8
Non-durable goods manufactur- ing	14,037	7	3,103	9	1,478	3	3,694	10	3,989	9	1,773	6
Transportation, communi- cation, and other public utilities	25,266	12	3,694	11	7,831	14	5,467	14	6,649	14	1,625	5
Wholesale and retail trade	41,075	20	5,024	15	7,092	13	9,456	26	9,899	22	9,604	31
Finance, insurance, and real estate	6,798	3	887	3	887	2	887	2	2,955	6	1,182	4
Service industries	26,595	13	3,103	9	2,807	5	7,535	20	6,797	15	6,353	20
Public administration	21,720	11	5,467	16	6,058	11	2,364	6	3,842	8	3,989	13
Accessions by women	88,514 <sup>D</sup>	100	5,460	100	24,284	100	23,853	100	21,841	100	13,076	100
Extractive industries	719	1	-	-	144	1	144	1	287	1	144	1
Construction	2,443	3	144	3	862	4	431	2	575	3	431	3
Durable goods manufacturing	10,921	12	862	16	5,604	23	1,868	8	1,581	7	1,006	8
Non-durable goods manufacturing	8,479	10	431	8	1,868	8	3,018	13	2,012	9	1,150	9
Transportation, communication and other public utilities	8,047	9	287	5	2,012	8	1,868	8	3,018	14	862	7
Wholesale and retail trade	21,267	24	1,581	28	4,311	18	7,041	28	5,029	23	3,305	25
Finance, insurance, and real estate	7,041	8	431	8	575	2	1,724	7	2,299	11	2,012	15
Service industries	17,386	19	1,293	24	3,736	15	3,736	16	5,891	27	2,730	21
Public administration	12,214	14	431	8	5,173	21	4,023	17	1,150	5	1,437	11

<sup>A</sup>Excludes accessions of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals, because of rounding; total accessions include only those accessions which were preceded by a separation from a different major industry group within the same two-year period.

<sup>C</sup>Excludes 3250 separations for which relevant information was not reported.

<sup>D</sup>Excludes 1293 separations for which relevant information was not reported.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-31.

Major Occupation Group of New Job or Assignment by Major Occupation Group of Former Job or Assignment for All Civilian Job or Assignment Shifts by Sex, January 1940-December 1949--San Francisco Work History Sample A--

Major occupation group of former job or assignment and sex	Total shifts <sup>B</sup>		Professional, technical, and kindred workers		Managers, officials, & proprietors, incl. farm workers		Clerical and kindred workers		Sales workers		Craftsmen, foremen, & kindred workers		Operatives and kindred workers		Service workers, incl. private household		Laborers	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
Shifts by men <sup>C</sup>	1,771,579	100	27,630	100	54,816	100	39,154	100	32,062	100	115,099	100	95,891	100	61,317	100	48,610	100
Professional, technical, and kindred workers	26,891	6	17,287	62	3,694	7	1,773	5	1,773	6	887	1	887	1	443	1	448	1
Managers, officials, & proprietors, incl. farm workers	48,906	10	3,546	13	16,548	30	4,728	12	5,944	21	7,979	7	4,433	5	2,660	4	2,069	4
Clerical and kindred workers	43,587	9	2,807	10	6,058	11	16,844	43	3,103	10	4,285	4	5,910	6	1,330	2	3,251	7
Sales workers	29,846	6	1,034	4	6,501	12	2,660	7	13,150	40	1,330	1	2,955	3	739	1	1,478	3
Craftsmen, foremen, and kindred workers	108,007	24	1,478	5	9,456	17	3,989	10	1,773	6	65,602	57	13,150	14	6,619	11	5,910	12
Operatives and kindred workers	106,086	22	1,034	4	7,683	14	4,433	11	3,398	11	21,424	19	48,610	50	9,013	15	10,490	22
Service workers, incl. private household	56,737	12	448	1	2,807	5	1,625	4	887	3	3,842	3	7,683	8	35,165	57	4,580	9
Laborers	54,500	11	296	1	2,069	4	3,103	8	1,034	3	9,752	8	12,263	13	5,319	9	20,685	43
Shifts by women	212,520	100	16,237	100	16,237	100	84,491	100	18,536	100	6,466	100	26,296	100	41,844	100	2,443	100
Professional, technical, and kindred workers	18,249	9	10,490	64	1,724	11	5,449	4	1,006	5	444	2	431	2	1,006	2	---	---
Managers, officials, & proprietors, incl. farm workers	13,794	6	431	3	6,322	39	3,018	4	1,581	9	287	4	1,150	4	862	2	444	2
Clerical and kindred workers	83,485	40	4,167	25	4,023	25	64,374	76	3,161	17	862	13	2,443	9	4,167	10	287	2
Sales workers	18,967	9	575	4	1,724	11	4,598	5	8,622	47	1,006	16	1,437	5	1,006	2	---	---
Craftsmen, foremen, and kindred workers	5,748	3	---	---	862	5	1,150	1	431	2	1,868	30	287	1	1,006	2	444	2
Operatives and kindred workers	28,595	13	431	3	718	4	3,305	4	2,299	12	1,437	22	15,806	61	4,167	10	431	2
Service workers, incl. private household	41,383	19	444	1	862	5	4,023	5	1,437	8	718	11	4,167	16	29,169	71	862	2
Laborers	2,299	1	---	---	---	---	575	1	---	---	444	2	575	2	431	1	575	1

A Excludes shifts of persons with casual work only, 1940-1949.

B Excludes items do not always add to totals because of rounding.

C Excludes 443 shifts for which relevant information was not reported.

D Percent not shown where less than 0.5.

E Percentages not shown for groups with fewer than 2,955 shifts (of men) or 2,874 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulation O-33.

Table A-37.

Major Occupation Group of New Job or Assignment by Major Occupation Group of Former Job or Assignment, for All Inter-Group Civilian Job or Assignment Shifts, January 1940-December 1949--"Expected" Distribution<sup>A</sup> Compared with Actual Distribution of Former Jobs, by Sex--  
San Francisco Work History Sample

Major occupation group of former job or assignment and sex	Major occupation group of new job or assignment							
	Professional, technical, and kindred workers		Managers, officials, and proprietors, incl. farm		Clerical and kindred workers		Sales workers	
	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution
Total shifts by men	231,084	10,343	208,330	38,268	213,945	22,311	223,992	18,912
Percent	100	100	100	100	100	100	100	100
Professional, technical, and kindred workers	--	--	5	10	4	8	4	9
Managers, officials, and proprietors, incl. farm	14	35	--	--	15	21	14	38
Clerical and kindred workers	12	27	13	16	--	--	12	16
Sales workers	7	10	8	17	8	12	--	--
Craftsmen, foremen, and kindred workers	18	14	20	25	20	18	19	9
Operatives and kindred workers	25	10	28	20	27	20	26	18
Service workers, incl. private household	9	1	10	7	10	7	10	5
Laborers	15	3	16	5	16	14	15	5
Major occupation group of former job or assignment and sex	Craftsmen, foremen, and kindred workers		Operatives and kindred workers		Service workers, incl. private household		Laborers	
	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution
Total shifts by men	198,283	49,497	183,212	47,281	219,116	26,152	206,853	27,925
Percent	100	100	100	100	100	100	100	100
Professional, technical, and kindred workers	5	2	5	2	4	2	5	1
Managers, officials, and proprietors, incl. farm	16	16	18	9	15	10	16	7
Clerical and kindred workers	13	9	15	12	12	5	13	12
Sales workers	8	3	9	6	8	3	8	5
Craftsmen, foremen, and kindred workers	--	--	23	29	19	25	20	21
Operatives and kindred workers	30	42	--	--	27	35	28	38
Service workers, incl. private household	11	8	12	16	--	--	10	16
Laborers	17	20	18	26	15	20	--	--

(Continued on next page)

Table A-37 (continued)

Major occupation group of former job or assignment and sex	Major occupation group of new job or assignment							
	Professional, technical, and kindred workers		Managers, officials, and proprietors, incl. farm		Clerical and kindred workers		Sales workers	
	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution
Total shifts by women	67,248	5,748	67,535	9,915	55,896	20,117	64,661	9,915
Percent	100	100	100	100	100	100	100	100
Professional, technical, and kindred workers	--	--	11	17	14	17	12	10
Managers, officials, and proprietors, incl. farm	11	8	--	--	13	15	12	16
Clerical and kindred workers	29	72	29	41	--	--	29	33
Sales workers	15	10	15	17	19	23	--	--
Operatives and kindred workers	19	8	19	7	22	16	20	23
Service workers, incl. private household	18	2	18	9	22	20	19	14
Other occupations	8	--	8	9	10	9	8	4
Major occupation group of former job or assignment and sex	Operatives and kindred workers		Service workers, incl. private household		Other occupations			
	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution		
Total shifts by women	62,219	10,490	62,793	12,645	69,691	6,179		
Percent	100	100	100	100	100	100		
Professional, technical, and kindred workers	12	4	12	8	11	2		
Managers, officials, and proprietors, incl. farm	12	11	12	7	11	7		
Clerical and kindred workers	30	23	31	33	27	19		
Sales workers	17	14	16	8	15	16		
Operatives and kindred workers	--	--	21	33	18	30		
Service workers, incl. private household	20	40	--	--	18	26		
Other occupations	9	8	8	11	--	--		

<sup>A</sup>The "expected distribution" of former jobs is the percentage distribution by major occupation group of all former jobs held by workers who participated in inter-group shifts, excluding those in the major occupation group of the new job.

<sup>B</sup>Excludes shifts of persons with casual work only, 1940-1949.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-33.

Major Occupation Group of New Job or Assignment by Major Occupation Group of Former Job or Assignment, for All Civilian Job or Assignment Shifts by Sex, January 1940-December 1949--  
San Francisco Work History Sample<sup>A</sup>

Major occupation group of former job or assignment and sex	Total shifts <sup>B</sup>	Major occupation group of new job or assignment							
		Professional, technical, & kindred workers	Managers, officials, & proprietors, incl. farm	Clerical workers	Sales workers	Craftsmen, foremen, & kindred workers	Operatives & kindred workers	Service workers, incl. priv. household	Laborers
Shifts by men	198,156	9,456	18,765	14,430	6,274	57,180	43,291	21,424	25,266
Professional, technical, and kindred workers	10,047	5,762	1,625	1,182	443	443	296	148	148
Managers, officials, and proprietors, incl. farm	18,321	1,330	4,285	2,216	1,773	4,580	2,512	591	1,036
Clerical and kindred workers	18,026	591	2,069	5,024	1,478	2,660	3,251	739	2,216
Sales workers	10,490	591	1,921	1,330	2,807	1,182	1,330	443	887
Craftsmen, foremen, and kindred workers	41,075	887	3,546	1,478	443	26,891	4,137	1,330	2,364
Operatives and kindred workers	46,937	296	3,103	1,478	887	12,263	20,538	2,955	5,319
Service workers, incl. private household	24,675	---	1,478	591	296	2,069	4,433	13,150	2,660
Laborers	28,664	---	732	1,182	148	7,092	5,797	2,069	10,638
Shifts by women	81,330	6,035	5,173	32,187	5,891	3,449	12,358	14,082	2,155
Professional, technical, and kindred workers	7,185	3,736	1,293	862	431	144	144	575	---
Managers, officials, and proprietors, incl. farm	4,023	144	1,581	1,006	575	---	575	---	144
Clerical and kindred workers	29,888	1,724	718	23,709	1,150	287	1,293	862	144
Sales workers	7,616	144	718	1,868	2,587	718	1,293	287	---
Craftsmen, foremen, and kindred workers	2,443	---	431	718	144	718	---	287	144
Operatives and kindred workers	11,495	287	144	2,012	575	718	5,604	1,724	431
Service workers, incl. private household	16,956	---	287	1,591	431	718	3,018	10,232	718
Laborers	1,724	---	---	431	---	144	431	144	575

A Excludes shifts of persons with casual work only, 1940-1949.

B Individual items do not always add to totals because of rounding.

C Excludes 296 shifts for which relevant information was not reported.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-15.

Table A - 39.

Major Occupation Group of New Job or Assignment by Major Occupation Group of Former Job or Assignment, for All Civilian Job or Assignment Shifts by Sex,

January 1945-December 1949--

San Francisco Work History Sample<sup>A</sup>

Major occupation group of former job or assignment and sex	Total shifts <sup>B</sup>	Major occupation group of new job or assignment									
		Professional, technical, & kindred workers	Managers, officials, proprietors, incl. farm	Clerical workers	Sales workers	Craftsmen, foremen, & kindred workers	Operatives & kindred workers	Service workers incl. priv. household	Laborers		
Shifts by men	233,894	13,859	31,176	19,208	19,503	49,645	45,212	35,608	13,651		
Professional, technical, and kindred workers	13,445	9,865	2,069	591	739	296	591	296			
Managers, officials, and proprietors, incl. farm	25,118	1,773	10,343	1,921	4,285	2,660	1,625	1,625	887		
Clerical and kindred workers	20,094	1,773	3,173	9,308	1,182	1,478	1,921	413	887		
Sales workers	16,400	443	4,285	739	8,165	1,182	1,921	296	591		
Craftsmen, foremen, and kindred workers	58,305	591	5,024	1,921	1,330	34,426	7,683	4,580	3,251		
Operatives and kindred workers	49,792	296	3,842	2,216	1,921	6,944	21,822	5,319	4,433		
Service workers, incl. private household	28,712		1,182	1,034	591	1,478	2,512	20,390	1,625		
Laborers	21,424	148	1,330	1,478	591	2,216	5,024	2,660	7,979		
Shifts by women	116,534	7,472	10,058	47,448	10,921	2,874	12,789	24,715	287		
Professional, technical, and kindred workers	8,765	5,029	287	2,299	575		144	431			
Managers, officials, and proprietors, incl. farm	8,765	297	4,023	2,012	1,006	287	575	575			
Clerical and kindred workers	47,275	1,437	3,305	36,641	1,724	575	1,006	2,443			
Sales workers	10,058	431	1,006	2,299	5,460	287		575			
Craftsmen, foremen, and kindred workers	3,305		431	431	287	1,150	287	718			
Operatives and kindred workers	14,944		431	1,293	1,006	575	9,627	1,868			
Service workers, incl. private household	22,847	144	575	2,299	862		1,006	17,818			
Laborers	575			144			144	287	144		

<sup>A</sup> Excludes shifts of persons with casual work only, 1940-1949.<sup>B</sup> Individual items do not always add to totals because of rounding.<sup>C</sup> Excludes 143 shifts for which relevant information was not reported.

Source: Occupational "Ability Survey, San Francisco, Tabulation O-19.

Table A - 40

Major Occupation Group of New Job or Assignment by Major Occupation Group of Former Job or Assignment, for all Inter-Group Job or Assignment Shifts by Men Shifting into Selected Occupation Groups, January, 1940-December 1944 and January 1945-December 1949--Expected Distribution<sup>a</sup> Compared with Actual Distribution of Former Jobs--

San Francisco Work History Sample B

Major occupation group of former job or assignment and period	Major occupation group of new job											
	Managers, officials, clerical, and professional workers, incl.	Operatives and kindred workers	Craftsmen, Foremen, and kindred workers	Service workers, incl. private household	Proprietors, incl. farm	Managers, officials, and clerical and kindred workers	Proprietors, incl. farm	Managers, officials, and clerical and kindred workers	Proprietors, incl. farm	Managers, officials, and clerical and kindred workers	Proprietors, incl. farm	
Total shifts by men, 1940-1944	95,005	114,480	96,039	9,456	94,857	33,289	82,741	22,754	97,516	3,274	91,015	14,627
Percent	100	100	100	100	100	100	100	100	100	100	100	100
Professional, technical, and kindred workers	5	11	4	12	5	1	5	1	4	2	5	1
Managers, officials, and proprietors, incl. farm	--	--	15	24	15	15	17	11	14	7	15	7
Clerical and kindred workers	14	14	--	--	14	9	16	14	13	2	14	15
Sales workers	8	13	8	14	8	4	9	6	3	5	8	6
Craftsmen, Foremen, and kindred workers	15	25	15	16	--	--	17	19	15	16	16	16
Operatives and kindred workers	27	22	27	14	27	40	--	--	28	36	29	37
Service workers, incl. private household	12	10	12	6	12	7	14	19	--	--	13	18
Laborers	19	5	19	12	19	23	22	31	18	25	--	--
Total shifts by men, 1945-1949	94,118	83,833	91,107	9,899	94,514	45,218	83,923	30,399	100,471	45,218	95,443	11,272
Percent	100	100	100	100	100	100	100	100	100	100	100	100
Professional, technical, and kindred workers	5	10	5	6	5	2*	5	3	5	2	5	--
Managers, officials, and proprietors, incl. farm	--	--	15	19	17	17	18	8	15	11	15	3
Clerical and kindred workers	11	15	--	--	13	10	13	2	11	3	11	8
Sales workers	3	21	9	7	9	1	7	5	7	2	9	5
Craftsmen, Foremen, and kindred workers	26	24	24	17	--	--	22	38	24	30	26	28
Operatives and kindred workers	27	19	25	24	30	45	--	--	25	35	26	37
Service workers, incl. private household	11	6	14	19	18	15	19	22	13	17	9	14
Laborers	19	5	19	12	19	23	22	31	18	25	--	--

<sup>a</sup> Expected distribution of former jobs is the percentage of shifts by men who participated in the new job. Former jobs held by workers who participate in the new job are assumed to be the same as the distribution of former jobs held by workers who participated in the new job. Source: Occupational Mobility Survey, San Francisco, 1940-1949, 0-15 and 0-17.

Table A-11.  
Major Industry Group of New Job by Major Industry Group  
of Former Job for All Civilian Job Shifts by Sex,  
January 1940-December 1949--  
San Francisco Work History Sample<sup>A</sup>

Major industry group of former job and sex	Total shifts <sup>B</sup>		Extractive industries		Construction		Durable goods manufacturing		Nondurable goods manufacturing		Transportation, communication, and other public utilities		Wholesale and retail trade		Finance, insurance, and real estate		Service industries		Public administration	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Shifts by men	426,117	100	6,058	100	47,724	100	86,878	100	27,186	100	47,872	100	100,471	100	13,889	100	60,283	100	35,756	100
Extractive industries	10,343	2	1,773	30	2,216	5	2,069	2	443	2	1,478	3	1,330	1	448	1	739	1	448	1
Construction	45,064	11	--	--	26,448	54	6,649	8	1,921	7	1,773	4	2,512	3	443	3	2,512	4	2,807	8
Durable goods manufacturing	91,015	21	1,034	17	7,535	16	36,495	42	4,580	17	11,081	23	13,445	13	3,103	22	7,388	12	6,353	18
Nondurable goods manufacturing	31,619	7	739	12	887	2	5,319	6	10,786	41	2,512	5	5,910	6	443	3	3,103	5	1,921	5
Transportation, communication, and other public utilities	48,167	11	443	7	1,921	4	8,717	10	1,478	5	18,026	37	8,570	9	1,034	7	4,728	8	3,251	9
Wholesale and retail trade	96,630	23	1,330	22	3,694	8	11,377	13	3,103	11	6,944	15	53,043	53	1,478	11	9,899	16	5,762	16
Finance, insurance, and real estate	11,820	3	--	--	296	1	1,773	2	887	3	443	1	1,478	1	4,580	33	739	1	1,625	5
Service industries	62,795	15	591	10	2,216	5	9,161	11	3,103	11	2,955	6	10,195	10	1,478	11	28,221	48	4,876	14
Public administration	28,664	7	448	2	2,512	5	5,319	6	887	3	2,660	6	3,989	4	1,182	9	2,955	5	9,013	25

(Continued on next page)

Table A - 11 (Continued)

Major industry group of former job and sex	Total shifts <sup>B</sup>	Major industry group of new job																	
		Extractive industries	Construction	Durable goods manufacturing	Nondurable goods manufacturing	Transportation, communication, and other public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Service industries	Public administration	Number	Per cent	Number	Per cent					
Shifts by women	196,127 <sup>D</sup>	100	862 <sup>F</sup>	3,018	100	14,800	100	20,835	100	11,639	100	58,339	100	10,777	100	56,327	100	19,829	100
Extractive industries	718	—	144	—	—	—	—	—	—	—	—	431	—	—	—	144	—	—	—
Construction	1,868	1	—	287	—	—	131	—	144	1	431	1	—	144	—	—	—	—	287
Durable goods manufacturing	17,243	9	—	—	—	—	2,012	10	1,868	16	5,748	10	—	718	7	2,012	4	1,363	9
Nondurable goods manufacturing	22,129	11	—	144	—	—	9,777	47	575	5	4,598	8	1,026	9	4,311	8	718	4	
Transportation, communication, and other public utilities	11,352	6	—	575	19	431	3	862	4	2,586	22	2,730	5	431	4	2,012	4	1,724	9
Wholesale and retail trade	57,189	29	—	718	23	5,929	34	2,730	13	3,161	23	32,331	54	2,730	25	7,328	13	3,161	16
Finance, insurance, and real estate	9,136	5	144	144	5	431	3	1,150	6	287	2	1,006	2	3,013	29	1,437	3	1,531	8
Service industries	58,339	30	144	362	28	3,890	26	3,161	15	1,724	15	8,909	15	1,863	17	33,480	53	4,311	22
Public administration	18,393	9	431	287	10	1,026	7	718	3	1,233	11	2,156	4	862	8	5,460	10	6,179	31

<sup>A</sup>Excludes shifts of persons with casual work only, 1940-1949.

<sup>B</sup>Individual items do not always add to totals because of rounding.

<sup>C</sup>Excludes 3546 shifts for which relevant information was not reported.

<sup>D</sup>Excludes 1293 shifts for which relevant information was not reported.

<sup>E</sup>Percent not shown where less than 0.5.

<sup>F</sup>Percent not shown for groups with fewer than 2,925 shifts (of men) or 2,974 shifts (of women).

Source: Occupational Mobility Survey, San Francisco, Tabulation O-31.

Table A-42.

Major Industry Group of New Job by Major Industry Group of Former Job,  
For All Inter-Group Civilian Job Shifts, January 1940 -  
December 1949 - "Expected Distribution"<sup>A</sup> Compared with Actual  
Distribution of Former Jobs, by Sex - - - -  
San Francisco Work History Sample<sup>B</sup>

Major industry group of former job and sex	Major industry group of new job							
	Construction		Durable goods manufacturing		Nondurable goods manufacturing		Transportation, communication, & other public utilities	
	Expected distrib- ution	Actual distrib- ution	Expected distrib- ution	Actual distrib- ution	Expected distrib- ution	Actual distrib- ution	Expected distrib- ution	Actual distrib- ution
Total shifts by men Percent	218,968 100	21,276 100	183,065 100	50,383 100	216,752 100	16,400 100	207,444 100	29,846 100
Construction	-	-	10	13	9	12	9	6
Durable goods manufacturing	24	36	-	-	25	28	26	38
Nondurable goods manufacturing	10	4	11	11	-	-	10	8
Transportation, communication, and other public utilities	14	9	16	17	14	9	-	-
Wholesale and retail trade	20	17	24	22	30	19	21	23
Service industries	16	10	19	18	16	19	17	10
Public administration	9	12	11	11	9	5	9	9
Other industries	7	12	9	8	7	8	8	6
Major industry group of former job and sex	Wholesale and retail trade		Service industries		Public administration		Other industries	
	Expected distrib- ution	Actual distrib- ution	Expected distrib- ution	Actual distrib- ution	Expected distrib- ution	Actual distrib- ution	Expected distrib- ution	Actual distrib- ution
Total shifts by men Percent	193,998 100	47,428 100	203,011 100	32,062 100	217,934 100	26,743 100	221,924 100	13,445 100
Construction	10	5	9	8	9	10	8	3
Durable goods manufacturing	27	29	27	23	24	24	24	31
Nondurable goods manufacturing	11	12	10	10	10	7	9	9
Transportation, communication, and other public utilities	16	18	15	15	14	12	14	11
Wholesale and retail trade	-	-	21	30	20	22	20	21
Service industries	18	22	-	-	16	18	16	15
Public administration	10	8	10	9	-	-	9	10
Other industries	8	6	8	5	7	7	-	-

(continued on next page)

Table A-42. (Continued)

Major industry group of former job and sex	Major industry group of new job							
	Durable goods manufacturing		Nondurable goods manufacturing		Transportation, communication, & other public utilities		Wholesale and retail trade	
	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution
Total shifts by women Percent	90,957 100	11,783 100	92,825 100	11,064 100	96,417 100	9,053 100	80,324 100	26,008 100
Durable goods manufacturing	-	-	15	18	14	21	18	22
Nondurable goods manufacturing	14	9	-	-	13	6	15	18
Transportation, communication, and other public utilities	10	4	9	8	-	-	11	10
Wholesale and retail trade	27	42	27	25	26	35	-	-
Service industries	27	32	27	29	26	19	31	35
Public administration	13	9	13	6	13	14	15	8
Other industries	9	4	9	14	8	5	10	7
Major industry group of former job and sex	Service industries		Public administration		Other industries			
	Expected distribution	Actual distribution	Expected distribution	Actual distribution	Expected distribution	Actual distribution		
Total shifts by women Percent	80,324 100	22,847 100	92,969 100	13,651 100	97,279 100	10,777 100		
Durable goods manufacturing	18	9	15	14	15	7		
Nondurable goods manufacturing	15	19	13	5	13	11		
Transportation, communication, and other public utilities	11	9	9	13	9	9		
Wholesale and retail trade	31	31	27	23	25	31		
Service industries	-	-	27	31	25	27		
Public administration	15	24	-	-	13	15		
Other industries	10	8	9	14	-	-		

A The "expected distribution" of former jobs is the percentage distribution by major industry group of all former jobs held by workers who participated in inter-group shifts, excluding those in the major occupation group of the new job.

B Excludes shifts of persons with casual work only, 1940-1949.

Source: Occupational Mobility Survey, San Francisco, Tabulation O-34.

Table A - 43.

Major Industry Group of New Job by Major Industry Group of Former Job for all Job Shifts by Sex, January 1940--  
December 1944--  
San Francisco Work History Sample A

Major industry group of former job and sex	Total shifts	Major industry group of new job									
		Extractive industries	Construction	Durable goods manu- facturing	Non-durable goods manu- facturing	Transportation, etc.	Wholesale & retail trade	Finance, insurance, & real estate	Service industries	Public administration	
Shifts by men	172,279	3,546	17,878	53,338	9,456	21,572	29,845	16,400	16,844	16,844	
Extractive industries	5,762	1,478	887	1,921	296	443	443	443	443	443	
Construction	21,129	—	10,934	4,876	1,330	1,034	443	—	—	—	
Durable goods manu- facturing	32,505	443	1,773	16,548	591	5,171	3,694	448	—	—	
Non-durable goods manu- facturing	15,957	296	739	4,137	3,398	1,478	3,251	296	—	—	
Transportation, communi- cation, and other	19,208	296	296	6,797	296	6,206	3,398	448	—	—	
Wholesale and retail trade	35,313	739	1,330	7,388	1,330	4,137	13,741	443	—	—	
Finance, insurance, and real estate	5,615	—	448	1,478	591	448	443	1,625	—	—	
Service industries	25,266	296	887	6,797	1,182	1,773	3,133	739	—	—	
Public administration	11,525	—	887	3,398	443	1,182	1,330	—	—	—	
Shifts by women	73,570	731	1,293	10,058	6,179	4,167	1,393	2,730	19,111	11,208	
Extractive industries	287	444	—	—	—	—	—	—	—	—	
Construction	862	—	444	—	—	—	287	444	—	—	
Durable goods manu- facturing	7,185	—	—	1,724	575	1,293	1,368	431	—	—	
Non-durable goods manu- facturing	7,759	—	444	575	2,536	431	1,531	—	—	—	
Transportation, communi- cation, and other	3,305	—	444	287	444	575	862	—	—	—	
Wholesale and retail trade	19,829	—	297	3,305	1,006	431	8,765	862	—	—	
Finance, insurance, and real estate	2,730	—	444	287	431	—	718	—	—	—	
Service industries	25,577	—	287	3,305	1,293	1,293	4,767	431	—	—	
Public administration	6,035	297	444	575	444	431	431	444	—	—	

Excludes shifts of persons with casual work only, 1940-1949.

Individual items do not always add to totals because of rounding.

Excludes 1625 shifts for which relevant information was not reported.

Excludes 144 shifts for which relevant information was not reported.

Source: Occupational Mobility Survey, San Francisco, Population 0-11.

Table A - 14.

Major Industry Group of New Job by Major Industry Group of Former Job  
for all Job Shifts by Sex, January 1945-December 1949--  
San Francisco Work History Sample<sup>a</sup>

Major industry group of former job and sex	Total Shifts B	Major industry group of new job									
		Extractive Industries	Construction	Durable Goods manufacturing	Non-durable Goods manufacturing	Transportation, etc.	Wholesale and retail trade	Finance, insurance, & real estate	Service Industries	Public administration	
Shifts by men	212,024	2,216	26,300	27,182	11,775	22,015	59,987	8,122	38,238	12,559	
Extractive Industries	3,546	295	739	118	—	1,031	887	118	296	—	
Construction	20,685	—	13,445	1,773	591	739	1,921	296	1,182	739	
Durable goods manufacturing	19,054	591	5,319	16,991	3,694	14,580	8,570	2,216	4,580	2,512	
Non-durable goods manufacturing	12,116	443	—	739	6,058	591	2,216	118	1,921	—	
Transportation, communication, and other public utilities	24,527	118	1,625	1,330	739	9,604	4,876	739	4,137	1,330	
Wholesale and retail trade	50,827	591	2,216	2,807	1,625	2,512	31,914	1,031	5,910	2,216	
Finance, insurance, and real estate	5,171	—	149	296	118	296	1,031	2,216	296	739	
Service Industries	32,653	—	1,182	2,069	1,178	1,182	6,353	739	18,026	1,625	
Public administration	13,445	118	1,625	1,330	443	1,473	2,216	887	1,921	3,393	
Shifts by women	108,200	431	1,724	4,454	13,363	6,610	36,210	7,328	30,894	7,185	
Extractive Industries	431	—	—	—	—	—	431	—	—	—	
Construction	862	—	—	—	287	111	111	—	—	111	
Durable goods manufacturing	8,622	—	—	1,150	1,293	575	3,449	287	1,581	287	
Non-durable goods manufacturing	12,645	—	—	431	7,041	111	2,012	862	2,155	—	
Transportation, communication, and other public utilities	6,035	—	431	111	431	1,293	1,868	431	862	575	
Wholesale and retail trade	34,342	—	431	1,724	1,581	2,586	21,554	1,724	3,380	862	
Finance, insurance, and real estate	6,035	111	—	111	718	287	575	2,155	1,150	862	
Service Industries	28,451	111	575	575	1,581	431	4,454	1,293	18,393	1,006	
Public administration	10,777	111	111	287	431	1,150	1,724	575	2,874	3,449	

<sup>a</sup>Excludes shifts of persons with casual work only, 1940-1949.

<sup>b</sup>Individual items do not always add to totals because of rounding.

<sup>c</sup>Excludes 1773 shifts for which relevant information was not reported.

<sup>d</sup>Excludes 1150 shifts for which relevant information was not reported.

<sup>e</sup>Source: Occupational Mobility Survey, San Francisco, Tabulation O-15.

Table A - 45.

Major Industry Group of New Job by Major Industry Group of Former Job, for All Inter-group Job Shifts by Men Shifting into Selected Major Industry Groups, January 1940-December 1941, and January 1945-December 1949—  
 "Expected Distribution" A Compared with Actual Distribution of Former Jobs—  
 San Francisco Work History Sample B

Major industry group of former job and period	Major Industry Group of New Job												
	Construction	Durable goods manufacturing	Expected durable goods manufacturing	Transportation, communication, and other public utilities	Wholesale and retail trade	Service industries	Public administration	Construction	Durable goods manufacturing	Expected durable goods manufacturing	Transportation, communication, and other public utilities	Wholesale and retail trade	Service industries
Total shifts by men, 1940-1941	96,482	6,944	90,720	36,790	93,675	15,366	85,105	16,105	89,390	8,422	98,846	13,150	100
Percent	100	100	100	100	100	100	100	100	100	100	100	100	100
Construction	—	17	—	11	11	7	12	3	11	11	10	12	100
Durable goods manufacturing	17	—	—	—	17	33	19	23	18	19	16	19	100
Non-durable goods manufacturing	13	13	14	11	13	13	15	20	14	14	13	9	100
Transportation, communication, and other public utilities	13	4	14	19	—	—	15	21	15	5	13	10	100
Wholesale and retail trade	22	19	24	20	24	26	—	—	24	39	23	23	100
Service industries	18	13	19	12	18	12	20	19	—	—	17	19	100
Public administration	8	13	9	9	8	8	9	8	9	7	—	—	100
Others	9	15	9	9	9	4	10	6	9	5	8	8	100
Total shifts by men, 1945-1949	102,668	12,854	77,865	13,490	95,005	12,411	91,015	23,073	95,300	20,242	97,830	9,161	100
Percent	100	100	100	100	100	100	100	100	100	100	100	100	100
Construction	—	—	9	17	8	6	8	7	8	6	7	8	100
Durable goods manufacturing	31	41	—	17	34	36	35	30	33	23	32	27	100
Non-durable goods manufacturing	6	—	8	7	6	5	7	8	6	9	6	—	100
Transportation, communication and other public utilities	15	13	19	13	—	—	16	17	16	23	15	15	100
Wholesale and retail trade	18	17	24	26	20	20	—	—	20	30	19	24	100
Service industries	14	9	19	20	15	10	16	23	—	—	15	18	100
Public administration	10	13	8	13	11	12	11	8	11	9	—	—	100
Others	6	7	8	4	6	11	7	7	6	3	6	8	100

The "expected distribution" of former jobs is the percentage distribution by major industry group of all former jobs held by workers who participated in inter-group shifts, excluding those in the major occupation group of the new job.  
 3. Excludes shifts of persons with casual work only, 1940-1949.  
 Source: Occupational Mobility Survey, San Francisco, Tabulations O-14 and O-18.

Table A - 46.

Net Shift in Employment Status or Occupation, January 1940—  
December 1949, by Age in 1951 and Sex—

San Francisco work History Sample<sup>A</sup>

Age in 1951 and sex	Total persons	Employed 1949				Not employed 1949	
		In same occupation group 1940	In different occupation but same occupation group 1940	In different occupation group 1940	Not employed 1940	Employed 1940	Not employed 1940
Men	211,433 <sup>B</sup>	86,878	16,696	68,852	29,550	6,353	3,103
Percent	100	41	8	33	14	3	1
25-34 years	44,917	2,955	3,251	13,741	21,424	1,330	2,216
Percent	100	7	7	31	47	3	5
35-44 years	61,613	22,902	6,058	26,300	3,398	2,512	443
Percent	100	37	10	42	6	4	1
45-54 years	55,998	29,994	4,433	17,435	2,955	739	443
Percent	100	54	8	31	5	1	1
55-64 years	36,642	22,458	2,660	9,161	1,034	1,330	—
Percent	100	61	7	25	3	4	—
65 and over	12,263	8,570	296	2,216	739	443	—
Percent	100	70	2	18	6	4	—
Women	112,942	32,905	7,041	15,950	44,976	5,029	7,041
Percent	100	29	6	14	41	4	6
25-34 years	28,307	2,443	1,006	3,592	17,243	718	3,305
Percent	100	9	4	13	59	3	12
35-44 years	35,205	8,478	2,730	6,897	12,501	3,018	1,581
Percent	100	24	8	20	35	9	4
45-54 years	30,606	11,783	2,299	3,736	9,915	1,006	1,868
Percent	100	39	8	12	32	3	6
55-64 years	13,938	7,328	575	1,437	4,311	144	144
Percent	100	53	4	10	31	1	1
65 and over	4,886	2,874	431	287	1,006	144	144
Percent	100	58	9	6	21	3	3

<sup>A</sup>Excludes persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Excludes 591 men not reporting relevant information.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-53.

Table A-47.

Net Shift in Employment Status or Occupation, January 1940 -  
December 1949, by Years of Residence in San Francisco - Oakland  
Standard Metropolitan Area and Sex ———  
San Francisco Work History Sample<sup>A</sup>

Years of residence in Area (as of 1951) and sex	Total persons	Employed 1949				Not employed 1949	
		In same occupation group 1940	In different occu- pation but same occupation group 1940	In different occupation group 1940	Not employ- ed 1940	Employ- ed 1940	Not employ- ed 1940
Men	211,433 <sup>B</sup>	86,878	16,696	68,852	29,550	6,353	3,103
Percent	100	41	8	33	14	3	1
0-5 years	43,439	9,752	3,546	16,400	9,752	2,216	1,773
Percent	100	22	8	39	22	5	4
6-11 years	29,698	6,353	3,989	11,229	6,353	1,625	148
Percent	100	21	13	40	21	5	0 <sup>C</sup>
12-20 years	32,062	13,889	2,069	12,411	3,398	296	-
Percent	100	43	6	39	11	1	-
21 and over	106,234	56,885	7,092	28,812	10,047	2,216	1,182
Percent	100	54	7	27	9	2	1
Women	112,942	32,905	7,041	15,950	44,976	5,029	7,041
Percent	100	29	6	14	41	4	6
0-5 years	33,768	5,891	2,874	5,460	13,938	2,155	3,449
Percent	100	17	9	16	42	6	10
6-11 years	21,266	1,293	1,006	4,023	10,921	1,724	2,299
Percent	100	6	5	19	51	8	11
12-20 years	15,375	6,035	1,150	2,586	5,029	287	287
Percent	100	39	7	17	33	2	2
21 and over	42,533	19,686	2,012	3,880	15,088	862	1,006
Percent	100	47	5	9	35	2	2

<sup>A</sup>Excludes persons with no civilian job or with casual work only, 1940-1949.

<sup>B</sup>Excludes 591 men not reporting relevant information.

<sup>C</sup>Percent not shown where less than 0.5.

Source: Occupational Mobility Survey, San Francisco, Tabulation P-54.

Table A-48.

Average Net Shifts of Selected Types by Major Occupation  
Group of Employment at End of Period and Sex, January 1940--  
December 1944, January 1945-December 1949, and January 1940-December 1949--

## San Francisco Work History Sample

Major occupation group of employment at end of period and sex	Average net shifts								
	In employment status or major occupa- tion group <sup>A</sup>			In occupation <sup>B</sup>			In major occupation group <sup>B</sup>		
	1940- 1944	1944- 1949	1940- 1950	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
Men employed at end of period	.37	.44	.50	.36	.26	.40	.29	.20	.32
Professional, technical, and kindred workers	.19	.42	.44	.16	.13	.29	.09	.08	.19
Managers, officials, and proprietors, incl. farm	.31	.40	.48	.26	.25	.39	.23	.24	.36
Clerical and kindred workers	.31	.50	.59	.26	.21	.35	.20	.15	.29
Sales workers	.26	.55	.61	.23	.25	.40	.21	.25	.38
Craftsmen, foremen, and kindred workers	.48	.34	.48	.49	.24	.44	.41	.13	.35
Operatives and kindred workers	.42	.45	.45	.45	.26	.43	.33	.18	.28
Service workers, incl. private household	.27	.49	.50	.27	.32	.42	.20	.28	.31
Laborers	.47	.43	.47	.48	.37	.46	.44	.34	.42
Women employed at end of period	.49	.36	.62	.20	.23	.20	.13	.14	.14
Professional, technical, and kindred workers	.31	.30	.40	.10	.14	.10	.07	.07	.05
Managers, officials, and proprietors, incl. farm	.54	.48	.76	.28	.38	.42	.28	.31	.41
Clerical and kindred workers	.48	.29	.59	.21	.22	.18	.11	.08	.08
Sales workers	.57	.61	.79	.27	.28	.32	.27	.28	.32
Craftsmen, foremen, and kindred workers <sup>C</sup>	*	*	*	*	*	*	*	*	*
Operatives and kindred workers	.60	.35	.73	.18	.15	.20	.13	.11	.16
Service workers, incl. private household	.40	.39	.63	.20	.20	.17	.08	.15	.11
Laborers <sup>C</sup>	*	*	*	*	*	*	*	*	*

<sup>A</sup>These averages have been computed from data which apply to all workers in the sample, including those who held no civilian job or did casual work only in each period, but excluding those not reporting occupation.

<sup>B</sup>Computed from data which excludes persons with no civilian job or with casual work only in each of the three periods, respectively, and persons not reporting occupation.

<sup>C</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Sources: Occupational Mobility Survey, San Francisco, Tables W-45, and W-47, and W-56 (Census), and Tabulations P-68 to P-70.

TABLE A-49

Average Net Shifts of Selected Types by Major Industry Group of  
Employment at End of Period and Sex, January 1940 --  
December 1944, January 1945-December 1949, and January 1940-December 1949 --

## San Francisco Work History Sample

Major industry group of employment at end of period and sex	Average net shifts								
	In employment status or major industry group <sup>A</sup>			In industry <sup>B</sup>			In major industry group <sup>B</sup>		
	1940- 1944	1945- 1949	1940- 1950	1940- 1944	1945- 1949	1940- 1949	1940- 1944	1945- 1949	1940- 1949
Men employed at end of period	.37	.44	.46	.35	.26	.37	.31	.22	.30
Extractive industries <sup>C</sup>	*	*	*	*	*	*	*	*	*
Construction	.28	.57	.51	.30	.33	.36	.28	.32	.32
Manufacturing	.52	.31	.46	.53	.25	.41	.45	.16	.31
Durable goods	.70	.32	.58	.67	.29	.50	.57	.12	.37
Nondurable goods	.22	.43	.42	.17	.21	.32	.12	.20	.26
Transportation, communication, and other public utilities	.41	.37	.50	.37	.19	.39	.35	.14	.34
Wholesale and retail trade	.24	.46	.40	.19	.29	.38	.16	.24	.27
Finance, insurance, and real estate	.14	.37	.42	.11	.19	.24	.11	.19	.23
Service industries	.22	.46	.44	.22	.30	.35	.17	.26	.29
Public administration	.58	.59	.65	.52	.18	.42	.49	.16	.38
Women employed at end of period	.52	.41	.66	.22	.27	.23	.18	.21	.17
Extractive industries <sup>C</sup>	*	*	*	*	*	*	*	*	*
Construction <sup>C</sup>	*	*	*	*	*	*	*	*	*
Manufacturing	.55	.34	.66	.21	.27	.23	.19	.23	.19
Durable goods	.77	.51	.83	.27	.32	.27	.26	.28	.25
Nondurable goods	.39	.36	.60	.16	.24	.21	.13	.22	.15
Transportation, communication, and other public utilities	.64	.55	.62	.24	.34	.19	.19	.32	.17
Wholesale and retail trade	.50	.42	.68	.24	.32	.28	.16	.19	.17
Finance, insurance, and real estate	.39	.46	.65	.15	.21	.15	.11	.19	.11
Service industries	.39	.42	.57	.16	.22	.17	.12	.16	.12
Public administration	.86	.24	.89	.33	.22	.29	.33	.18	.26

<sup>A</sup>These averages have been computed from Occupational Mobility Survey, San Francisco, Table W-46, W-48, and W-55 (Census). They apply to all workers in the sample, including those who held no civilian job or did casual work only in each period, but excluding those not reporting occupation.

<sup>B</sup>Computed from data which exclude persons with no civilian job or with casual work only in each of the three periods, respectively, and persons not reporting occupation.

<sup>C</sup>Averages not shown for groups with fewer than 2,955 men or 2,874 women.

Source: Occupational Mobility Survey, San Francisco, Tables W-46, W-48, and W-55 (Census), and Tabulations P-71 to P-73.

TABLE A-50.

Selected Ratios of Gross To Net Shifts by Major Occupation Group of Employment at End of Period and Sex, January 1940-December 1944, January 1945-December 1949, and January 1940-December 1949

San Francisco Work History Sample<sup>A</sup>

Major occupation group of employment at end of period and sex	Ratio of average gross civilian job or assignment shifts to average net shifts in employment status or occupation group						Ratio of average gross occupation shifts to average net occupation shifts--men		Ratio of average gross inter-group occupation shifts to average net inter-group occupation shifts--men			
	Men			Women								
	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1944	1945-1949	1940-1949	
Persons employed at end of period	2.8	2.5	4.7	1.8	2.9	3.2	2.1	2.5	3.7	2.1	2.6	3.7
Professional, technical, and kindred workers <sup>B</sup>	*	2.1	4.0	*	*	3.4	*	*	3.4	*	*	*
Managers, officials, and proprietors, incl. farm Clerical and kindred workers <sup>B</sup>	2.5	1.9	3.2	1.3	2.3	2.5	2.5	2.1	2.7	2.6	2.0	2.6
Sales workers <sup>B</sup>	*	2.5	4.0	1.8	3.5	3.3	*	*	5.3	*	*	4.9
Craftsmen, foreman, and kindred workers <sup>B</sup>	*	2.1	3.7	*	1.9	2.6	*	*	3.7	*	*	3.4
Operatives and kindred workers <sup>B</sup>	3.1	3.6	5.9	*	*	*	2.0	2.5	3.5	2.0	*	3.5
Service workers, incl. private household <sup>B</sup>	2.7	2.8	5.8	1.5	*	2.2	1.8	3.1	4.2	1.8	*	4.9
Laborer <sup>B</sup>	* 3.1	2.6 2.8	5.2 5.6	2.1 *	3.3 *	4.0 *	* 2.3	2.2 2.1	3.7 3.9	* 2.1	1.9 2.1	4.0 3.8

<sup>A</sup>Excludes persons with no civilian job or casual work only in each of the three periods, respectively (but see footnote A, Table A-48).

Ratios not shown where base (percent) has a co-efficient of variation greater than .15.

Source: Occupational Mobility Survey, San Francisco. Computed from Tables A-8 to A-10, A-15, A-16 and A-48 (unrounded data used in computation of ratios).

Table A - 51.

Selected Ratios of Gross to Net Shifts by Major Industry Group of Employment at End of Period and Sex, January 1940 - December 1944, January 1945 - December 1949, and January 1940 - December 1949--

San Francisco Work History Sample<sup>A</sup>

Major industry group of employment at end of period	Ratio of average gross civilian job or assignment shifts to average net shifts in employment status or industry group						Ratio of average industry shifts to average net industry shifts--men			Ratio of average gross inter-group industry shifts to average net inter-group industry shifts--men		
	Men			Women			Men			Men		
	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1949	1940-1944	1945-1949	1940-1949
Persons employed at end of period	2.8	2.5	5.0	1.7	2.5	3.0	1.9	2.4	3.7	1.8	2.3	3.8
Extractive industries <sup>B</sup>	*	*	*	*	*	*	*	*	*	*	*	*
Construction <sup>B</sup>	*	2.6	6.4	*	*	*	*	2.3	4.4	*	2.8	4.5
Manufacturing	2.5	3.4	4.9	1.6	2.8	2.8	1.7	2.4	3.4	*	2.7	3.4
Durable goods <sup>B</sup>	2.1	3.5	4.3	1.5	*	2.7	1.6	2.2	3.2	*	*	2.9
Nondurable goods <sup>B</sup>	*	2.3	4.7	1.7	2.5	2.8	*	*	3.6	*	*	*
Transportation, communication and other public utilities <sup>B</sup>	3.1	2.1	4.2	1.3	1.9	2.9	2.0	*	3.3	1.9	*	3.3
Wholesale and retail trade <sup>B</sup>	3.2	2.8	6.0	2.0	3.0	3.3	2.4	2.6	3.7	*	2.4	4.3
Finance, insurance, and real estate <sup>B</sup>	*	1.5	3.2	*	1.8	2.4	*	*	*	*	*	*
Service industries <sup>B</sup>	*	2.5	5.0	1.7	2.2	3.2	*	2.1	3.8	*	2.2	4.0
Public administration <sup>B</sup>	2.4	1.8	3.7	1.4	*	2.6	1.8	*	3.6	1.8	*	3.6

<sup>A</sup>Excludes persons with no civilian job or with casual work only in each of the three periods, respectively (but see footnote A, Table A - 49).

<sup>B</sup>Ratios not shown where base (percent) has a coefficient of variation greater than .15.

Source: Occupational Mobility Survey, San Francisco. Computed from Tables A-11 to A-13, A-17, A-19, and A-49 (unrounded data used in computation of ratios).

Table A - 52.

 Ratios of Gross to Net Changes in Major Occupation  
 Group by Sex, January 1940 - 1950--

 San Francisco Work History Sample (with supporting data)  
 Six-City Work History Samples (without supporting data)

Major occupation group (abbreviated title) and sex	Employed at least one month in 1950	Employed, January 1940	Net change, 1940-1950	Gross movement into group	Gross movement out of group <sup>C</sup>	Ratio of gross to net change-San Francisco	Ratio of gross to net change-six cities combined
Total men <sup>A</sup>	216,160 <sup>B</sup>	181,662 <sup>B</sup>	+34,278	+34,278	--	1.0	1.0
Percent	100	84	+16	+16	--		
Professional	19,651	13,445	+ 6,206	+ 8,570	- 2,364	1.4	1.5
Percent	100	68	+32	+44	-12		
Managerial	40,927	35,312	+ 5,614	+19,798	-11,184	3.5	2.2
Percent	100	86	+14	+49	-35		
Clerical <sup>D</sup>	16,991	15,809	+ 1,182	+10,047	- 8,865	*	*
Percent	100	93	+ 7	+59	- 52		
Sales <sup>D</sup>	19,503	13,298	+ 6,205	+11,968	- 5,763	1.9	*
Percent	100	68	+32	+62	-30		
Craftsmen	41,814	29,698	+12,116	+19,947	- 7,831	1.6	1.7
Percent	100	71	+29	+48	-19		
Operatives <sup>D</sup>	29,994	36,199	- 6,205	+13,594	-19,799	3.2	*
Percent	100	121	-21	+45	-66		
Service	32,062	22,311	+ 9,751	+16,105	- 6,354	1.7	2.1
Percent	100	70	+30	+50	-20		
Laborers <sup>D</sup>	15,218	15,809	- 591	+ 7,092	- 7,683	*	3.3
Percent	100	104	- 4	+47	-51		
Total women <sup>A</sup>	115,816 <sup>B</sup>	61,356 <sup>B</sup>	+54,460	+54,460	--	1.0	1.0
Percent	100	53	+47	+47	--		
Professional <sup>D</sup>	12,789	10,633	+ 2,156	+ 5,173	- 3,017	*	*
Percent	100	83	+17	+41	-24		
Managerial	9,627	5,029	+ 4,598	+ 7,328	2,730	1.6	1.4
Percent	100	52	+48	+76	-28		
Clerical <sup>D</sup>	46,700	22,703	+23,997	+27,589	- 3,592	1.1	1.2
Percent	100	49	+51	+59	- 8		
Sales <sup>D</sup>	8,765	4,598	+ 4,167	+ 6,897	- 2,730	1.7	*
Percent	100	52	+48	+79	-31		
Craftsmen <sup>D</sup>	1,724	718	+ 1,006	+ 1,149	- 143	*	*
Operatives	13,076	6,466	+ 6,610	+ 9,484	- 2,874	1.4	1.2
Percent	100	49	+51	+73	-22		
Service	22,129	10,777	+11,352	+13,939	- 2,587	1.2	1.6
Percent	100	49	+51	+63	-12		
Laborers <sup>D</sup>	1,006	431	+ 575	+ 719	- 144	*	*

<sup>A</sup>Individual items do not always add to totals because of rounding.

<sup>B</sup>Excludes persons not reporting occupation or in the Armed Forces.

<sup>C</sup>There was no movement out of total employment, 1940 - 1950, because of the manner in which the sample was defined.

<sup>D</sup>Percentages or ratios not shown where base is lower than 2,955 men or 2,874 women (San Francisco) or 30,599 men or 30,044 women (six cities).

Source: Occupational Mobility Survey, San Francisco, Table W-56 (Census).