## FAMILY MOBILITY TO AND FROM TULSA, 1939-1941

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Family mobility to and from Tulsa over the three year period 19391941 was estimated by means of a sampling method. 1940 was chosen as the base year and the following four possibilities were considered: Families that lived in Tulsa in 1939 and 1940 but not 1941, or migration from Tulsa; families that lived in Tulsa in 1940 and 1941 but not 1939, or migration to Tulsa; families that lived in Tulsa during the base year 1940 only, or the constant factor to be considered in analyzing both types of migration; and families that remained in the city during the period.

The statistics were obtained from the city directory. Only householders, that is those who were the heads of households, were considered. This was the only classification given by the directory and appeared to be a fairly accurate means of determining families. The city directory is published in January of each year and the data are compiled during the last quarter of the previous year. The study is thus actually based on statistics compiled during the last three months of 1938, 1939, and 1940.

The method of sampling was a simple one. The first four householders, as they were listed on each page of the 1940 directory, were chosen to make up the total sample of 2548 families. An analysis of the total number of householders listed on twenty-two pages of the directory, chosen at random, showed that the total sample appeared to represent approximately $61 / 2$ percent of the total number of householders listed in the directory. If this estimate is reasonably accurate, then the sample may be considered adequate as to quantity. The fact that the first four householders were chosen from each of the 637 pages of the 1940 directory insured a completely unselective sample as to quality, including families of every social class and occupational status in approximately their ratio to the general population. This agreed with the purpose of the study, which was to make an uncritical analysis of family mobility to and from Tulsa without regard to or selection for specific types of families.

The use of the city directory to obtain statistics for the purpose of a study of this nature is open to several criticisms, such as: widows who remarried during the period of study cannot be located under the original sample name; families that moved in and out of Tulsa between the dates for gathering the data of the directory are not tabulated; errors in the directory, such as misspelled names, wrong initials, omissions, etc., result in an increased estimate of mobility. However, these errors are not of such frequency as to affect a sufficiently large sample noticeably.

The results of the study are tabulated below.

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\begin{array}{lc}
\text { Number of } & \text { Percent of } \\
\text { Householders } & \text { Total }
\end{array}
$$

| Families living in Tulsa during |  |  |
| :--- | ---: | ---: |
| 1940 only |  |  |
| Total mobility during period | $\underline{127}$ | 4.98 |
| Families that did not move during the <br> period studied | $\underline{568}$ | $\mathbf{2 2 . 2 9}$ |
| Total | $\underline{2548}$ | $\underline{1980}$ |

From this table it appears that over 22 percent of the families were mobile during the comparatively short period under observation. There are, unfortunately, no figures available to show comparisons between Tulsa and other cities of similar size and population complex. Whether this is a high percentage of mobility or whether this conforms to the standard of other cities like Tulsa is, therefore, not determinable at present.

Five percent of the sample was exceedingly mobile, being in Tulsa for the base year 1940 only. When this percentage is added to the percentage of the sample in Tulsa in 1939 and 1940 but not 1941 we find that slightly over $131 / 2$ percent of the sample moved between 1940 and 1941. Of this number about $361 / 2$ percent were exceedingly mobile, moving away from Tulsa within one year after arrival, while the mobility of the remainder could not be determined since the study extended backward to 1939 only. The migration to Tulsa was also slightly over $131 / 2$ percent, for in addition to the 5 percent who came and left during 1940, $81 / 2$ percent were in Tulsa in 1940 and 1941 but not 1939. It would appear, therefore, that despite the rather high mobility the population total remained constant.

This particular period was essentially normal in character except for the Mid-Continent Petroleum Corporation refinery strike that occurred in December, 1938. Although the strike accounts for some migration both to and from Tulsa, it applies to a few occupational groups only. Since the sample was unselected as to occupational status the strike is believed to have had only a limited effect on the total study.

It is probable that the percentage of mobility shown by the sample represents a conservative estimate of the mobility of the total population of Tulsa. The most stable portion of the general population, that is householders or families, was selected for the primary purpose of insuring a reasonably constant sample. If the sample had been completely unselected as to the names chosen, a higher rate of mobility would have resulted, since it is reasonable to expect that the single population in the adult classification includes a higher percentage of the so-called "floating" population than is found among householders.

The gross rate of outward migration can be vividly pictured as meaning that within seven and a half years the city of Tulsa would be emptied of its present citizens, if the total population moved at a rate equal to that of the $131 / 2$ percent of the sample leaving Tulsa between 1940 and 1941. The gross rate of incoming migration means that within the same seven and a half years the present population of Tulsa would be replaced by newcomers. The two rates together determine whether the population is static or dynamic, whether it is growing or declining and the tempo of the change.

We know, of course, that cities do not empty and refill in accordance with gross rates of mobility. In this particular study we find 5 percent of the total sample came to Tulsa and departed within a year. This is $361 / 2 \mathrm{per}$ cent of the total leaving Tulsa during one year and affects the gross outward mobility rate disproportionately. The same thing is true of the gross incoming mobility rate and for the same percentage of the sample.

This study follows the usual pattern of factual studies of the social order in that many questions are raised and few answered. We know the degree of mobility for the 5 percent of the sample that came and left within a year, but what of the $81 / 2$ percent that came and the $81 / 2$ percent that left, for whom we have no data as to length of residence? Are there included among their number all kinds of mobile families, or are the averages heavily weighed toward either stability or instability? How homogenous are the incoming migrants compared to the present Tulsa population?

Seventy-eight percent of the sample did not move during the period studied. How stable would this group prove to be if studied over a longer period? Are mobile families drawn from all sources within and without the city population? Or is mobility confined to a certain portion of the city population that moves frequently and is replaced by a similar element, while the larger portion of the population remains fairly stable? Is interarea mobility correlated with mobility to and away from the city, and, if so, to what extent? What is the relation of the social structure and occupational status, among other selective factors, to mobility?

The study did establish unrefined mobility rates for a specific period. It demonstrated, to a certain extent, the feasibility of the method used, and disclosed topics for future studies. An interesting sidelight was the fact that this method of analysis offers a means of estimating gross population changes between census years, thus serving as a check on other ways of arriving at this computation.

